

Tunnel Vision Resources (Pty) Limited

Nooitgedacht Colliery

Scoping Report

Draft

Compiled and submitted as contemplated in Appendix 2 and Regulation 21 of the Environmental Impact Assessment Regulations, 2014 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended

For the application for an Environmental Authorisation and a Waste Management Licence in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the Amended Environmental Impact Assessment Regulations 2014, Government Notice No. 327 (NEMA EIA Regulations, 2014) - Listing Notice 1 of 2014, Government Notice No. 325 - Listing Notice 2 of 2014, Government Notice No. 324-Notice No-Listing Notice 3 of 2014 and Government Notice R 921 – List of Waste Management Activities

DMRE Reference No.: MP 30/5/1/2/2/10376 MR

February 2023

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2. I have no bias regarding this project or towards the various stakeholders involved in this project.
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(Electronic signature)

O.T. Shakwane, B.Sc. Hons. (Professional Natural Scientist no: 117080)

EXECUTIVE SUMMARY

Tunnel Vision Resources (Pty) Limited is an emerging coal mining company, which intends to undertake a coal mining operation on a portion of portion 6, portions 2, 52, 103, 105, 172, 193, 195, 239, 253 and a portion of the remaining extent of the farm Nooitgedacht 268 IT, situated in the Magisterial District of Ermelo, Mpumalanga Province. See Regulation 2 (2) plan attached as **Appendix A**.

Based on the depth of the coal seam within the proposed mining area, the proposed mining area can be optimally mined using opencast mining method. The opencast mining method will be utilising the sequential lateral rollover mining technique. A reputable mining contractor will conduct the mining, crushing, and screening of coal will be conducted in-house. The coal to be mined will be transported by tipper trucks from the mining areas to the R.O.M. coal stockpile area. After the processing of the R.O.M coal, the product coal will be hauled by haulage trucks via the road networks to destined clients. All necessary surface infrastructures required to undertake the proposed mining operation will be constructed at the proposed Nooitgedacht Colliery.

The opencast coal will be dry crushed and screened (sized) on site in a dedicated R.O.M coal stockpile area and transported via roads to the end user and/or the inland markets. Some R.O.M coal may also be supplied to offsite coal washing clients to augment the income of the planned coal mining operation.

Associated infrastructure and facilities that will be constructed, include access/haul roads, water management structures (storm water diversion structures and pollution control dams with silt traps), overburden material stockpiles, box-cuts, R.O.M./product stockpiles, crushing/ screening plant, diesel storage facility, weighbridge, and workshop.

In view of the above, Tunnel Vision Resources (Pty) Limited has lodged a mining right application (Ref. No.: MP 30/5/1/2/2/10376 MR) with the Department of Mineral Resources and Energy (Mpumalanga Regional Office) in accordance with the relevant guidelines and regulations under the Mineral and Petroleum Resources Development Act, 2002 as amended.

In addition to the above, the National Environmental Management Act, 1998 (Act 107 of 1998), (NEMA), and the National Environmental Management: Waste Act, 2008 (Act 59 of 2008), (NEMWA), requires that any person or entity that intends to undertake activities listed in the NEMA listing notice regulations (Government Notices No. 983, 984 and 985) as amended in 2017 and waste management activities listed under GN 921 must obtain an Environmental Authorisation in terms of section 24D of the NEMA and a waste management licence in terms of part 4 of chapter 4 of the NEMWA before undertaking such activities. Activities that will require an Environmental Authorisation and a waste management licence in terms of the above-mentioned acts were identified and are listed in a table 4 of the draft scoping contained in this report.

According to the NEMA EIA Regulations 2014, as amended in 2017, under Government Notice No. 326 (NEMA EIA Regulations 2014), an application for an Environmental Authorisation together with an application for a waste management licence for the above-mentioned listed activities and waste management activities, respectively, must be submitted to a competent authority in line with the requirements of the above-mentioned regulations. Since both the applications for the environmental authorisation and waste management licence were submitted as one application to the DMRE, the application will be referred to in this report as an integrated environmental authorisation application. The Department of Mineral Resources and Energy (eMalahleni Office) is the competent authority for the above-mentioned applications.

In view of the above, Tunnel Vision Resources (Pty) Limited appointed Geovicon Environmental (Pty) Limited, an independent environmental consulting company, to prepare and submit the IEA application and manage the Environmental Impact Assessment (EIA) process for the proposed Nooitgedacht Colliery. The above-mentioned Integrated Environmental Authorisation (IEA) for activities listed under Table 4 in this report, has been submitted to the DMRE, Mpumalanga Regional Office (Competent Authority) for their consideration.

Regulation 21 of the NEMA EIA Regulations, 2014, requires that if a Scoping and Environmental Impact Reporting process (S&EIR) must be applied to an application, the applicant must submit a Scoping Report (SR), an Environmental Impact report (EIR) and an Environmental Management Programme (EMPr) to the competent authority which has been subjected to a public participation process and which reflects the incorporation of comments received, including any comments of the competent authority. The draft SR (this document), which has been compiled to meet the requirements of Appendix 2 and Regulation 21 of the NEMA EIA Regulations, 2014, and is made available to the competent authority and Registered Interested and Affected Parties (I&APs) as part of the public participation process for their review and comments.

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Appendix C	Deed's list of the direct farms
Appendix D	National Web Based Environmental Screening Tool Report

ABBREVIATIONS

TERMS	DEFINITION
EAR	Environmental Audit Report
EAPASA	Environmental Assessment Practitioners Association of South Africa
BARs	Basic Assessment Reports
BEE	Black Economic Empowerment
CV	Curriculum Vitae
CBA	Critical Biodiversity Areas
CO2	Carbon Dioxide
DALA	Department of Agriculture and Land Administration
DMRE	Department of Mineral Resources and Energy
DWS	Department of Water and Sanitation
DFFE	Department of Forestry, Fisheries and Environment
EAP	Environmental Assessment Practitioner
EA	Environmental Authorisation
ESA	Ecological Support Areas
EA's	Environmental Authorisations
IEA	Integrated Environmental Authorisation
EIA	Environmental Impact Assessment
EIAs	Environmental Impact Assessments
EMPr	Environmental Management Programme Report
GA	General Authorisation
GN	Government Notice

TERMS	DEFINITION
Gm	Mesic Highveld Grassland Bioregion
GNR	Government Notice Regulation
GIS	Geographic Information System
Ha	Hectare
HIA	Heritage Impact Assessment
HIA	Health Impact Assessment
Hu	Hutton
IAIA	International Association for Impact Assessment
IWUL	Integrated Water Use Licence
IWUL's	Integrated Water Use Licences
I&APs	Interested and Affected Parties
Km	Kilometres
Lo	Longlands
LoM	Life of Mine
l/s	Litres per second
mamsl	Metres above mean sea level
m	Meters
mm	Millimetres
m ²	Meters squared
m ³	Meters cube
MTSF	Mid Term Strategic Framework
m/d	Meters per day
MPRDA	Mineral and Petroleum Resources Development Act
Mt	Million tonnes
MTPA	Mpumalanga Tourism and Parks Agency
ML	Mega Litres
MBCP	Mpumalanga Biodiversity Conservation Plan
No	Number
NWA	National Water Act
MSDS	Material Safety Data Sheets
NEMA	National Environmental Management Act
NEMWA	National Environmental Management: Waste Act

TERMS	DEFINITION
NEMPAA	National Environmental Management: Protected Areas Act
NEMBA	National Environmental Management: Biodiversity Act
NFEPA	National Freshwater Ecological Priority Areas
NDCR	National Dust Control Regulations
NHRA	National Heritage Resources Act
ONAs	Other Natural Areas
PCD	Pollution Control Dam
PTY	Proprietary Limited Company
RDP	Resource Development Plan
ROM	Run of Mine
ROD	Record of Decision
SABAP2	Southern African Bird Atlas Project 2
SANRAL	South African National Roads Agency Limited
SANS	South African National Standards
SACNASP	South African Council for Natural Scientific Professions
SAHRA	South African Heritage Resources Agency
S&EIR	Scoping and Environmental Impact Reporting/Report
SMME's	Small, Medium and Micro Enterprises
SIA	Social Impact Assessment
SLP	Social and Labour Plan
WULA	Water Use License Application
WML	Waste Management Licence

1. INTRODUCTION

1.1 WHO IS DEVELOPING THE SCOPING REPORT?

1.1.1 Name and contact details of the EAP's who prepared the Scoping Report

EAP: Mr. O.T Shakwane (BSc. Honns.)

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EAPASA Registration: 2019/1763

IAIA Membership No.: 3847

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1.1.2 Expertise of the EAP's who prepared and reviewed the Scoping Report

Geovicon Environmental (Pty) Limited has been appointed by Tunnel Vision Resources (Pty) Limited as the independent environmental consultant to compile this SR and has no vested interest in the project.

Geovicon Environmental (Pty) Limited is a geological and environmental consulting company. The company was formed in 1996, and currently has twenty-two years' experience in the geological and environmental consulting field. Geovicon Environmental (Pty) Limited has successfully completed consulting projects in the mining sector (coal, gold, base metal and diamond), Quarrying sector (sand, aggregate and dimension stone), Industrial sector and Housing sector. Geovicon Environmental (Pty) Limited has undertaken contracts within all the provinces of South Africa and in Swaziland, Botswana and Zambia. During 2001 Geovicon Environmental (Pty) Limited entered the field of mine environmental management and water monitoring.

Geovicon Environmental (Pty) Limited is a Black Economically Empowered Company with the BEE component owning 60% of the company. Geovicon Environmental (Pty) Limited has three shareholders i.e. O.T. Shakwane, J.M. Bate and T.G. Tefu.

Mr. O.T. Shakwane obtained his BSc (Microbiology and Biochemistry) from the University of Durban Westville in 1994, and completed his honours degree in Microbiology in 1995. Mr O.T. Shakwane has also completed short courses on environmental law, EIA, environmental risk assessment and environmental management systems. He has worked within the three state departments tasked with mining and environmental management i.e., Department of Water and Sanitation (Gauteng and Mpumalanga Region),

DMRE (Mpumalanga Region) and Department of Agriculture, Conservation and Environment (Gauteng Region). Mr. Shakwane has been in the consulting field since 2004 and has undertaken environmental impact assessments for mining operations like the proposed Nooitgedacht Colliery. Mr. Shakwane is the appointed EAP for the NEMA IEA application and the EIA process for the proposed Nooitgedacht Colliery project. Mr. Shakwane has been involved in the field of EIA for the past nineteen years.

He is registered with the Environmental Assessment Practitioners Association of South Africa and South African Council for Natural Scientific Professions as an EAP and a Professional Natural Scientist in terms of section 24H of the National Environmental Management Act, (Act 107 of 1998) and section 20(3) of the Natural Scientific Professions Act, 2003 (Act 27 of 2003), respectively. He is also a member of the International Association for Impact Assessment, South Africa.

Mr. Ornassis Tshepo Shakwane of Geovicon Environmental (Pty) Limited, hereby declares that they are independent EAP and that Geovicon Environmental (Pty) Limited have no business, financial, personal, or other interest in this project in respect of which Geovicon Environmental (Pty) Limited is appointed. Furthermore, no circumstances exist that may compromise the objectivity of Geovicon Environmental (Pty) Limited, excluding fair remuneration for work performed in connection with this environmental audit. The EAP's CV is attached as **Appendix B**.

1.2 WHO WILL EVALUATE THE SCOPING REPORT?

Before the proposed project can proceed, an EAP must compile an application for an IEA for the proposed activities. An EIA must be undertaken in support of the application for an IEA where a SR must be compiled and an EIA be carried out for the activities applied for, in terms of the NEMA EIA Regulations, 2014. The above-mentioned application must be made to the competent authority in terms of Section 24 of NEMA, Section 45 and Section 20(b) of the NEMWA and in terms of Regulations 16 of the NEMA EIA Regulations, 2014. The Minister responsible for the DMRE is the competent authority for this application. In view of the above, the IEA for the proposed Nooitgedacht Colliery was submitted to the DMRE, eMalahleni Regional Office for their consideration and decision making.

In the spirit of co-operative governance and in compliance with Regulation 7(2) the NEMA EIA Regulations, 2014, the competent authority (DMRE) will, during the processing of the IEA application, consult with other organs of state that administers laws that relate to matters affecting the environment relevant to this application.

In addition to the above, all organs of state which have jurisdiction in respect of the activity applied for and all potential, or, where relevant, I&APs will also be given an opportunity to evaluate and comment on the documents to be submitted to the authorities.

1.3 PURPOSE OF THE SCOPING REPORT

The Draft SR addresses the requirements as contemplated in Appendix 2 of the NEMA EIA Regulations, 2014. This report also allows for the I&APs to raise issues and concerns during the consultation phase which will then be addressed in the final SR. The aim of this SR is to:

- Provide background information on the proposed mining project,
- Provide information regarding alternatives that have been considered,
- Show how authorities and I&APs were afforded the opportunity to contribute to the project, and to indicate the issues raised and the responses to those issues,

- Describe the receiving environment that might be affected by the proposed mining project,
- Describe the extent of environmental consequences for the construction, operational and decommissioning phases of the proposed project,
- Describe the environmental studies that are going to be conducted/have already been conducted,
- Present findings in a manner that facilitates decision-making by the relevant authorities.

2. PROJECT BACKGROUND AND CONTEXT

2.1 OVERVIEW OF THE PROJECT

2.1.1 Name of the Applicant

2.1.2 Tunnel Vision Resources (Pty) Limited

2.1.3 Name of the Proposed Project

Nooitgedacht Colliery

2.1.4 Address of the proposed Project

Postal address:

Tunnel Vision Resources (Pty) Limited

P. O. Box 213

Waterkloof

Pretoria

0181

2.1.5 Project Manager

Mongwe Mojalefa

Email: douglas@xakwa.com

Cell No: 0745489126

2.1.6 Contact Person

Mongwe Mojalefa

Email: douglas@xakwa.com

2.2 DESCRIPTION OF THE PROPERTY (LOCATION OF THE PROJECT)

2.2.1 Name of the property

Portions 2, 6, 52, 103, 105, 253 and a portion of remaining extent of the farm Nooitgedacht IT.

2.2.2 Magisterial District & Regional Services Council

Magisterial: Ermelo Magisterial District, Mpumalanga

District Municipality: Gert Sibande District Municipality

Local Municipality: Msukaligwa Local Municipality

2.2.3 Direction and Distance to Nearest Towns

Table 1: Direction and Distance to Nearest Towns.

Town	Direction	Distance
Ermelo	East	3.26 km
Breyten	North East	32.36 km
Hendrina	North West	54 km

2.2.4 Surveyor General Code

Table 2: Surveyor General Code for the Project Area

Farm portion and name	Surveyor General Code
Portion 2 of the farm Nooitgedacht 268 IT	T0IT00000000026800002
Portion 6 of the farm Nooitgedacht 268 IT	T0IT00000000026800006
Portion 52 of the farm Nooitgedacht 268 IT	T0IT00000000026800052
Portion 103 of the farm Nooitgedacht 268 IT	T0IT00000000026800103
Portion 105 of the farm Nooitgedacht 268 IT	T0IT00000000026800105
Portion 195 of the farm Nooitgedacht 268 IT	T0IT00000000026800195
Portion 193 of the farm Nooitgedacht 268 IT	T0IT00000000026800193
Portion RE of the farm Nooitgedacht 268 IT	T0IT00000000026800000
Portion of the RE (253) of the farm Nooitgedacht 268 IT	T0IT00000000026800253
Portion of the RE (239) of the farm Nooitgedacht 268 IT	T0IT00000000026800239
Portion of portion 52 (172) of the farm Nooitgedacht 268 IT	T0IT00000000026800172

2.3 LOCATION

The proposed Nooitgedacht Colliery is situated on a portion of portion 6, portions 2, 52, 103, 105, 172, 193, 195, 239, 253 and a portion of the remaining extent of the farm Nooitgedacht 268 IT in the Magisterial District of Ermelo, Mpumalanga Province. The proposed project area is located on the southern side of the N17 National Road and the Provincial Road R39 passing through the southern area of the proposed mining right area. Access to the proposed project area will be via R39 (Provincial Road). Refer to Figure 1 for the locality plan of the proposed Nooitgedacht Colliery.

2.4 LAND TENURE OF IMMEDIATE AND ADJACENT LAND

Table 3 and Figure 2 indicates the immediate and adjacent surface owners for the proposed Nooitgedacht Colliery. Also refer to Appendix A for the Regulation 2 (2) plan and **Appendix C** for the Deed's list of direct farm owners of Nooitgedacht. Land use within the proposed project area includes land used for agricultural purposes (grazing and crop cultivation). Wetland areas are mostly utilised as grazing and livestock watering areas. Provincial road and power lines are situated within the project area.

Table 3: Direct and Indirect Surface Owners of the proposed Nooitgedacht Colliery

FARM	PORTION	SURFACE RIGHT OWNERS
Direct Surface Owners		
Nooitgedacht 268 IT		
Nooitgedacht 268 IT	2	Republic of South Africa
Nooitgedacht 268 IT	6	Mpumalanga Provincial Government
Nooitgedacht 268 IT	52	Republic of South Africa
Nooitgedacht 268 IT	103	Mpumalanga Provincial Government
Nooitgedacht 268 IT	105	Mpumalanga Provincial Government
Nooitgedacht 268 IT	195	Transnet Ltd
Nooitgedacht 268 IT	193	Transnet Ltd
Nooitgedacht 268 IT	RE	Republic of South Africa
Nooitgedacht 268 IT	253	Republic of South Africa
Nooitgedacht 268 IT	239	Republic of South Africa
Nooitgedacht 268 IT	172	Republic of South Africa
Adjacent Surface Owners		
Nooitgedacht 268 IT		
Nooitgedacht 268 IT	112	Mpumalanga Provincial Government
Nooitgedacht 268 IT	75	Ermelo Municipality
Nooitgedacht 268 IT	244	Mpumalanga Provincial Government
Nooitgedacht 268 IT	184	Republic of South Africa
Nooitgedacht 268 IT	185	Republic of South Africa
Nooitgedacht 268 IT	49	C.A Theron

Nooitgedacht 268 IT	206	Republic of South Africa
Nooitgedacht 268 IT	3	Kenneth Magagula Family Trust
Nooitgedacht 268 IT	244	Maroela Family Trust
Nooitgedacht 268 IT	5	Jacoba Johanna Cornelia Carr Testamentary Trust
Nooitgedacht 268 IT	166	Transnet Ltd
Nooitgedacht 268 IT	168	Transnet Ltd
Nooitgedacht 268 IT	169	Transnet Ltd
Nooitgedacht 268 IT	192	Transnet Ltd
Nooitgedacht 268 IT	194	Transnet Ltd
Nooitgedacht 268 IT	35	Mpumalanga Provincial Government
Nooitgedacht 268 IT	46	Republic of South Africa
Nooitgedacht 268 IT	104	Republic of South Africa
De Roodepoort 435 IS		
De Roodepoort 435 IS	1	P.H.A. Oosthuizen
De Roodepoort 435 IS	16	P.H.A. Oosthuizen
De Roodepoort 435 IS	6	J.J. Weideman
De Roodepoort 435 IS	7	J.J. Weideman
De Roodepoort 435 IS	13	Transnet Ltd

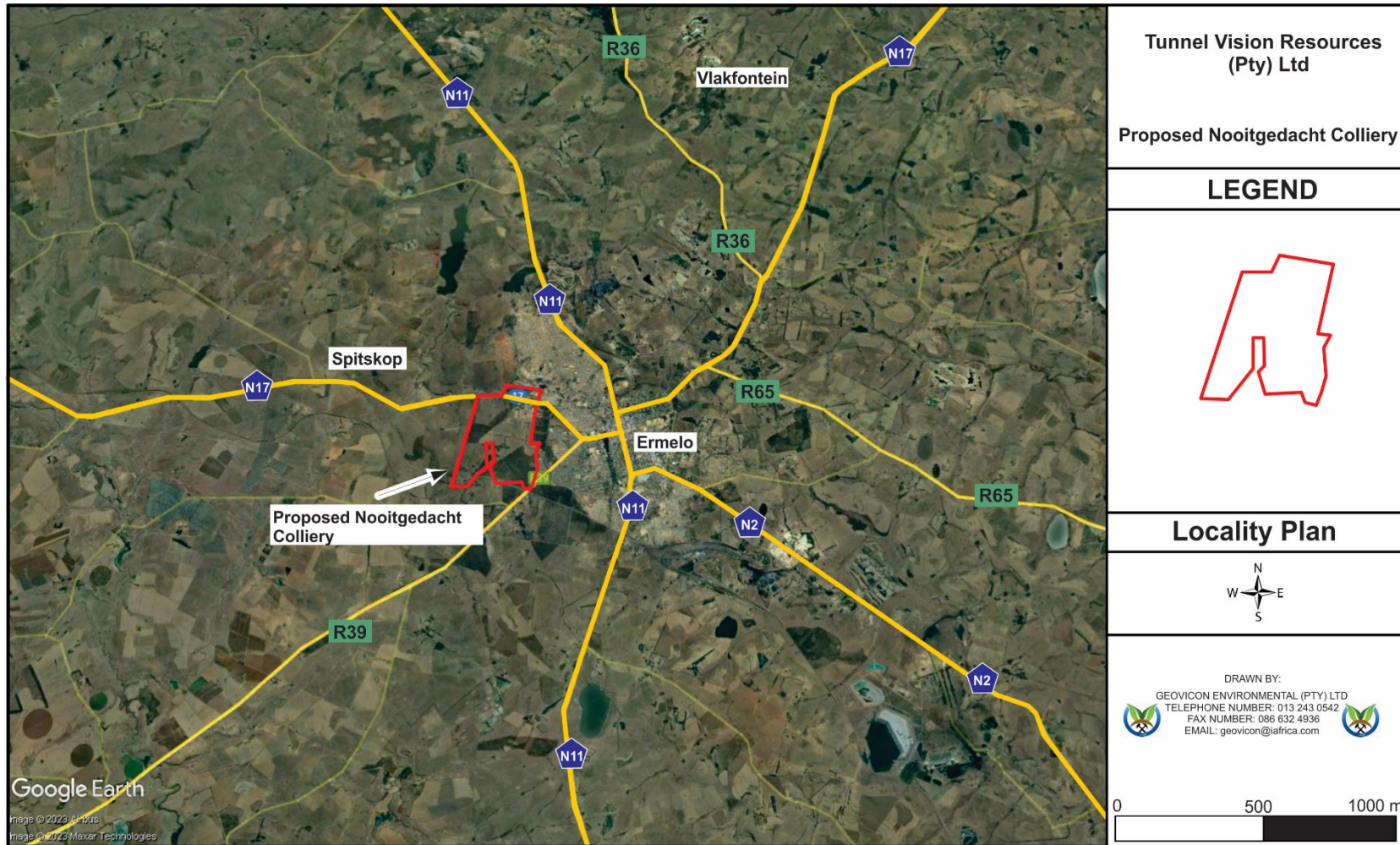


Figure 1: Locality plan for the proposed Nooitgedacht Colliery

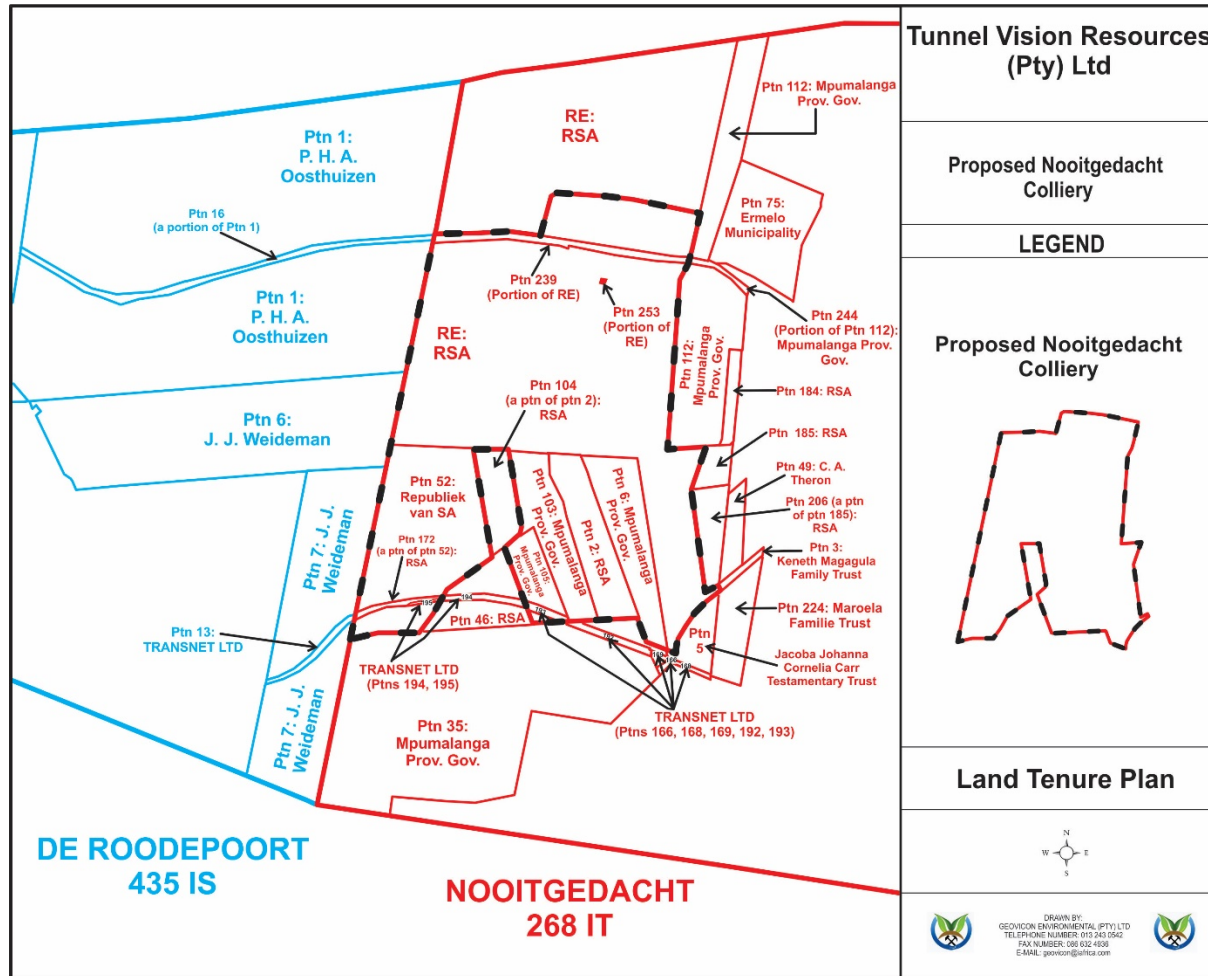


Figure 2: Land Tenure Plan for the proposed Nooitgedacht Colliery

3. DESCRIPTION OF THE SCOPE OF THE PROPOSED ACTIVITY

3.1 DESCRIPTION OF THE PROPOSED NOOITGEDACHT COLLIERY

Tunnel Vision Resources (Pty) Limited intent to undertake a coal mining operation on a portion of portion 6, portions 2, 52, 103, 105, 172, 193,195, 239, 253 and a portion of the remaining extent of the farm Nooitgedacht 268 IT situated in the Magisterial District of Ermelo, Mpumalanga Province. The project will comprise of initial box-cut, subsequent opencast cuts, R.O.M. stockpiling area, overburden stockpiles, offices, workshops, diesel storage facilities, crushing/screening plant, access/haul roads, water management structures (Pollution Control Dam and clean and dirty water diversion structures) and other related mining infrastructure.

Haul and Access/Haul Road

A haul road will be constructed to access the Nooitgedacht Colliery Project area. The road will be used for the haulage of overburden and coal material from the proposed project.

Opencast Pits

Opencast mining, using the truck and shovel lateral rollover mining method will be undertaken. Mining will commence from the initial box-cut. Access to the opencast pit will be via a pit ramp. Access and haul roads that will be extended from the nearby existing road infrastructure will be used to access the opencast mining area and for the haulage of material from the opencast.

The soft overburden will be removed by mechanical methods. The hard overburden will be drilled and blasted and then removed by mechanical methods. The coal will also be drilled and blasted prior to removal.

Topsoil stockpile

Topsoil material will be stripped from the opencast and surface infrastructure areas and will be stockpiled at the dedicated topsoil stockpiling areas. The stripped soils will be stockpiled as per the recommendation from the soil specialist report. The topsoil material will therefore be used later to cover the backfilled opencast voids.

Water Management Structures

Dirty water from the proposed mining area (workings and dirty water areas) will be pumped/drained/diverted to the pollution control facilities to be constructed on site. The pollution control facilities will be designed and constructed to have enough capacity to handle the volumes of the dirty water emanating from the proposed mine including the volumes from a 1:50 year 24-hour storm event.

3.2 LISTED AND SPECIFIED ACTIVITIES TRIGGERED

In terms of the NEMA and NEMWA, the proposed project will result in conducting of activities that are considered as listed activities and waste management activities. In terms of the above-mentioned legislations, none of the above-mentioned listed activities can commence without an Environmental Authorization (EA) and a Waste Management Licence (WML). In view of the above, Tunnel Vision Resources (Pty) Limited has appointed Geovicon Environmental (Pty) Limited, an independent environmental consulting company to apply for an IEA for all listed activities and waste management activities to be conducted at the proposed project area to the competent authority (DMRE). This section

will give a description of the NEMA listed activities and NEMWA waste management activities that were included in the application form for the IEA. Table 4 reflects listed activities applied for that will be undertaken at the proposed Nooitgedacht Colliery.

Table 4: Description of listed activities to be undertaken for the proposed Nooitgedacht Colliery

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE
PROJECT LISTED AND SPECIFIC ACTIVITIES			
NATIONAL ENVIRONMENTAL MANAGEMENT ACT			
NEMA EIA AMENDED Regulations Listing Notice 1			
<p>The construction and operation of storm water diversion trenches. The dirty water trenches will channel dirty water to the pollution control dam and the clean water trench will be diverted to the nearby clean water environment and associated watercourses.</p>	<p>The storm water diversion trenches will cover an area of 2,620 m in length.</p>	<p><u>Activity 9 of Listing Notice 1:</u> The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water or storm water- (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where- (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve; or (b) where such development will occur within an urban area.</p>	<p>GNR 983</p>
<p>The development and related operation of water pipelines exceeding 1000 metres in length for the transportation of waste water from the pit to the pollution control dam.</p>	<p>The length of the pipeline for transportation of wastewater located in pit will be approximately 1 km.</p>	<p><u>Activity 10 of Listing Notice 1:</u> The development and related operation of infrastructure exceeding 1000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes? (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where- (a) such infrastructure is for bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve; or (b) where such development will occur within an urban area.</p>	<p>GNR 983</p>

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE
<p>The lined pollution control dams will be constructed for the containment of polluted water emanating from the mining operation and will have a capacity of more than 35 000 cubic meters. Since more than one dam may be constructed, the combined capacity of the dams may exceed the 50 000 m³ threshold.</p>	<p>The lined pollution control dam facility will cover an area of approximately 0.8 hectares.</p>	<p><u>Activity 13 of Listing Notice 1:</u> The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2 of 2014.</p>	<p>GNR 983</p>
<p>The development of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres. The goods to be stored include all hydrocarbon liquids (oils, petrol, diesel etc.), chemicals that may be used at the mine and all waste considered as dangerous goods.</p>	<p>80 square meters</p>	<p><u>Activity 14 of Listing Notice 1:</u> The development of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres</p>	
<p>The construction and operation of access roads for accessing the proposed mining operation.</p>	<p>The access and haul roads will cover a length of approximately 1.1 km.</p>	<p><u>Activity 24 of Listing Notice 1:</u> The development of- (i) a road for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding- (a) roads which are identified and included in activity 27 in Listing Notice 2 of 2014; or (b) roads where the entire road falls within an urban area.</p>	<p>GNR 983</p>

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE
NEMA EIA AMENDED Regulations Listing Notice 2			
The development of the proposed Nooitgedacht Colliery Opencast Mining Project and associated infrastructure will require an integrated water use licence in terms of the National Water Act, 1998 (Act 36 of 1998).	The development of the mining operation with its associated infrastructure will cover an area of approximately 2741.49 hectares.	<u>Activity 6 of Listing Notice 2:</u> The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution, or effluent, excluding- <ul style="list-style-type: none"> • activities which are identified and included in Listing Notice 1 of 2014; • activities which included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; or • the development of facilities or infrastructure for the treatment of effluent, wastewater, or sewage where such facilities have a daily throughput capacity of 2000 cubic metres or less. 	GNR 984
The development of the mining operation and associated infrastructure will result in the clearance of indigenous vegetation from the project area.	The proposed operation with its associated infrastructure will cover an area of approximately 2741.49 hectares.	<u>Activity 15 of Listing Notice 2:</u> The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for- <ol style="list-style-type: none"> (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan. 	GNR 984
Opencast mining which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	The development of the mining operation with its associated infrastructure will cover an area of approximately 2741.49 hectares.	<u>Activity 17 of Listing Notice 2:</u> Opencast mining which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures, and earthworks, directly related to the extraction of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	GNR 984

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE
Crushing and screening of ROM coal to produce products required by the markets.		<p><u>Activity 21 of Listing Notice 2:</u> Any activity including the operation of that activity associated with the primary processing of a mineral resource including winning, reduction, extraction, classifying, concentrating, crushing, screening, and washing but excluding the smelting, beneficiation, refining, calcining, or gasification of the mineral resource.</p>	GNR 984
NEMA EIA AMENDED Regulations Listing Notice 3			
The development of access and haul roads within the proposed mining area.	The access and haul roads will cover a length of approximately 1.1 km.	<p><u>Activity 4 of Listing Notice 3:</u> The development of a road wider than 4 metres with a reserve less than 13, 5 metres.</p> <p><u>In Free State, Limpopo, Mpumalanga, and Northern Cape provinces:</u></p> <ul style="list-style-type: none"> • In an estuary; • Outside urban areas in: <ul style="list-style-type: none"> (aa) A protected area identified in terms of NEMPAA, excluding disturbed areas; (bb) National Protected Area Expansion Strategy Focus areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an International Convention; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ff) Core areas in biosphere reserves; (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve, excluding disturbed areas.; or (hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined; <p>or</p>	GNR 985

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE
		(iii) In urban areas: (aa) Areas zoned for use as public open space; (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; or (cc) Seawards of the development setback line or within urban protected areas.	
The development of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres	80 square meters	<u>Activity 10 of Listing Notice 3:</u> The development of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 30 cubic metres or more but not exceeding 80 cubic metres.	
Clearance of indigenous vegetation for the mining operation and for the construction of infrastructure associated with the mining project.	The proposed operation with its associated infrastructure will cover an area of approximately 2741.49 hectares.	<u>Activity 12 of Listing Notice 3:</u> The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. <u>(c) in Mpumalanga</u> (i) within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; (ii) within critically biodiversity area identified in bioregional plans; (iii) within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone; whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas	GNR 985

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE
		(iv) on land, where, at the time of the coming into effect of this Notice or thereafter such land was zone open space, conservation or had an equivalent zoning or proclamation in terms of NEMPAA.	
<p>New access and haul roads will be constructed to connect to the existing road infrastructure. This will result in the extension of the current road by more than one kilometre.</p>	<p>The access and haul roads will cover a length of approximately 1.1 km</p>	<p><u>Activity 18 of Listing Notice 3:</u> The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre. a) In Free State, Limpopo, Mpumalanga, and Northern Cape provinces: (i) In an estuary; (ii) Outside urban areas, in: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an International Convention; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ff) Core areas in biosphere reserves; (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; (hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined; or (ii) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined; or iii. Inside urban areas:</p>	<p>GNR 985</p>

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE
		(aa) Areas zoned for use as public open space; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.	
NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT			
The disposal of overburden material (carbonaceous) into the mined out areas.	The overburden stockpile material will cover an area of approximately 0.45 hectares.	<u>Activity 7 under category B:</u> Disposal of any quantity of hazardous waste on land.	GNR 921
Disposal of dirty water from opencast pits, ROM coal stockpile, overburden stockpile areas and any dirty water area of the mine into the line pollution control dam.	The pollution control dams facility will cover an area of approximately 0.8 hectares.	<u>Activity 7 under category B:</u> Disposal of any quantity of hazardous waste on land.	GNR 921
The establishment and maintenance of the overburden material stockpiles and associated pollution control dam.	The associated infrastructure will cover an area of approximately 3.55 hectares.	<u>Activity 10 under category B:</u> The construction of a facility for a waste management activity listed under Category B of this Schedule (not in isolation to associated waste management activity).	GNR 921
Reclamation of the overburden material for rehabilitation.	As much of the material as possible will be reclaimed and used for rehabilitation.	<u>Activity 11 under category B:</u> The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	GNR 921/ GNR 632

3.3 NOOITGEDACHT COLLIERY SURFACE INFRASTRUCTURE DESCRIPTION AND THE MINING METHOD

Below is the description of the surface infrastructure and the mining method for the proposed Nooitgedacht Colliery.

3.3.1 Target Mineral

The target mineral for the proposed project is coal.

3.3.2 Mining Method

Opencast mining, using the truck and shovel lateral rollover mining method will be undertaken. Mining will commence from the initial box-cut. Access to the opencast pit is via a pit ramp. Haul roads that will be extended from the nearby existing road to access the opencast mining area.

The soft overburden will be removed by mechanical methods. The hard overburden will be drilled and blasted and then removed by mechanical methods. The coal will be drilled and blasted prior to removal.

3.3.3 Proposed Surface Infrastructure Description

Nooitgedacht Colliery Project area is mainly utilized for agricultural activities (crop production and grazing). There are existing power lines on within the mining area. Nooitgedacht Colliery will either use the existing power lines or use generator to generate electricity in their precises.

3.3.4 Proposed Surface Infrastructure Description

The project will comprise of initial box-cut, subsequent opencast cuts, R.O.M. stockpiling area, overburden stockpiles, offices, workshops, diesel storage facilities, crushing/screening plant, access/haul roads, water management structures (Pollution Control Dam and clean and dirty water diversion structures) and other related mining infrastructure.

3.3.4.1 Access

There is a good network of both tarred and gravel roads connecting the proposed Nooitgedacht Colliery with the surrounding towns. Existing roads to be used for the proposed area include the R39 Provincial Road and unnamed road passing at the middle of the mining right area. A haul road will be constructed to join the existing road.

3.3.4.2 Waste Management

According to NEMWA, waste is defined as any substance, material, or object, that is unwanted, rejected, abandoned, discarded, or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material, or object, whether such substance, material or object can be re-used, recycled, or recovered and includes all waste as defined in Schedule 3 of NEMWA. Schedule 3 of NEMWA further divides waste into hazardous and general waste. Both hazardous and general waste will be generated from the Nooitgedacht Colliery. Identification of waste to be generated from the Nooitgedacht Colliery was conducted in terms of Schedule 3 of NEMWA and all identified waste and their management is described below.

General Waste Management

General waste that may be generated at the proposed project include paper, plastic, cut boards, and food waste. Waste management include the separation of waste components into recyclable waste and waste that require disposal. Waste generated will temporarily be stored on-site prior to off-site transportation to recycling facilities, collection points or licensed waste disposal sites by registered contractors. Nooitgedacht

Colliery will use a certified contractor for the collection and disposal of the waste generated from the project area.

Management of domestic waste include the temporary storage of all domestic waste generated from the mine in a demarcated area. The area will have a capacity to handle not more than 100 m³, of waste. Should enough waste be generated to warrant recycling, recycling will be conducted. All generated domestic and general waste will be collected on-site into clearly demarcated waste skips/bins and transported off site by the appointed waste removal contractor. The waste skips/bins will be placed on protected areas. The waste generated will comply with the National Norms and Standards for Storage of Waste, 2013.

Hazardous Waste Management

Hazardous waste that may be generated at the proposed project include used oils, fuel, degreasers, brake fluid, lubricants, and fire suppressants. This list of chemicals to be used at the proposed project area will be finalised as the project progresses to the other stages. The Material Safety Data Sheets (MSDS) will be made available for all the chemicals to be stored on site prior to the commencement of construction. The waste management system will be used for the collection and disposal of this waste.

Waste generated will be removed by a permitted waste disposal contractor for treatment and disposal at a licensed hazardous waste disposal site. Management of hazardous waste include the temporary storage of all hazardous waste generated from the mine in a demarcated area. The waste stored on site will not be more than 80 m³ for hazardous waste at any given time. The waste generated will comply with the National Norms and Standards for Storage of Waste, 2013.

All industrial waste will be stored separately in clearly marked containers and waste skips at the workshop area and will be removed by the appointed waste handling contractor.

Hydrocarbon waste will be collected in drums at designated collection waste points that will be underlain by an impervious layer linked to an oil trap or sump, which ensures that spills are contained. Waste from the drums will be collected by the appointed contractor when full for recycling or safe disposal.

Maintenance of the above-mentioned waste storage facilities will take place on slabs that are linked to sumps that prevents potential pollution. The hazardous waste collected is transported to a registered landfill site.

Diesel fuel will be regularly bulk delivered and stored in tanks placed on concrete foundations surrounded by spillage bunds with a capacity to contain 110% of the volume of diesel stored (as per the SANS 10131:2004 specifications).

3.3.4.3 Water Pollution Management Facilities

3.3.4.3.1 Sewage Treatment Plant

No sewage treatment plant will be required for the proposed project. Chemical toilets will be utilized.

3.3.4.3.2 Dirty Water Management and Storm Water Management Facilities

Storm water management entails the prevention of runoff from clean areas from entering dirty areas and the prevention of runoff from dirty areas from entering clean water areas. The above will hence prevent clean water from being contaminated and contaminated water from contaminating clean water. This section will indicate how storm water at the proposed Nooitgedacht Colliery will be managed.

The storm water management system for the proposed Nooitgedacht Colliery includes the construction and operation of storm water diversion berms, dirty water pipelines and a PCD. The system will be designed to

separate clean and dirty storm water from the catchment of the proposed Nooitgedacht Colliery project and its associated infrastructure.

Clean storm water generated within the Nooitgedacht Colliery area and the associated infrastructure will be diverted via berms towards the nearby clean water environment.

All dirty water from the mined opencast pits will be collected in a PCD via dirty water pipelines. Water from the pollution control dam will be utilised to suppress dust on the haul roads.

3.3.4.4 Water Supply Infrastructures

Water will be required at the proposed Nooitgedacht Colliery area for the purpose of supplying potable water and dust suppression. Water for dust suppression will be sourced from the proposed PCD and potable water will be sourced from a borehole or via a water supplier for portable water. Alternatively, portable water may be sourced from the local municipality.

3.3.4.5 Mineral Processing

Crushing and screening of coal will be conducted before coal is transported to the end user.

3.3.4.6 Transportation of product

Coal from the mining area will be transported via tipper trucks to the R.O.M stockpile area. Front-end loaders will be used to feed the crushing, screening, with coal from the R.O.M. stockpile. Haulage trucks will then be used to transport the coal product from the coal product stockpile to the destined clients.

4. POLICY AND LEGISLATIVE CONTEXT

4.1 CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA (ACT NO. 108 OF 1996)

Section 24 of the Constitution of the Republic of South Africa (Act No. 108 of 1996) states that everyone has the right:

- a) to an environment that is not harmful to their health or well-being; and
- b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:
 - (i) prevent pollution and ecological degradation;
 - (ii) promote conservation; and
 - (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

In terms of Section 24 of the Constitution of the Republic of South Africa (Act No. 108 of 1996), everyone has the right to an environment that is not harmful to their health or well-being. In addition, people have the right to have the environment protected, for the benefit of present and future generations, through applicable legislations and other measures that prevent pollution, ecological degradation and promote conservation and secure ecological sustainable development using natural resources while prompting justifiable economic and social development. The needs of the environment, as well as affected parties, should thus be integrated into the overall project to fulfil the requirements of Section 24 of the Constitution. In view of the above, several laws pertaining to environmental management were promulgated to give guidance on how the principles set out in section 24 of the Constitution of the Republic of South Africa (Act No. 108 of 1996) would be met. Below are laws applicable to the Nooitgedacht Colliery system that were promulgated to ensure that section 24 of the Constitution of the Republic of South Africa (Act No. 108 of 1996) is complied with.

4.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998)

Section 24(1) of the NEMA states:

“In order to give effect to the general objectives of integrated environmental management laid down in this Chapter [Chapter 5], the potential consequences for or impacts on the environment of listed activities or specified activities must be considered, investigated, assessed and reported on to the competent authority or the Minister of the DMRE, as the case may be, except in respect of those activities that may commence without having to obtain an environmental authorisation in terms of this Act.”

In order to regulate the procedure and criteria as contemplated in Chapter 5 of NEMA relating to the preparation, evaluation, submission, processing and consideration of, and decision on, applications for environmental authorisations for the commencement of activities, subjected to environmental impact assessment, in order to avoid or mitigate detrimental impacts on the environment, and to optimise positive environmental impacts, and for matters pertaining thereto, Regulations (EIA Regulations, 2014) were promulgated. These Regulations took effect from the 4th of December 2014.

In addition to the above, Section 28 of the NEMA includes a general “Duty of Care” whereby care must be taken to prevent, control and remedy the effect of significant pollution and environmental degradation. This section stipulates the importance to protect the environment from degradation and pollution irrespective of the operations taking places or activities triggered / not triggered under GN327, GN325 and GN324.

In view of the above, an EIA process is being undertaken to comply with the requirements of the NEMA and the NEMA EIA Regulations, 2014. The NEMA EIA Regulations of December 2014 determines requirements to be met to obtain an IEA. This report has therefore been compiled in compliance with the above regulations.

4.3 NATIONAL ENVIRONMENTAL MANAGEMENT AIR QUALITY ACT, 2004 (ACT NO. 39 OF 2004)

The National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEM: AQA) focuses on reforming the law regulating air quality in South Africa to protect the environment through the provision of reasonable measures protecting the environment against air pollution and ecological degradation and securing ecological sustainable development while promoting justifiable economic and social developments. This Act provides national norms and standards regulating air quality management and control by all spheres of government. These include the National Ambient Air Quality Standards (NAAQS) and the National Dust Control Regulations (NDCR). The standards are defined for different air pollutants with different limits based on the toxicity of the pollutants to the environment and humans, number of allowable exceedances and the date of compliance of the specific standard.

On 22 November 2013 the list of activities which result in atmospheric emissions which have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage was published in Governmental Gazette No 37054, in terms of Section 21(1)(b) of the NEM: AQA.

The proposed Nooitgedacht Colliery will not trigger any of the activities listed under the above-mentioned Regulations. However, Tunnel Vision Resources (Pty) Limited must ensure that emissions from the proposed activities complies with the standards as set in the above-mentioned regulations.

4.4 THE NATIONAL HERITAGE RESOURCES ACT, 1999 (ACT NO. 25 OF 1999)

The National Heritage Resources Act (Act No. 25 of 1999) (NHRA) focuses on the protection and management of South Africa’s heritage resources. The governing authority for this act is the South African Heritage Resources Agency (SAHRA). In terms of the NHRA, historically important features such as graves, trees, archaeology and fossil beds are protected as well as culturally significant symbols, spaces and landscapes. Section 38 of the NHRA stipulates the requirements a developer must undertake prior to development. In terms of Section 38 of the NHRA, SAHRA can call for a Heritage Impact Assessment (HIA) where certain categories of development are proposed.

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon.

The Act also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is deemed adequate, a separate HIA is not required. An assessment of the proposed area will be done to determine if there are any sites that require protection.

4.5 NATIONAL ENVIRONMENTAL MANAGEMENT BIODIVERSITY ACT (ACT No. 10 OF 2004)

The National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEMBA) provides for the management and protection of South Africa's biodiversity within the framework established by NEMA. The Act aims to legally provide for biodiversity conservation, sustainable, equitable access and benefit sharing and provides for the management and control of alien and invasive species to prevent or minimize harm to the environment and indigenous biodiversity. The Act imposes obligations on landowners (state or private) governing alien invasive species as well as regulates the introduction of genetically modified organisms. The Act encourages the eradication of alien species that may harm indigenous ecosystems or habitats. The NEMBA ensures that provision is made by the site developer to remove any aliens which have been introduced to the site or are present on the site.

The NEMBA also provides for listing of threatened or protected ecosystems, in one of four categories: critically endangered, endangered, vulnerable or protected. The purpose of listing protected ecosystems is primarily to conserve sites of exceptionally high conservation value.

The Act supports South Africa's obligations under sanctioned international agreements regulating international trade in specimens of endangered species, and ensures that the utilization of biodiversity is managed in an ecological sustainable way.

The SR has been compiled to ensure that all applicable requirements prescribed in the NEMBA are complied with.

4.6 MPUMALANGA NATURE CONSERVATION ACT, 1998 (ACT No. 10 OF 1998)

The Mpumalanga Nature Conservation Act, No. 10 of 1998, aims to consolidate and amend the laws relating to nature conservation within the province and to provide for matters connected therewith. Provincial legislation relevant to biodiversity conservation comprises of two Provincial Acts, the Mpumalanga Nature Conservation Act (Act 10 of 1998) and the Mpumalanga Tourism and Parks Agency Act (Act 5 of 2005). In relation to nature conservation, the province has developed the Mpumalanga Biodiversity Conservation Plan (MBCP). This plan has been jointly developed by the Mpumalanga Tourism and Parks Agency (MTPA) and the Department of Agriculture and Land Administration (DALA). The MBCP takes its mandate from the South African Constitution, the National Biodiversity Act (10 of 2004) and the Mpumalanga Nature Conservation Act 10 of 1998. Areas identified under the MBCP as sensitive were identified and where applicable measures will be proposed for ensuring that the areas are not degraded by the proposed project activities. Furthermore, the SR has been compiled to ensure that all applicable requirements prescribed in the NEMBA are complied with.

4.7 MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT No. 28 OF 2002)

The Department of the DMRE is responsible for regulating the mining and minerals industry to achieve equitable access to the country's resources and contribute to sustainable development. The Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) requires that an EIA be conducted and that the EMP be drafted for the mitigation of impacts identified during the EIA for a mining project. During December 2014, the "One Environmental System" was implemented by Government which initiated the streamlining of the licensing processes for mining, environmental authorisations and water use. Under the One Environmental System, The Minister of Mineral Resources, will issue environmental authorisations

and waste management licences in terms of the NEMA, and the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), respectively, for mining and related activities. In view of the above, the application for an IEA for the proposed Nooitgedacht Colliery was submitted to the DMRE as the competent authority.

4.8 NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998)

The National Water Act (Act No. 36 of 1998) (NWA) is the primary regulatory legislation, controlling and managing the use of water resources as well as the pollution thereof in South Africa. The NWA recognises that the aim of water resource management is to achieve sustainable use of water for the benefit of all users and that the protection of the quality of water resources is necessary to ensure sustainability of the nation's water resources in the interests of all water users. The NWA presents strategies to facilitate sound management of water resources, provides for the protection of water resources, and regulates use of water by means of Catchment Management Agencies, Water User Associations, Advisory Committees and International Water Management. The National Government has overall responsibility for and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest. Further, an industry can only be entitled to use water if the use is permissible under the NWA. The enforcing authority on water users is the Department of Water and Sanitation (DWS).

Further, Regulation 704 of the NWA deals with the control and use of water for mining and related activities aimed at the protection of water resources.

Tunnel Vision Resources (Pty) Limited will apply for an integrated water use licence for the water uses triggered by the proposed project to the DWS for consideration.

4.9 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT (ACT NO. 59 OF 2008)

The National Environmental Management: Waste Act (NEMWA) requires that all waste management activities must be licensed. According to Section 44 of the NEMWA, the licensing procedure must be integrated with an EIA process in terms of the NEMA.

The objectives of NEMWA involve the protection of health, wellbeing and the environment. The NEMWA provides measures for the minimisation of natural resource consumption, avoiding and minimising the generation of waste, reducing, recycling and recovering waste, and treating and safely disposing of waste.

Waste management activities are triggered by the proposed disposal of dirty water into the PCD, hence an application in terms of the NEMWA was submitted to the DMRE. However, where applicable, principles and objectives relating to waste management will be used during the compilation of the EMP for the proposed project.

4.10 NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT (ACT NO. 57 OF 2003)

NEMPAA provides for the declaration and management of protected areas in South Africa and provides for the declaration of special nature reserves, national parks, nature reserves; world heritage sites; specially protected forests, forest nature reserves; and mountain catchment areas.

According to Section 48 of NEMPAA, no person may conduct commercial prospecting, mining, exploration, production or related activities in a special nature reserve; national park; nature reserve; world heritage site; marine protected area; specially protected forest area; forest nature reserve or forest wilderness area. Furthermore, Section 48 of the NEMPAA provides that no person may conduct commercial prospecting,

mining, exploration, production or related activities in a protected environment without the written permission of the Minister of Environmental Affairs and the Minister of Mineral Resources. None of the areas were identified.

4.11 EIA GUIDELINES

Several national and provincial EIA guidelines were published by different departments. These guidelines are mainly aimed at assisting relevant stakeholders by providing information and guidance and giving recommendations on several aspects relating to the EIA process. The guidelines can be used by the competent authority, applicant and the EAP during the EIA process. It is therefore important that the EAP and the person compiling a specialist report must have relevant expertise when conducting the environmental impact assessments.

Several guidelines were consulted during the compilation of this report and these include amongst them the following i.e., Guidelines on the Need and Desirability, Department of Environmental Affairs and Tourism Integrated Environmental Management Guidelines, Department of Water Affairs Best Practice Guidelines and the Western Cape Provincial Department of Environmental Affairs and Development Planning Guidelines on Public Participation.

5. NEED AND DESIRABILITY OF THE PROPOSED PROJECT

In terms of the EIA Regulations the need and desirability of any development must be considered by the relevant competent authority when reviewing an application. The need and desirability must be included in the reports to be submitted during the environmental authorisation application processes. This section of the SR will indicate the need and desirability for the proposed Nootgedacht Colliery project, which was compiled in terms of the 2010 guideline on need and desirability, integrated environmental management guideline series 9, Department of Environmental Affairs (now known as the Department of Agriculture, Forestry and Fisheries).

Proposed Nootgedacht Colliery Project is situated within the Msukaligwa Local Municipality in the Mpumalanga Province. As part of the requirements of the compilation of the SR, the applicant must determine the Need and Desirability of the proposed project. This section of the SR was therefore compiled in order to comply with the requirements of the guideline on need and desirability promulgated on the 20th of October 2014 under Government Notice 891 of 2014, which in turn will comply with the requirements of the EIA Regulations, 2014.

The need and desirability determination for this project will hence be structured such that it determines how the ecological attributes of the area, spatial development of the area, socio-economic profile of the communities within the study area and the project's financial viability fits together in ensuring that the proposed project becomes a success for the region.

5.1 ECOLOGICAL INTEGRITY

5.1.1 Considerations of the ecological integrity

Threatened ecosystems

According to the **Vegetation map of Southern Africa (South African National Biodiversity Institute – GIS-based electronic application, 2018)** the study area is situated in the Soweto Highveld grassland

vegetation unit and the Eastern Highveld grassland vegetation unit (Gm 12) / ecosystem (Figure 3). The status of these vegetation units is vulnerable.

According to Government Notice 1002, (Government Gazette No. 34809 9 December 2011), vulnerable ecosystems are considered threatened ecosystems since it is ecosystems that have a high risk of undergoing significant degradation of ecological structure, function, or composition as a result of human intervention, although they are not critically endangered ecosystems or endangered ecosystems (Figure 4).

According to the **National Freshwater Ecological Priority Areas (NFEPA) (South African National Biodiversity Institute – GIS-based electronic application, 2011)** the study area is not situated in a NFEPA river area, upstream water management area or freshwater ecosystem priority area.

According to the **South African National Biodiversity Institute, GIS-based electronic application, 2018: National Biodiversity Assessment - National Wetlands Map 5**, the study area is situated in the vicinity of the following wetland types *viz.* seepage wetlands and channelled valley bottom wetlands, , (Figure 5).

According to the **National Wetland Types (South African National Biodiversity Institute – GIS-based electronic application, 2016)**, wetland areas over the study area form part of the Mesic Highveld Grassland, Group 3, wetland ecosystem type and the Mesic Highveld Grassland, Group 4, (Figure 6). The ecosystem threat status assessment indicates the following categories for wetland types in this wetland ecosystem *viz.* Seepage wetlands – Least threatened Channelled valley bottom wetlands – Least threatened; (Mbona *et. al.* 2015).

According to the **Mpumalanga Biodiversity Sector Plan, GIS-based electronic application (Mpumalanga Tourism and Parks Agency (MTPA, 2013)**, the study area is primarily situated in the terrestrial assessment categories of and “**Heavily Modified**”, meaning areas that are currently transformed and where biodiversity and ecological function has been lost to the point that it is not worth considering for conservation at all; “**Moderately modified – old lands**” meaning areas which were modified within the last 80 years but were at some point abandoned, including old mines and old cultivated lands, collectively termed “old lands”; “**Other Natural Areas (ONAs)**”, meaning areas that are not identified to meet biodiversity pattern or process targets; and “**Critical Biodiversity areas (CBA) – Optimal**” meaning areas optimally located to meet the various biodiversity targets (Figure 7).

According to the **Mpumalanga Biodiversity Sector Plan, GIS-based electronic application (Mpumalanga Tourism and Parks Agency (MTPA, 2013)**, the study area is primarily situated in the freshwater assessment categories of “**Heavily Modified**” meaning areas that have experienced a form of land use that has resulted in the near complete loss of biodiversity and a degree of loss of ecological function; “**Other Natural Areas**” meaning areas that have not been identified as a priority in the current systematic biodiversity plan but retain most of their natural character and perform a range of biodiversity and ecological infrastructural functions; “**Ecological Support Areas (ESA) – Wetlands**” meaning areas that support the hydrological functioning of rivers, water tables, freshwater biodiversity as well as providing a host of ecosystem services through their ecological infrastructure. They need to be maintained in a healthy condition; “This category includes FEPA and “**Dams**” meaning artificial water bodies which may have impacted on wetlands or river systems. These areas may, however, still have a recharge effect on wetlands, groundwater, and river systems. (Figure 8).

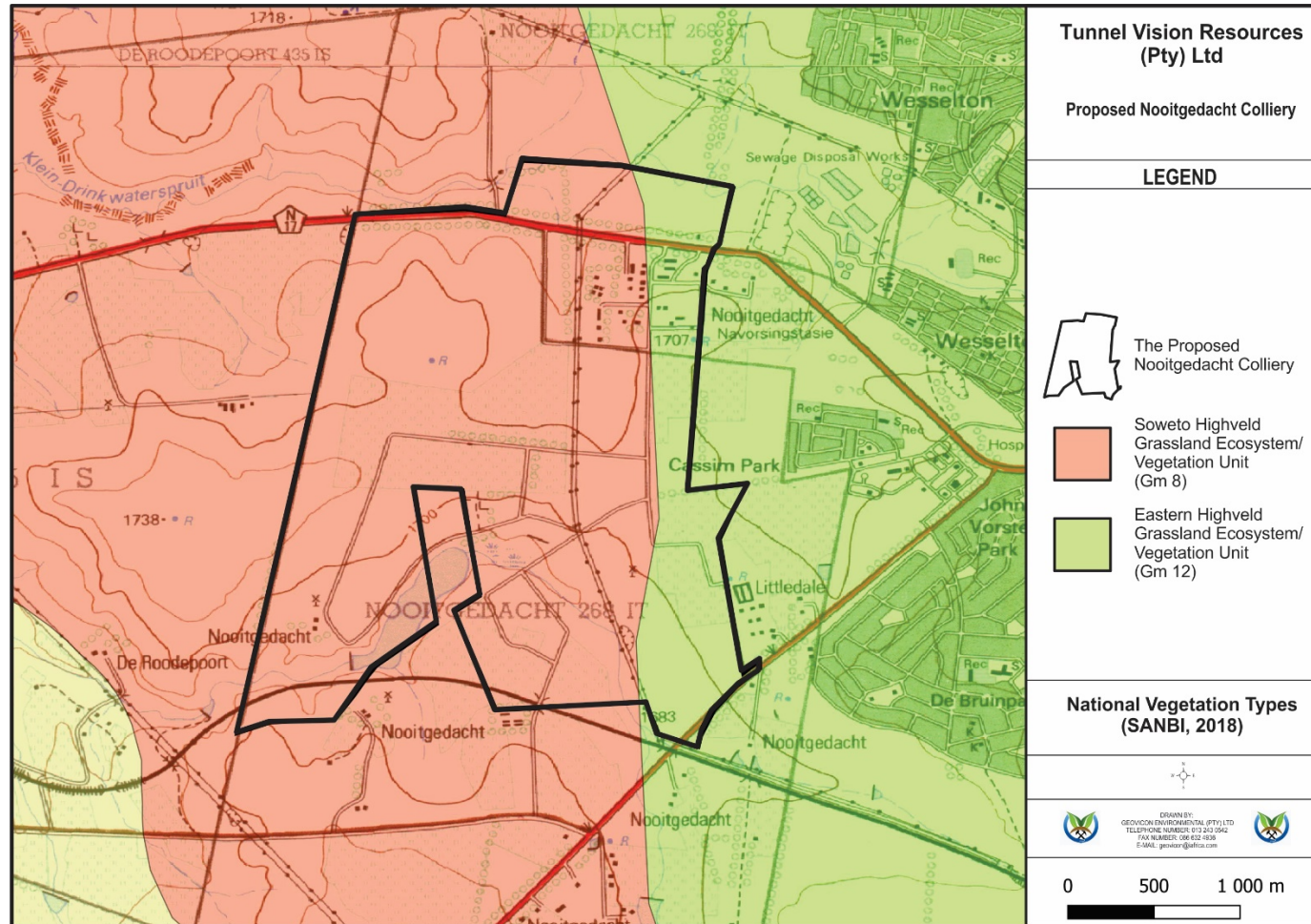


Figure 3: National vegetation map (SANBI) for the proposed Nooitgedacht Colliery

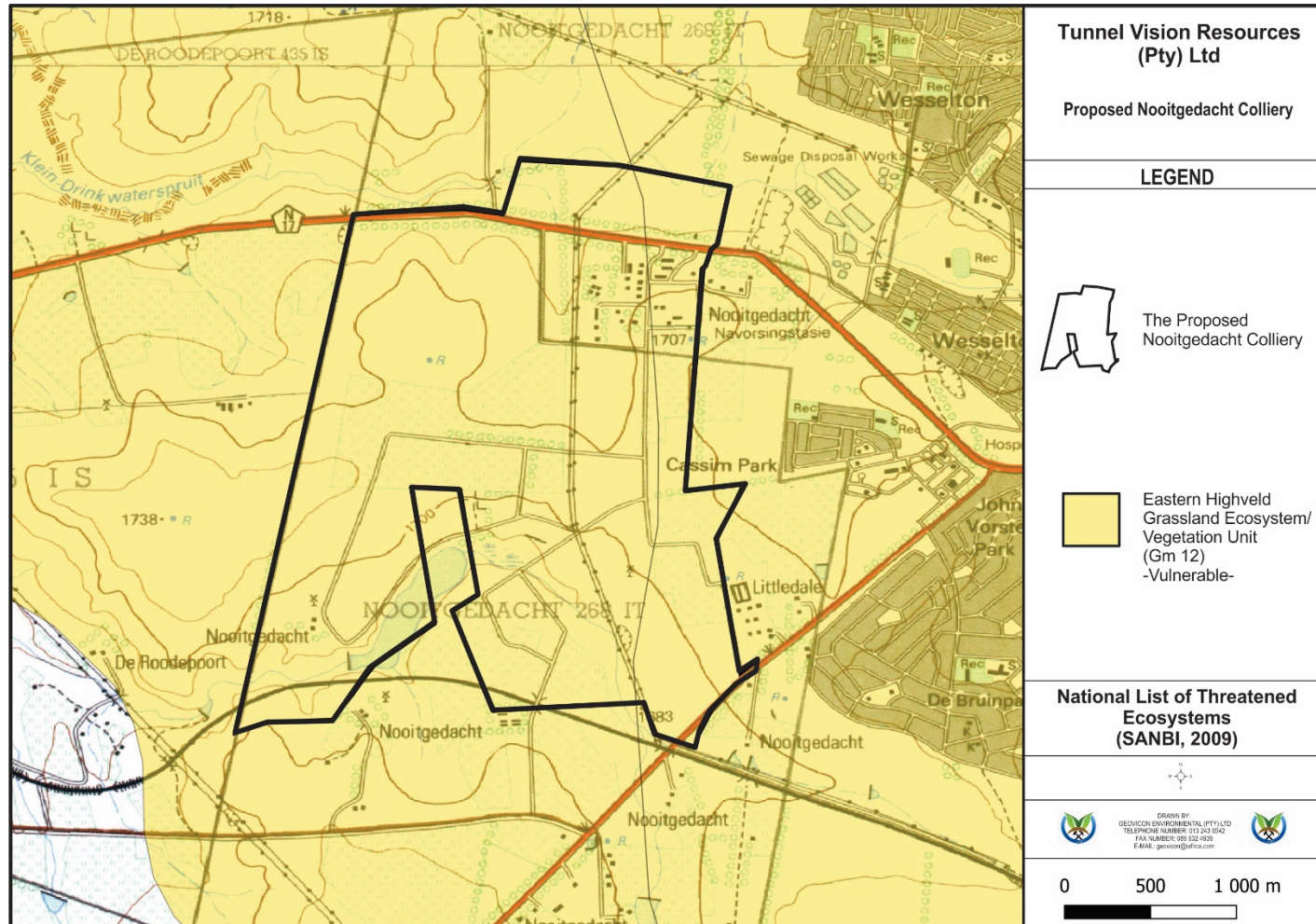


Figure 4: Threatened ecosystems for the proposed Nooitgedacht Colliery

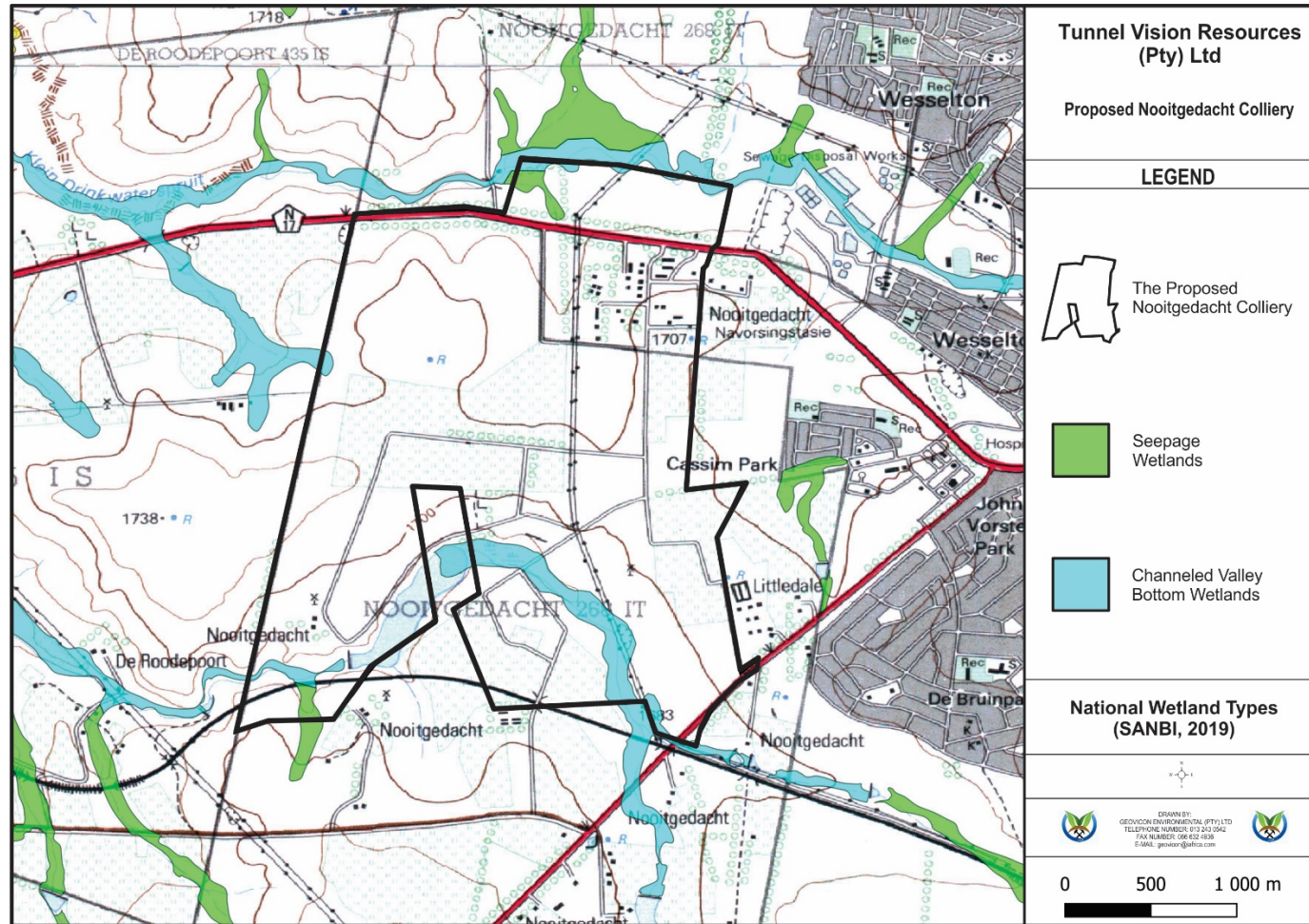


Figure 5: National wetland Types, Map 5 (2018) for the proposed Nooitgedacht Colliery

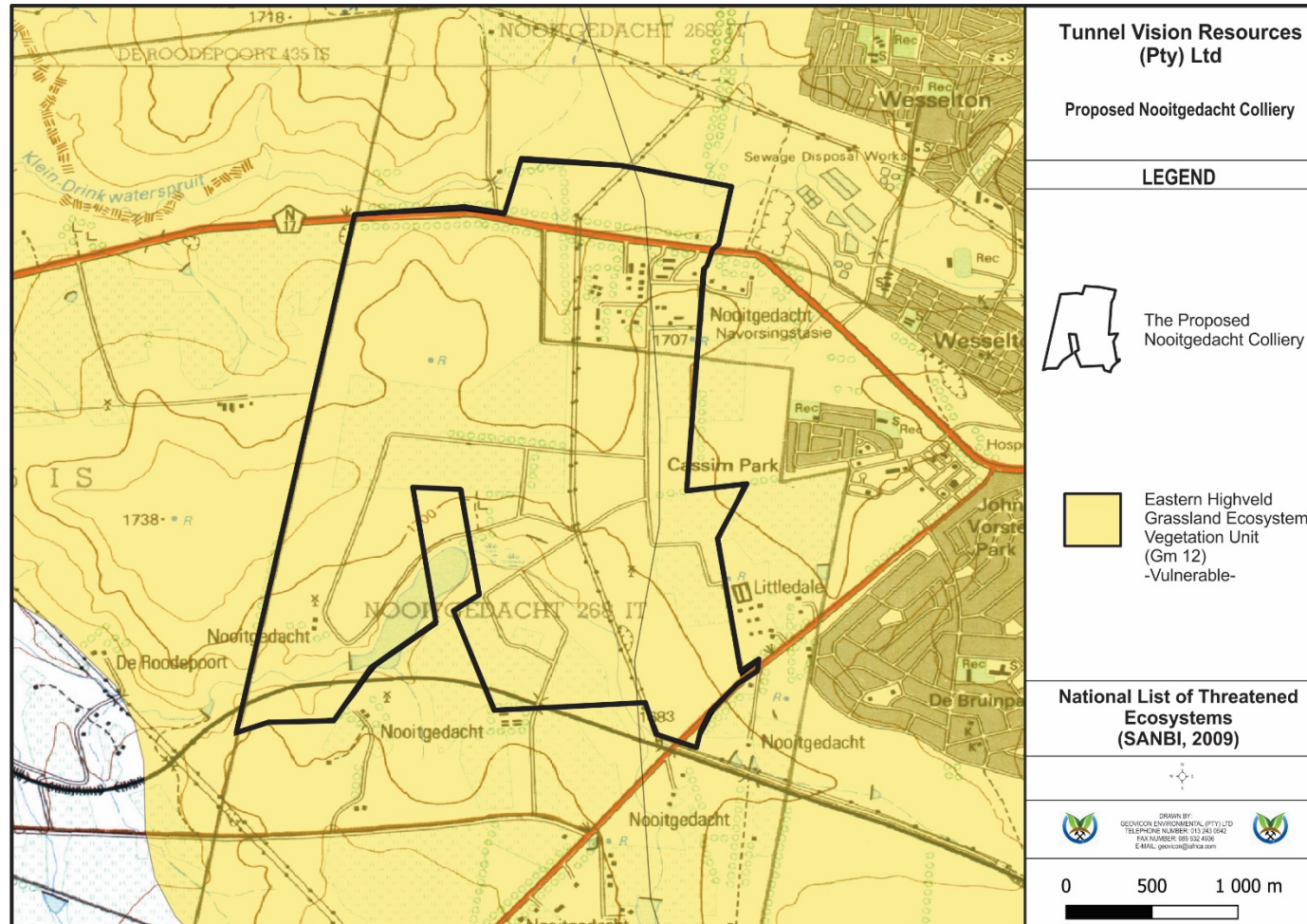


Figure 6: National Wetland Ecosystem types for the proposed Nooitgedacht Colliery

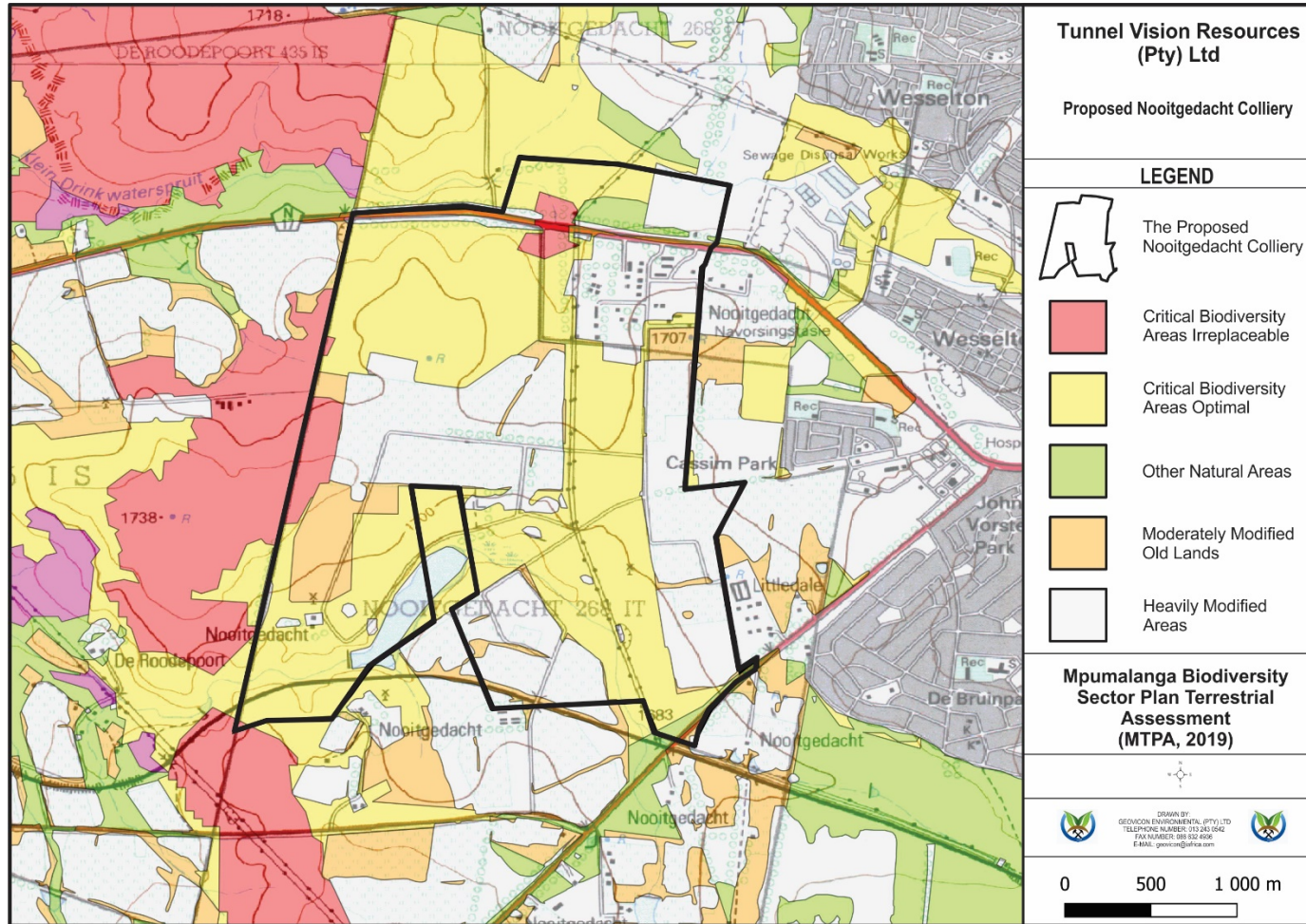


Figure 7: MBSP Terrestrial assessment for the proposed Nooitgedacht Colliery

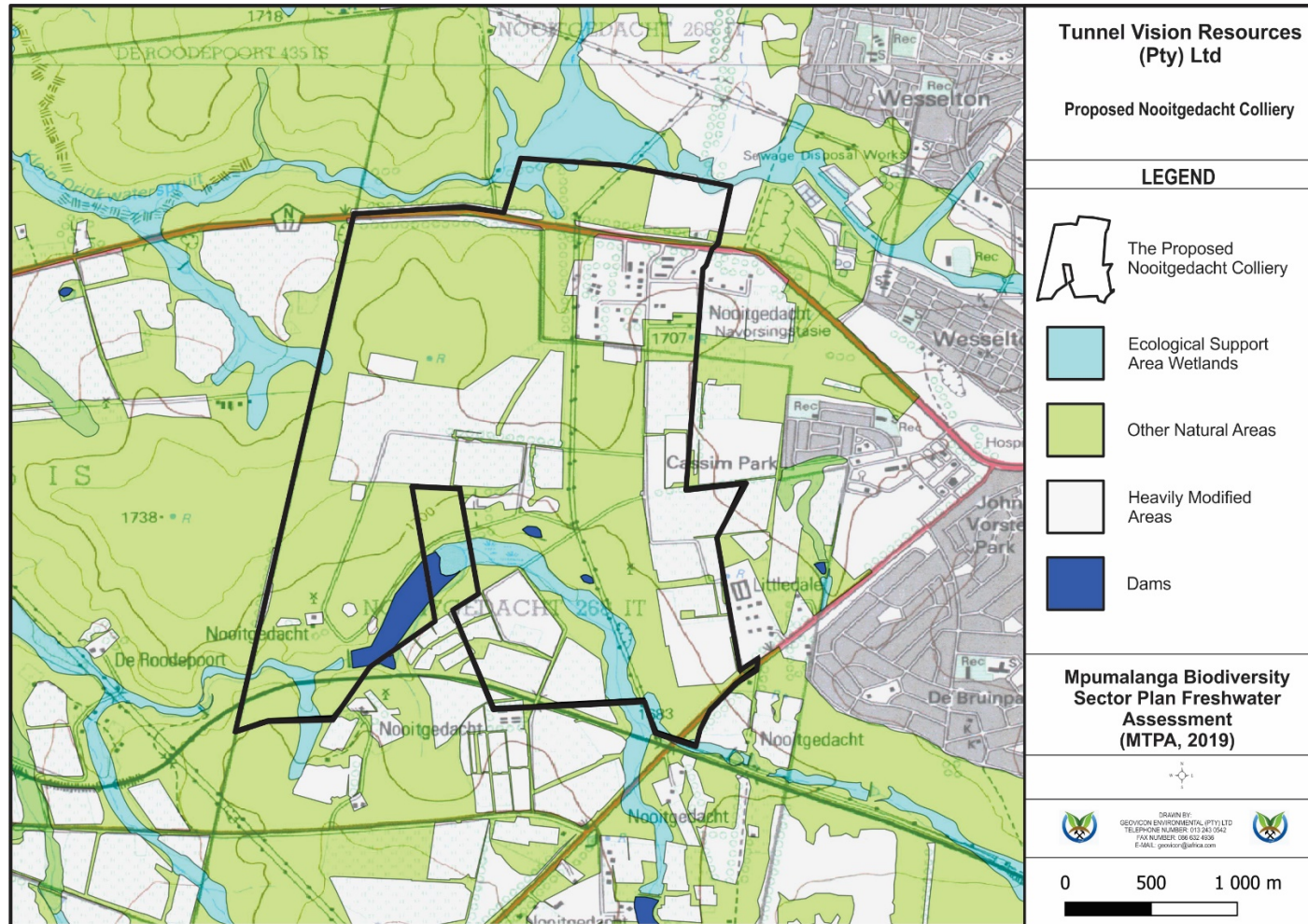


Figure 8: MBSP Freshwater assessment for the proposed Nooitgedacht Colliery

Conservation targets

According to the Mpumalanga Biodiversity Sector Handbook the Rand Highveld grassland vegetation type (Gm 11) / ecosystem is poorly protected. The conservation target is 27 % with a transformed land of 25 % consisting of crop cultivation, grazing and dams. The conservation status of the project area is vulnerable.

Ecological drivers of the ecosystem

According to the Mpumalanga Biodiversity Sector Handbook, the most important ecological drivers in Mpumalanga are built infrastructure, cultivation, mining, prospecting, and residential areas. The proposed Nooitgedacht Colliery is situated in the Nkangala District Municipality with the percentages for the different ecological drivers as a percentage of the surface area of Mpumalanga as:

Built infrastructure – 14.3 %

Cultivation – 1.8 %

Mining – 39.9 %

Prospecting – 75.6 %

Residential – 8 %

Environmental Management Framework

The Mpumalanga Biodiversity Sector Plan (MTPA 2013) is the Environmental Management Framework for Mpumalanga and provides for the sustainable use of natural resources in Mpumalanga by means of utilising the most recent and best quality spatial biodiversity information to inform land use and development planning, environmental assessments and authorisations and natural resource management.

Spatial Development Framework

The Msukaligwa Local Municipality utilises its Spatial Development Framework for land use planning. Based on the above-mentioned special development framework, the proposed project is situated within an already developed area and will hence not conflict with the municipality's spatial development framework regarding preservation of the ecological integrity of the area.

5.1.2 Consideration of the disturbance or enhancement of the ecosystems and/or result in the loss or protection of biological diversity

Only small portion of the infrastructural area will disturb the ecosystem and result in the loss of biological diversity since the area will be stripped of all vegetation and topsoil. This negative impact cannot be avoided since this is the only area where the infrastructural area will have the least environmental impact since the area is already disturbed by historic mining related infrastructure. The negative impact will be remedied by keeping the footprint of the development as small as possible and post mining, by means of rehabilitation and re-vegetation according to best practises.

5.1.3 Consideration of pollution and degradation of the biophysical environment

The Nooitgedacht Colliery may pollute or degrade the biophysical environment with polluted mine water (in the surface and groundwater), coal dust, alteration of surface runoff water quantity, velocity and patterns, soil compaction and invasion of declared invader species. This negative impact cannot be avoided since this is the area where the coal reserve is situated, however it can be mitigated.

The negative impact will be remedied by keeping the footprint of the development as small as possible, by the separation of dirty and clean water, containing all mine polluted water in the proposed PCD, dust

suppression, routing clean water around the mining area to report to the clean environment, keeping the footprint of all stockpiles as small as possible and to implement an eradication programme for declared invader species.

5.1.4 Waste to be generated by the proposed development and their management

According to NEMWA, waste is defined as any substance, material, or object, that is unwanted, rejected, abandoned, discarded, or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material, or object, whether such substance, material or object can be re-used, recycled, or recovered and includes all waste as defined in Schedule 3 of NEMWA. Schedule 3 of NEMWA further divides waste into hazardous and general waste. Both hazardous and general waste will be generated from the Nooitgedacht Colliery. Identification of waste to be generated from the Nooitgedacht Colliery was conducted in terms of Schedule 3 of NEMWA and all identified waste and their management is described below.

General Waste Management

Waste management include the separation of waste components into recyclable waste and waste that require disposal. Waste generated will temporarily be stored on-site prior to off-site transportation to recycling facilities, collection points or licensed waste disposal sites by registered contractors. Nooitgedacht Colliery will use a certified contractor for the collection and disposal of the waste generated from the project area.

Management of domestic waste include the temporary storage of all domestic waste generated from the mine in a demarcated area. The area will have a capacity to handle not more than 100 m³, of waste. Should enough waste be generated to warrant recycling, recycling will be conducted. All generated domestic and general waste will be collected on-site into clearly demarcated waste skips/bins and transported off site by the appointed waste removal contractor. The waste skips/bins will be placed on protected areas.

The domestic/general waste collected from the mine will be transported to a registered solid waste disposal site. The waste stored on site will not be more than 100 m³, for general waste at any given time. The waste generated will comply with the National Norms and Standards for Storage of Waste, 2013.

Hazardous Waste Management

Hazardous waste that may be used at the proposed project include oils, fuel, degreasers, brake fluid, lubricants, and fire suppressants. This list of chemicals to be used at the proposed project will be finalised as the project progresses to the other stages. The MSDS will be made available for all the chemicals stored on site prior to the commencement of construction. The waste management system will be used for the collection and disposal of this waste. The system is described below.

Chemical waste will be removed by a permitted waste disposal contractor for treatment and disposal at a licensed hazardous waste disposal site. Batteries will be removed by a permitted waste disposal contractor for recycling or treatment and disposal at a licensed hazardous waste disposal site.

Management of hazardous waste include the temporary storage of all hazardous waste generated from the mine in a demarcated area. The waste stored on site will not be more than 80 m³ for hazardous waste at any given time. The waste generated will comply with the National Norms and Standards for Storage of Waste, 2013.

All industrial waste will be stored separately in clearly marked containers and waste skips at the workshop area and will be removed by the appointed waste handling contractor.

Hydrocarbon waste will be collected in drums at designated collection waste points that will be underlain by an impervious layer linked to an oil trap or sump, which ensures that spills are contained. Waste from the drums will be collected by the appointed contractor when full for recycling or safe disposal.

Maintenance of the above-mentioned waste storage facilities will take place on slabs that are linked to sumps that prevents potential pollution. The hazardous waste collected is transported to a registered landfill site.

Diesel fuel will be regularly bulk delivered and stored in tanks placed on concrete foundations surrounded by spillage bunds with a capacity to contain 110% of the volume of diesel stored (as per the SANS 10131:2004 specifications).

5.1.5 Consideration of the disturbance or enhancement of landscape

No disturbance of the nation's cultural heritage will be undertaken from the activities associated with the proposed project area. As part of the EIA, the specialist studies will be conducted to determine if negative impacts will occur on sites that constitute the nation's cultural heritage.

5.1.6 Consideration of the impacts on non-renewable natural resources

The Nooitgedacht Colliery will exploit the coal reserve in this area. The coal reserve will only be exploited in an area where the coal is economically viable. This will keep the footprint of the project as small as possible. The consequence of the depletion of the non-renewable natural resource will be a positive impact on the community. This negative impact cannot be avoided since this is the area where the coal reserve is situated. The negative impact will be remedied by rehabilitation and re-vegetation of disturbed areas.

5.1.7 Consideration of the impacts on renewable natural resources

5.1.7.1 Increment of the project's dependency on resources to maintain economic growth

The proposed Nooitgedacht Colliery coal mining project will reduce resource dependency since the non-renewable natural resource (coal) will be totally extracted.

5.1.7.2 Use of natural resources

Since South Africa is still dependant on coal for energy, and it is seen as a strategic mineral by the government, the proposed use of the natural resource constitutes the best use thereof. The use is justifiable since South Africa is currently still dependent on coal for energy because the use of alternative methods for energy is still too expensive in South Africa. Coal will probably not be used by future societies as an energy resource since alternative energy resources will become cheaper in future. The coal resource will thus not be needed by future societies and thus do not need to be justifiable. Energy generation is the most important priority for which the resource can be used.

5.1.8 Application of risk-averse and cautious approach

5.1.8.1 Knowledge Gaps

The limits of current knowledge are the fact that most of the environmental investigations that were conducted, concentrated on the Nooitgedacht Colliery areas within the Nooitgedacht Colliery Mining Right area.

5.1.8.2 Application of the risk-averse and cautious approach to the proposed project

A risk-averse and cautious approach was applied by means of the different environmental investigations, including impact assessments, which were conducted for the proposed project and will form part of the EIR/EMPr.

5.1.9 Consideration of people's environmental rights

5.1.9.1 Negative impacts on people's environmental rights

There are commercial farmers situated within or immediately adjacent to the proposed project area, that may be negatively impacted regarding the above-mentioned negative impacts. The negative impact cannot be avoided since this is the area where the coal reserves are situated. The negative impact will be remedied by keeping the footprint of the development as small as possible and post mining, by means of rehabilitation and re-vegetation of the opencast mining and infrastructure areas, according to best practises.

5.1.9.2 Positive impacts on people's environmental rights

Nooitgedacht Colliery will at a minimum spend the legislative required percentage of its revenue on community projects in accordance to its Social and Labour Plan.

The following include the positive impacts from the proposed project:

- More job opportunities will be created for people living in the nearby communities.
- The proposed project has effects on the local economy by capital expenditure, investment in local projects and other activities. This not only has direct positive impacts on the economy, but also creates a demand for a variety of goods and services that in turn stimulate local sectors. This economic environment will likely generate more opportunities for micro and small businesses, provided they are formalised and able to meet the procurement requirements of the proposed mine.

5.1.9.3 Impacts of the proposed project on ecological integrity objectives/targets/considerations of the project area

The proposed Nooitgedacht Colliery will negatively impact on ecological integrity objectives/targets/considerations. The negative impact will be remedied to an extent by keeping the footprint of the development as small as possible and post mining, by means of rehabilitation and re-vegetation, especially of the shaft and infrastructure area, according to best practises.

5.1.9.4 Consideration of the need to secure ecological integrity and a healthy biophysical environment

This negative impact cannot be avoided since this is the area where the coal reserve is situated. No alternatives can be considered since this is the area where the coal reserve is situated.

5.1.9.5 Description of cumulative ecological/biophysical impacts

The proposed Nooitgedacht Colliery is situated within the Mining Right area of Nooitgedacht Colliery. The negative cumulative ecological/biophysical impacts of the project may be high since it is situated in the vicinity of some wetland areas. The positive cumulative impact will be that the areas will be rehabilitated and re-vegetated to be grazing land. Vegetation cover and number of plant species will thus in future be higher than in the case of mono-crop cultivation. Over time, plant species occurring in natural veld may once again colonise the areas and this will enhance the habitat for small mammals, invertebrates, and other small animal species.

5.2 SOCIO-ECONOMIC CONTEXT OF THE AREA

5.2.1 Risk-averse and cautious approaches applied in terms for socio-economic impacts

Desktop studies and literature review, primary data, consultation, and fieldwork were used to gather data for the determination of the socio-economic impacts from the proposed project. These included various secondary data sources for the extrapolation of information to determine and analyse the social and economic characteristics of the study area. A site visit was undertaken and interviews conducted with relevant stakeholders and I&APs to assist in establishing the baseline environment, social fabric, as well as the key economic activities of the core communities. Information gathered in terms of the above approaches are deemed sufficient to determine the current socio-economic situation and the impacts from the proposed project.

5.2.2 Impacts on people's environmental rights

The environmental rights contained in section 24 of the Constitution of the Republic of South Africa (Act No. 108 of 1996) provide that everyone is entitled to an environment that is not harmful to his or her well-being. In the context of the proposed Nooitgedacht Colliery, this requires a determination of what level of pollution and degradation to the environment from the project is harmful to well-being. The general approach of the common law is to define an acceptable level of impacts which a reasonable person can be expected to tolerate in the circumstances. The subjectivity of this approach can be problematic which has led to the development of environmental guidelines and noise standards.

Several studies were conducted over the project area, which included studies on biophysical and social aspects of the environment. The outcomes of the studies were used to identify possible impacts from the proposed project. All significant impacts identified from the proposed project will be avoided and if they cannot be avoided, they will be mitigated to ensure that they are within acceptable levels as determined by the applicable environmental guidelines and standards. In view of the above and if the mitigation measures are strictly adhered to, the people's environmental rights as stipulated in section 24 of the Constitution will not be affected by the commencement and operation of the proposed project.

During the operation of the proposed project, monitoring of the environment will be ongoing and the results from the monitoring will be regularly reported to the responsible organs of state. Compliance to the measures that will be included in the EIR/EMPr (after the SR is accepted) will also be undertaken in accordance with the timeframes indicated in the IEA that will be issued. Reports from the above monitoring and compliance assessment will be made available to the public for their perusal and commenting. The above illustrate the commitment Tunnel Vision Resources (Pty) Limited will have ensuring that the environment is held in public trust for the people.

5.2.3 Public participation

A process that ensures that consultation with I&APs for the project will be undertaken. The process will be conducted to provide all I&APs with an opportunity to comment on the project. Platforms such as public meetings (focussed group) and public commenting opportunities will be offered to the I&APs. Tunnel Vision Resources (Pty) Limited further commits to ensure their contribution to environmental education, to their employees and the nearby communities during the proposed project's LoM.

The employees will be made aware of work that may be harmful to their health and the environment and of any work posing danger. This will be undertaken in terms of the Mine Health and Safety Act, 1999 (Act 25 of 1999) and their regulations, which gives the employees the right to refuse work that is dangerous and

Tunnel Vision Resources (Pty) Limited will respect decisions of employees regarding the above and is committed to the protection of employees against any dangerous working environment.

All issues raised by the I&APs will be recorded and addressed in the final SR.

5.2.4 Intergovernmental co-ordination

Before the proposed project can proceed, IEA must be applied for and issued. The above-mentioned application must be made to the competent authority, which in this case is the DMRE.

In the spirit of co-operative governance and in compliance with the NEMA, the competent authority will, during the processing for this application, consult with other organs of state that administer laws that relate to a matter affecting the environment relevant to this application.

The organs of state that will be consulted may include the following:

- Department of Mineral Resources and Energy
- Department of Water and Sanitation
- Department of Agriculture, Land Reform and Rural Development
- Mpumalanga Tourism and Parks Agency
- South African Heritage Resource Agency
- SANRAL
- ESKOM
- Transnet
- Msukaligwa Local Municipality
- Relevant Ward Councillors

Note however that this list is not exhaustive as more organs of state may be identified by the competent authority.

Aside from the NEMA IEA, an integrated water use licence will be required for the water uses for the proposed project area.

In view of the above, Tunnel Vision Resources (Pty) Limited believes that sufficient intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to environment were undertaken. No conflicts of interests between organs of state are therefore anticipated in the application.

5.2.5 Environmental considerations

In the interest of the public and in bid to ensure that the environment is used to the interest of the public, environmental baseline data was obtained through various independent agencies and used in the SR. The data accumulated and analysed is deemed sufficient to gain a baseline indication of the present state of the environment. The impacts that could arise during and after the proposed activities were determined and ranked according to their significance. Based on the impact assessment, recommendations were made for the mitigation of significant negative environmental impacts that will result from the proposed project.

The proponent will also make sufficient financial provision for remedying pollution, environmental degradation, and consequent adverse health effects and of preventing, controlling, or minimising further pollution, environmental damage, or adverse health effects through a bank guarantee for closure costs and by making funds available from their operational costs during the operational phase of the mine.

6. MOTIVATION FOR THE PREFERRED DEVELOPMENT FOOTPRINT

6.1 CONSIDERATION OF ALTERNATIVES

The amended NEMA, EIA Regulations, 2014 requires a SR to identify alternatives for projects applied for. An alternative in relation to a proposed activities, refers to different means of meeting the general purpose and requirements of the activities, which may include alternatives to (a) the property on which or location where it is proposed to undertake the activities; (b) the type of activities to be undertaken; (c) the design or layout of the activities; (d) the technology to be used in the activities; (e) the operational aspects of the activities; and (f) the option of not implementing the activities.

6.1.1 Project Alternatives

The location of the proposed development is the most suitable due to its ideal location in terms of the requirements for coal mining. Prospecting boreholes drilled indicated that the quality of the coal in the area where the applicant proposes to mine coal, is of the best quality and therefore no alternative site has been investigated.

6.1.2 Site Layout Alternatives

Site layout alternatives can be considered after specialist input has identified possible sensitive landscapes and wetland zones have been delineated.

6.1.3 Transport Alternatives

In terms of the proposed Nooitgedacht Colliery the most viable option to accessing the site will be via the existing R39 Provincial Road.

6.2 CONCLUDING STATEMENT

- If the mine cannot proceed with this project, this may result in the sterilisation of the reserves for an extended period, which will cause loss of revenue to the local municipality and the district at large.
- In view of the above, the consequences of not proceeding with this project will have a detrimental impact on the employment opportunities to be created, the surrounding previously disadvantaged community and the owners of the mine.

7. DETAILS OF THE PUBLIC PARTICIPATION PROCESS FOLLOWED

In terms of Chapter 6 of the NEMA regulations (GNR 326), all potential I&APs should be informed of the project and be given a chance to register as an I&APs in order to raise any comments and concerns which relates to the proposed project.

7.1 THE CONSULTATION PROCESS UNDERTAKEN

Public participation is the cornerstone of the EIA process. The principles of the NEMA govern many aspects of EIA's, including public participation. The general objectives of integrated environmental management laid down in the NEMA include to "ensure" adequate and appropriate opportunity for public participation in decisions that may affect the environment". The National Environmental Management Principles include the principle that "The participation of all I&APs in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary to achieve equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured", which basically means that the person responsible for the application (EAP) must ensure that provision of sufficient and transparent information on an ongoing basis to stakeholders are made to allow them to comment, and to ensure that the participation of previously disadvantaged people like women and the youth are undertaken.

In terms of the EIA Regulations, 2014 (as amended), when applying for an IEA, the EAP managing the application must conduct a public participation process where all potential or registered I&APs, including the competent authority, are given a period of at least 30 days to submit comments on each of the SR, BARs, EIR/EMPr and where applicable the closure plan. In this case the SR and the EIR/EMPr is considered.

This section of the SR will explain the public participation process taken to comply with the above-mentioned requirements. Several public participation guidelines were published in a bid to assist persons responsible for the environmental authorisation applications. As much of the available guidelines were used in determining the public participation process, in guiding the public participation process of the proposed project.

Tunnel Vision Resources (Pty) Limited is applying for an IEA for the proposed Nooitgedacht Colliery. The application for the IEA is undertaken in terms of the process as laid out in part 3 of Chapter 4 under the NEMA EIA Regulations, 2014 (as amended). The above-mentioned regulations require that an applicant for an IEA submit a SR and an EIR/EMPr report to the competent authority after having subjected the reports to a public participation process.

In view of the above, a public participation process was initiated for the proposed project. The public participation process for the proposed project is designed to provide sufficient and accessible information to I&APs in an objective manner to assist them to:

- Raise issues of concern and make suggestions for enhanced benefits;
- Contribute local knowledge and experience;
- Verify that their issues have been captured;
- Verify that their issues have been considered in the technical investigations; and
- Comment on the findings of the SR.

7.1.1 Registration phase

Immediate and adjacent landowners, local municipality, state departments and the greater public will be notified via emails (individual notices), site notices and a local newspaper of the proposed project. The Draft SR will be made available for comments to all relevant stakeholders during the registration phase.

7.1.2 Registered Interested and Affected Parties

The I&APs identified are as follows:

- Department of Mineral Resources and Energy
- Department of Water and Sanitation
- Department of Agriculture, Land Reform and Rural Development
- Mpumalanga Tourism and Parks Agency
- South African Heritage Resource Agency
- SANRAL
- ESKOM
- Transnet
- Msukaligwa Local Municipalities
- Relevant Ward Councillors
- Direct and Adjacent Landowners
- Office of the Regional Land Claims Commissioner
- Communities

7.1.3 Scoping Phase

The draft Scoping Report was placed in the Ermelo Regional Library on the 03rd of February 2023 for evaluation and comment. An advertisement was placed in the local newspaper (Highvelder Newspaper) on the 03rd of February 2023 in accordance with Regulation 41 of Government Notice No. 326 under section 24 of the National Environmental Management Act, 107 (Act no. 107 of 1998) informing the public about the availability of the draft scoping report in the said Library for evaluation and comment. The draft SR was made available to the competent authority, potential and registered I&APs for their comment from the 03rd of February 2023 to 06th of March 2023 for thirty (30) days.

7.1.4 EIA/EMP Phase

Upon acceptance of the final SR, the draft EIR/EMPr report, will be compiled and submitted to relevant State Departments, the Msukaligwa Local Municipality, and registered I&APs for evaluations and for comments. The draft EIR/EMPr will also be placed at the Ermelo Regional Library for comment. An advert will be placed in the local newspapers (Highvelder Newspaper) in accordance with Regulation 41 of Government Notice No. 326 under section 24 of the NEMA informing the public about the availability of the draft EIR/EMPr report in the said library for evaluation and comments and inviting the public to a public meeting. Once the commenting period lapses, the final EIR/EMPr including comments from registered I&APs, will be submitted to the DMRE for their evaluation and decision-making.

7.1.5 Record of Decision (ROD)

Once a decision on the application has been taken and communicated to the applicant by the competent

authority, all registered I&APs will be informed directly in writing, via email or fax and indirectly through advertisement in local newspapers.

8. BASELINE INFORMATION

8.1 GEOLOGY

The proposed project area falls within the Ermelo Coalfield. Nooitgedacht Colliery is situated near current small- and large-scale operating collieries, which have an impressive history of exploration and mining activities, associated with them. The geology, sedimentary deposition, and mineralogy of the coal seams within the Ermelo Coalfield are well understood.

Ermelo Coalfield

The Ermelo coalfield extends from Carolina in the north to Dirkiesdorp in the south and includes the districts of Hendrina, Breyten, Davel, Ermelo, and Morgenzon encompassing a surface area of approximately 11 250 km². The Ermelo Coalfield has a somewhat arbitrary boundary with the Witbank and Highveld coalfields to the west, and the Klipriver and Utrecht coalfields to the south, whilst the eastern and northern boundaries are delineated by pre-Karoo basement outcrop.

The coal seams present within the Carolina – Breyten sector are alphabetically numbered from the top as follows; A, B, C, D and E seams. The A and D seams are generally too thin (< 0,6 meters) to be of economic importance. The B seam generally attains a thickness of between 2,0 – 3.7 m and consists of alternating layers of poor and good quality coal with generally high ash content. The C seam can attain a thickness of between 0,6 and 2,0 meters and is generally the target seam within the Ermelo area. The E seam is generally well developed in the Carolina – Breyten sector of the Coal Province and may attain a thickness of 3.0 meters.

Description and distribution of the coal seams within the Ermelo sector.

The coal seams present within the Carolina – Breyten sector are alphabetically numbered from the top as follows; A, B, C, D and E seams. The A and D seams are generally too thin (< 0,6 meters) to be of economic importance. The B seam generally attains a thickness of between 2,0 – 3.7 m and consists of alternating layers of poor and good quality coal with generally high ash content. The C seam can attain a thickness of between 0,6 and 2,0 meters and is generally the target seam within the Ermelo area. The E seam is generally well developed in the Carolina – Breyten sector of the Coal Province and may attain a thickness of 3.0 meters.

The host rocks of the coal seams vary from fine-grained laminated and micaceous to coarse and gritty sandstones with alternating zones of shale and shaly sandstone. The total thickness of the Middle Ecca is up to 170 meters and the main coal zone within it, up to 85 meters. The thickness of the partings between seams A and B, B and C, and C and D are 30 – 60 meters, 6 – 9 meters, and about 12 meters respectively.

The A seam

The A seam occurs in isolated outliers in the sector. Although of moderate quality, it has no reported economic importance. It occurs usually as an interbanded shaly coal seam with a thickness of 1 meter.

The B seam

The B seam may be split into seam bands and occurs as three discrete leaves. These are designated as the BX, B and B1 seams (also locally known as the B upper, B, and B1 seams).

The BX seam (B Upper) attains a thickness of approximately 1 meter and is separated from the B seam by a thin shale or sandstone (~ 0,4 m) parting. This seam consists of dull coal with occasional bright bands.

The B seam varies in thickness from 1 – 2,7 meters. This seam consists of a bright-banded coal of good quality and low ash content within the Carolina area.

The C seam

The C seam is a complex seam, consisting of several plies separated by partings of variable thickness.

Traditionally the C seam group is subdivided into the C Upper and C Lower seams. The C Upper seam may be split into two seams.

The C Upper seam

This seam is well developed over the sector. However, it is usually a complex seam of two or three plies, split by in seam sandstones, siltstones or mudstones of variable extent and thickness. In the Carolina – Breyten sector, the seam is more complex, due to the proximity of large channel fill sandstones. A further complication is the occurrence of a thin, although laterally persistent seam (locally known as the B1). This thin seam may either be separated from the C Upper by a thin parting, or may gradually migrate up the sequence to the base of the B seam. The upper portion of the C Upper seam is typically of poor quality and may be torbanitic over large areas. The lower portion of the seam is of good quality coal and consists of vitrain and durian bands.

The C Lower seam

The C Lower seam is usually thin and seldom greater than 0.6 m in thickness. The floor of the seam is usually sandstone or interbedded sandstone and shale, whilst the roof is generally interbedded carbonaceous shale.

The upper portion of the seam is generally of good quality, with interbanded vitrain and durian bands. The lower portion of the seam normally becomes more torbanitic towards the base.

D seam

The D seam seldom attains a thickness greater than 0.6 m and thus is usually too thin to be of economic importance. The overlying and underlying sediments are predominantly sandstones with minor siltstone intercalations. The coal is vitrainitic with occasional durian bands.

E seam

The E seam is well developed and is of economic significance. It attains a thickness of over three meters (although thinning to a maximum thickness of 1.2 meters within the Carolina area). The roof and floor of the seam are generally composed of competent sandstone. The seam consists of predominantly bright banded (vitrainitic) coal. It should be noted that the seams to be found in the area will be concluded after prospecting at Steynsdraai has been conducted.



Figure 9: Coalfields associated with Nooitgedacht Colliery

8.2 CLIMATE

8.2.1 Regional Climate

The proposed mining area falls into the Eastern Plateau Highveld climate zone, characterised by relatively warm wet summers and cold dry winters.

The average rainfall per year is 631 mm, with the wetter months occurring from October to March. Maximum recorded rainfall for 60 minute and 24-hour periods ranges from 6.4 mm to 50.1 mm (60 minutes) and 17.4 mm to 80.0 mm (24 hours) with November and February having the highest precipitation for the 60 minutes and 24-hour events respectively.

During the summer months the wind direction is generally north to northeast. During winter, the winds are somewhat more northeast to northwest.

8.2.1.1 . Mean Monthly Rainfall

Average monthly rainfall and the number of days experiencing rainfall are presented in Table 5. The average rainfall per year is 670 mm, with the wetter months occurring from November to March.

Table 5: Climatic conditions in the vicinity of Nooitgedacht Colliery–Ermelo.

MONTH	MM	AVERAGE NO OF RAIN DAYS
October	73.2	6.5
November	122.5	9.0
December	110.2	8.1
January	115.6	9.0
February	87.5	6.4
March	77.0	6.0
April	41.6	3.8
May	17.8	1.5
June	7.6	0.7
July	4.9	0.5
August	8.8	0.8
September	22.0	2.2
Mean Annual	670*	

8.2.1.2 Mean Monthly Maximum and Minimum Temperatures

No weather stations are near the proposed project area. The closest weather station is in Witbank. Temperature data from the Witbank weather station (Station number 0515320 8) was analysed and a summary of the data is presented in Table 6. The temperature data spanned 2001 to 2010.

Table 6: The mean maximum and minimum temperatures

Month	Average daily minimum temperature (°C)	Average daily maximum temperature(°C)
January	15.3	26.1
February	14.9	26.3
March	13.3	25.0
April	10.7	23.2
May	7.1	20.8
June	4.8	18.3
July	4.1	18.5
August	6.6	21.3
September	9.3	24.9
October	12.3	26.0
November	13.5	25.2
December	14.7	26.1

Monthly Mean Wind Direction and Speed

No data on the wind patterns is available for the mine. Owing to the location of the site, the gentle undulating topography and the non-existence of mountain ranges, no localised wind systems (topographically induced) will be generated.

Extreme weather conditions

The area is prone to host extreme events on a regular basis. These events include the following:

- The area is prone to drought conditions.
- Regular frost occurs during the winter months.
- Rainfall occurs as scattered thunderstorms.

Strong gusty winds prior to and during thunderstorms.

8.3 TOPOGRAPHY

The elevation of the surrounding area ranges from 1662 metres above sea level to 1728 metres above sea level. The surrounding area is considered undulating and consists of hills and valleys, often with streams in the valleys and pans in the hills.

8.4 LAND USE

The land in the area is mainly used for agricultural activities (crop production and grazing) and has national road (N17), and provincial road (R39). Adjacent land is used for mainly residential purposes, mining activities, crop production and grazing. Refer to figure 10 below.



Figure 10: Land Use Map for the proposed Nooitgedacht Colliery

8.5 BIODIVERSITY

According to Government Notice 1002, (Government Gazette No. 34809 9 December 2011), vulnerable ecosystems are considered threatened ecosystems since it is ecosystems that have a high risk of undergoing significant degradation of ecological structure, function, or composition as a result of human intervention, although they are not critically endangered ecosystems or endangered ecosystems.

According to the NFEPA (South African National Biodiversity Institute – GIS-based electronic application, 2011) the study area is not situated in a NFEPA river area, upstream water management area or freshwater ecosystem priority area.

According to the South African National Biodiversity Institute, GIS-based electronic application, 2018: National Biodiversity Assessment - National Wetlands Map 5, the study area is situated near the following wetland types viz. seepage wetlands, and channelled valley bottom wetlands.

According to the National Wetland Types (South African National Biodiversity Institute – GIS-based electronic application, 2016), wetland areas over the study area form part of the Mesic Highveld Grassland, Group 3, Mesic Highveld Grassland, Group 4 wetland ecosystem type. The ecosystem threat status assessment indicates the following categories for wetland types in this wetland ecosystem viz. Seepage wetlands – Least threatened Channelled valley bottom wetlands – Least threatened.

According to the Mpumalanga Biodiversity Sector Plan, GIS-based electronic application (Mpumalanga Tourism and Parks Agency (MTPA, 2013), the study area is primarily situated in the terrestrial assessment categories of and “Heavily Modified”, meaning areas that are currently transformed and where biodiversity and ecological function has been lost to the point that it is not worth considering for conservation at all; “Moderately modified – old lands” meaning areas which were modified within the last 80 years but were at some point abandoned, including old mines and old cultivated lands, collectively termed “old lands”; “Other Natural Areas”, meaning areas that are not identified to meet biodiversity pattern or process targets; and “Critical Biodiversity areas (CBA) – Optimal” meaning areas optimally located to meet the various biodiversity targets.

According to the Mpumalanga Biodiversity Sector Plan, GIS-based electronic application (Mpumalanga Tourism and Parks Agency (MTPA, 2013), the study area is primarily situated in the freshwater assessment categories of “Heavily Modified” meaning areas that have experienced a form of land use that has resulted in the near complete loss of biodiversity and a degree of loss of ecological function; “Other Natural Areas” meaning areas that have not been identified as a priority in the current systematic biodiversity plan but retain most of their natural character and perform a range of biodiversity and ecological infrastructural functions; “Ecological Support Areas (ESA) – Wetlands” meaning areas that support the hydrological functioning of rivers, water tables, freshwater biodiversity as well as providing a host of ecosystem services through their ecological infrastructure. They need to be maintained in a healthy condition; “and “Dams” meaning artificial water bodies which may have impacted on wetlands or river systems. These areas may, however, still have a recharge effect on wetlands, groundwater, and river systems.

8.6 SURFACE WATER

In terms of the Department of Water and Sanitation, Nooitgedacht Colliery is situated in the quaternary catchment C11F drains into the Vaal river. There are several perennial and non-perennial streams flowing in the proposed

mining right area. Figure 11 depicts the location of Nooitgedacht Colliery in relation to the quaternary drainage regions within the Nooitgedacht Colliery

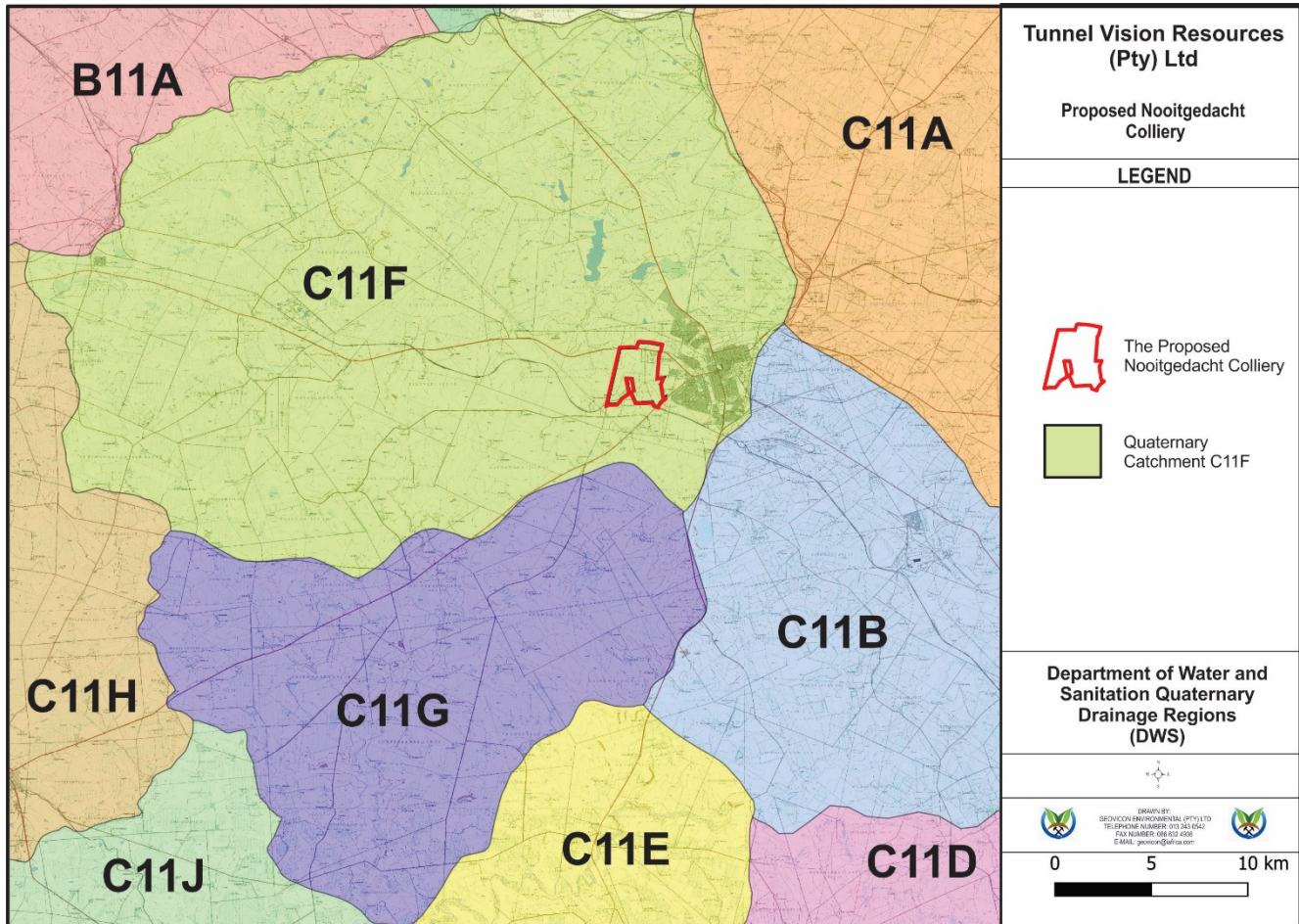


Figure 11: Quaternary catchment areas of the proposed Nooitgedacht Colliery

Table 7: Summary of the Quaternary Catchments associated with the proposed Nooitgedacht Colliery

Quaternary Catchment	C11F
Drains into	Vaal River
Size in km²	937
Mean annual precipitation (mm)	703,30

Evaporation (mm)	1889,50
Mean annual surface runoff (mm)	55,20

River diversions

No river diversions are planned for the prospecting activities covered by this report.

Water Use

The likely downstream users were determined by examining aerial photography and literature surveys.

The downstream users were therefore considered in the stream. The downstream usage classes are evaluated below:

- Domestic users – local inhabitants may consume this river water and will likely also use the water for laundry.
- Recreational users – it is likely that local inhabitants will swim in the streams.
- Aquatic users – fishing.
- Irrigation users – the river water is might to be used for small-scale or informal irrigation.
- Livestock – the river water is likely to be used for drinking by livestock.

Water Authority

The catchment area is government water-controlled catchment. The authority in charge is the Department of Water and Sanitation (Mpumalanga Regional Office).

8.7 GROUNDWATER

Aquifer classification

According to literature the Karoo Supergroup sediments typically act as secondary aquifers (intergranular and fractured rock aquifers). However, the multi-layered weathering system present on these rocks could prove to have up to two aquifer systems present in the form of a shallow, regolith aquifer with a weathered, intergranular soft rock base associated with the contact of fresh bedrock and the weathering zone; and a fractured bedrock aquifer. These aquifer systems are discussed below.

Saturated Zone

In the saturated zone, at least four aquifer types may be inferred from knowledge of the geology of the area:

- A shallow aquifer formed in the weathered zone, perched on the fresh bedrock.
- An intermediate aquifer formed by fracturing of the Karoo sediments.
- Aquifers formed within the more permeable coal seams and sandstone layers.
- Aquifers associated with the contact zones of the dolerite intrusives.

Although these aquifers vary considerably regarding geohydrological characteristics, they are seldom observed as isolated units. Usually, they would be highly interconnected by means of fractures and intrusions. Groundwater will thus flow through the system by means of the path of least resistance in a complicated manner that might include any of these components.

Shallow perched aquifer

A near surface weathered zone is comprised of transported colluvium and *in-situ* weathered sediments and is underlain by consolidated sedimentary rocks (sandstone, shale, and coal). Groundwater flow patterns usually follow the topography, often coming very close to surface in topographic lows, sometimes even forming natural springs. Experience of Karoo geohydrology indicates that recharge to the perched groundwater aquifer is relatively high, up to 3% of the Mean Annual Precipitation (MAP).

Fractured Karoo rock aquifers

The host geology of the area consists of consolidated sediments of the Karoo Supergroup and consists mainly of sandstone, shale, and coal beds of the Vryheid Formation of the Ecca Group. Most of the groundwater flow will be along the fracture zones that occur in the relatively competent host rock. The geology map does not indicate any major fractures zones in this area, but from experience it can be assumed that numerous major and minor fractures do exist in the host rock. These conductive zones effectively interconnect the strata of the Karoo sediments, both vertically and horizontally into a single, but highly heterogeneous and anisotropic unit.

Aquifers associated with coal seams

The coal seam forms a layered sequence within the hard rock sedimentary units. The margins of coal seams or plastic partings within coal seams are often associated with groundwater. The coal itself tends to act as an aquitard allowing the flow of groundwater at the margins.

Aquifers associated with dolerite intrusives

Dolerite intrusions in the form of dykes and sills are common in the Karoo Supergroup, and are often encountered in this area. These intrusions can serve both as aquifers and aquifuges. Thick, unbroken dykes inhibit the flow of water, while the baked and cracked contact zones can be highly conductive. These conductive zones effectively interconnect the strata of the Ecca sediments both vertically and horizontally into a single, but highly heterogeneous and anisotropic unit on the scale of mining. These structures thus tend to dominate the flow of groundwater. Unfortunately, their location and properties are rather unpredictable. Their influence on the flow of groundwater is incorporated by using higher than usual flow parameters for the sedimentary rocks of the aquifer.

Unsaturated zone

Although a detailed characterization of the unsaturated zone is beyond the scope of this study, a brief description thereof is supplied.

The unsaturated zone in the proposed mining area is in the order of between 1 and 20 meters thick and consists of colluvial sediments at the top, underlain by residual sandstone/siltstone/mudstone of the Ecca Group that becomes less weathered with depth. According to the Parsons Classification system, the aquifer could be regarded as a minor aquifer system, but also a sole aquifer system in some cases where groundwater is the only source of domestic water.

8.8 SENSITIVE LANDSCAPE

Wetlands are sensitive landscapes under statutory protection, and such must not be cultivated, overgrazed, or mined. The presence of wetlands within the proposed mining area needs to be assessed and their status determined which will give the applicant and the authorities the pre-mining conditions of the wetlands. To this extent, a wetland specialist will be appointed to conduct a wetland assessment for the proposed project area.

8.9 AIR QUALITY

Potentially air pollution from human activities may arise as a result of particulates entering the atmosphere. The sources of air pollution from human activities comprise of three broad categories i.e., stationary sources (agriculture, mining, quarrying, manufacturing, mineral products, industries and power generation), community sources (homes or buildings, municipal waste and sewage sludge incinerators, fireplaces, cooking facilities, laundry services and cleaning plants) and mobile sources combustion-engine vehicles and fugitive emissions from vehicle traffic). Air pollutants are generally classified into suspended particulate matter (dust, fumes, mists, and smokes), gaseous pollutants (gases and vapours) and odours.

Assessment of the proposed mining right area has determined that all three categories of air pollution sources are found at the proposed area.

8.10 SITES OF ARCHAEOLOGICAL AND CULTURAL INTEREST

A study will be conducted by a suitably qualified specialist to confirm if there are any sites of archaeological and cultural interest found within the proposed mining area.

8.11 SOCIO-ECONOMIC STRUCTURE

The proposed project is situated in the Msukaligwa Local Municipality part of the Gert Sibande District Municipality, which is one of the three districts in Mpumalanga province. The Msukaligwa Local Municipality is situated in Mpumalanga province, within the Gert Sibande District Municipality.

Population density, growth, and location

The mid-year population estimates for 2015 for Mpumalanga Province is estimated at 4 283 900 (7.8% of the total national population) and has remained steady in the period between 2002 and 2015 (Stats SA, Statistics release P0 302, 2016). The population figure for Gert Sibande District was 1 308 129 (Census 2011) and new statistics released by Statistics SA (www.localgovernment.co.za) for 2016 estimate the district's population at 1 445 624.

The Chief Albert Luthuli Local Municipality population was 395 466 in 2011 and increased to 455 228 in 2016 (Stats SA, www.localgovernment.co.za), thus comprising 30.5% of the district. The number of households also increased from 119 874 to 150 420 during this same period. However, the average household size decreased from 3.2% to 3%.

Major economic activities and sources of employment

Mining in the Chief Albert Luthuli Local Municipality is the highest contributor to both economic growth and job creation. Given the abundance of coal reserves in Mpumalanga (and being the key mineral within Chief Albert Luthuli Local Municipality); the local space is likely to benefit from the resources abundantly found within the locality; at the expense of agriculture.

The Economy of the municipality is driven by the Mining sector which contributed 50% in 2009 followed by electricity at 12.1% and Finance at 10.8%. Agriculture and manufacturing don't seem to be performing well within the local space.

9 DESCRIPTION OF ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS

This section will only highlight anticipated impacts from the proposed Nooitgedacht Colliery. This impact assessment is informed by the typical known impacts from the area and for the type of activities that will be undertaken. A more detailed impact assessment for the preferred site layout will be outlined in the draft EIR and EMP. Potential impacts will arise during and after the operation of the proposed project activities, which include the four phases of mining i.e., Construction phase, Operational phase, Decommissioning phase and Closure phase (Residual Impacts).

The following positive and negative environmental impacts that are likely to be caused by the proposed mining and associated surface infrastructures for the proposed Nooitgedacht Colliery were identified.

9.1 CONSTRUCTION PHASE

During the construction phase, the following activities, which are likely to have a detrimental effect on the environmental, social and cultural aspects will be conducted:

- Construction of mine surface infrastructure (offices, workshops, access/haul roads, and other related mining infrastructure);
- Construction of crushing and screening plant
- Excavation of an initial box-cut;
- Preparation and formation of the topsoil, subsoil, and overburden stockpiling areas;
- Preparation of R.O.M. stockpiling area;
- Construction of water management facilities

Topography

The construction of the mine surface infrastructure, R.O.M. and overburden stockpiles and pollution control dam and the excavation of the initial box cut will form topographical highpoints and topographical voids, which will have an impact on the topography of the proposed mining area. This will change the drainage patterns of the affected areas.

Soils

All construction phase activities will result in the stripping of the topsoil, which will result in the disruption of the soil profile within the mining areas. The stockpiling of the topsoil may result in the topsoil being leached out. The stockpiling of overburden material will result in the compaction of the topsoil layer, which will affect the fertility of the soil on which the stockpiles are placed.

Land Use

As described above, the area is predominantly used for crop production and limited grazing. All construction phase activities will result in the land use changing from the above-mentioned land uses

to the mining land use. Note that the impacts during the construction phase will be limited to the initial box cut and infrastructure areas, hence will be less when compared to the operational phase. The construction phase may have impacts on the surrounding land uses, which will be determined during the EIA phase.

Land capability

All construction phase activities will result in the reduction of the land capability through disruption of soil profile.

Natural vegetation

The stockpiling of topsoil may result in the covering of the natural vegetation, which will in turn result in the loss of the vegetation. The construction phase activities on virgin ground will result in the removal of the topsoil layer, which will result in removal of vegetation cover. All mining activities will result in the removal of soils, which in turn, will result in loss of vegetation cover.

Animal Life

All construction phase activities will result in the migration of animals away from the proposed mining area. Disruption of the topsoil profile may also lead to loss of animal burrows/microhabitats.

Surface water

The activities undertaken during the construction phase will result in the formation of voids, which will decrease surface water runoff within the mine-affected catchments. Exposure of soils may lead to increased silt loads in surface water runoff. Rainfall captured within the pit will be exposed to carbonaceous material, resulting in elevation of some chemical components of the water. This water may impact negatively on the surface water of streams, if released.

Groundwater

Note that during the construction phase no extensive mining operations and related activities will be undertaken, hence the mining operation will not have a significant influence on the groundwater. Oil and diesel spillages from earthmoving equipment/diesel tanks/workshop areas may contaminate groundwater. It is however not expected that the activities would impact on the groundwater significantly. In view of the above no significant impacts on groundwater are predicted during the construction phase.

Air Quality

Movement of mining machinery will generate dust and diesel fumes. Dust will be generated by wind blowing over exposed soils. Blasting will also generate dust. This dust may have high concentration of coal, which may be harmful to employees, nearby residents, vegetation and may affect the land use

of adjacent properties. These activities will have an impact on the air quality within and around the proposed mining area.

Visual Aspects

The mine activities will be visible from the surrounding farms and the nearby roads. The visibility of the mine may have visual impacts on the surrounding properties.

Noise

Machine operators in close proximity to mine machinery will be exposed to noise levels in excess of 85 dBA. Noise generated from the site may affect the neighbouring property owners and occupiers.

Social Aspects

Commencement of mining activities may result in the following i.e., Creation of jobs in the Delmas and surrounding areas, Development of mine employees in terms of skills and career development, injection of capital into the local/regional economy, support of the infrastructure development, community development and poverty eradication projects. It must however be noted that the social well-being of the community within and adjacent to the proposed mining area will be affected by the commencement of the mine.

9.2 OPERATIONAL PHASE

The following activities, which may impact on the health of people and the environment, will occur at the proposed Nooitgedacht Colliery during the operational phase:

- Systematic removal of the coal seams by means of opencast mining method;
- Crushing and screening of coal
- Stockpiling and transporting of R.O.M material;
- Disposal of mine affected water into the pollution control facilities; *and*
- Use of the mine surface infrastructure.

The activities listed above are likely to have a detrimental effect on the following environmental/social aspects:

Topography

Removal of coal by the opencast mining method and the stockpiling of coal at the coal stockpile area will result in the formation of voids and highpoints which will impact on the topography of the proposed mining area and its surrounds. The presence of the overburden stockpiles and the mine surface infrastructure will change the topographical features within and around the proposed mining area.

Soils

Removal of the target coal during the operational phase will require that the overburden, which includes the top, subsoil and hards layers, be removed for access to the coal. The above, will result in the disturbance of above-mentioned layers, which will have an impact on the physical and chemical structure of the soil layers, which will in turn have impacts on the animal life and vegetation cover of the affected area. The use of mine machinery may have impacts on the soils due to leaking hydrocarbon fluids. Spillages of coal from the tipper and haulage trucks will cause areas not affected by the mining operation to be contaminated, resulting in the contamination of the soils within those areas.

Land capability

All operational phase activities will result in the reduction of land capability as a result of disruption of soil profiles.

Land Use

As described in the construction phase, the land use will change from crop production, residential, livestock drinking and grazing to mining. Except for the area demarcated for mining, no additional areas will be impacted on by the proposed mining operation.

Natural Vegetation

The systematic removal of the coal by opencast mining methods will result in the removal of soil layers, which will in turn result in loss of vegetation. The above will have an impact on the natural vegetation over the opencast mining areas and indirectly to the animal life, if any, within the affected areas.

Animal Life

The removal of the coal by opencast mining methods will result in the loss of animal burrows/microhabitats due to disruption of the soil profile and stripping of vegetation. This will result in the migration of animals away from the proposed mining area.

Surface water

Removal of coal by opencast mining methods will result in the formation of a void, which will result in loss of MAR within the streams draining from the proposed mining area. Runoff from the upslope area may enter the opencast workings and other dirty water areas, giving rise to an increased loss of potential surface water runoff.

Sensitive landscapes

The erosion and/or sedimentation of the seasonal wetland as a result of poor storm water management. This may result in alien vegetation encroachment within the surrounding wetland.

Groundwater

Seepage from the pollution control dam may enter the groundwater table, resulting in pollution of the aquifer.

Note however, that a Geohydrological study will be undertaken to determine the extent of the anticipated impacts on groundwater.

Air Quality

During the operational phase of the proposed mining operation, mine machinery movement may result in air pollution due to dust and diesel fumes generated. These air pollutants will have a tendency to travel towards the prevailing wind direction, which may cause settling of dust particles on the surrounding properties. Operators close to the mine machinery may also be affected by the dust generated. Note however that dust and fuel particulates tend to attenuate within approximately 500 meters. This situation may however differ in situations where wind speed is stronger than usual.

Dust will also be generated during blasting and will travel a longer distance compared to dust generated by blowing winds and machinery movements, hence the impact on air quality will cover a larger area.

Depending on the prevailing wind direction the landing of dust and fuel particulates on the surrounding properties may affect the vegetation of the land, which may include the cultivated lands.

Wind blowing over exposed soils will generate dust. These activities will have an impact on the air quality within and around the proposed mining area.

Noise

Noise will be generated from mine machinery and blasting, which may be a nuisance to the nearby residents. Noises generated by mine machinery tend to attenuate to allowable levels within approximately five hundred meters. Operators close to the mine machinery may also be affected by the noise generated.

Visual Aspects

All surface activities will be visible from a certain distance from the mine. Dust generated from the mine may be visible from a certain distance from the mine. The potential visual impact sites will include the nearby town Ermelo and several roads. All potential visual impact sites will be identified and discussed in the EIA report.

Regional Socio-Economic Structure

The commencement of the proposed Nooitgedacht Colliery will have a positive impact on the socio-economic structure by creating employment both directly and indirectly through the multiplier effect and by uplifting the economic levels of the surrounding areas through the implementation of the local economic development projects (Social and Labour Plan).

Interested and Affected Parties

All interested and affected persons will be identified and consulted during the environmental impact assessment. Through this consultation all concerns will be recorded and measures to address the concerns identified. During the operational phase the mine will continue to apply an open-door policy with the public, hence the public will have access to the mine and documentation through relevant channels. Any concerns/complaints raised by any Interested and Affected Party will be considered and suitably addressed in a prompt manner.

9.3 DECOMMISSIONING PHASE

The decommissioning phase is taken to begin once all economically exploitable coal reserves have been extracted. The following activities, which may impact on the health of people and the environment

and are associated with the proposed project, will occur at the proposed Nooitgedacht Colliery during the decommissioning phase:

- Removal of all mining related infrastructure;
- Ripping of all infrastructure areas;
- Demolition of crushing and screening plant
- Filling of the final void and final shaping of the rehabilitated opencast pit;
- Rehabilitation of all R.O.M/product coal stockpiling area and haul/access roads;
- Rehabilitation of the dirty water management facilities; and
- Seeding of ripped and rehabilitated surfaces.

The activities listed above are likely to have a detrimental effect on the following environmental/social aspects:

Topography

The removal of infrastructure and filling of voids will re-instate the topography of the area, hence a positive impact will result.

Soils, land capability and use

Removal of the carbonaceous layer from the R.O.M stockpiling area, ripping and rehabilitating of all haul roads and seeding of ripped and rehabilitated surfaces will re-instate the soils, land use and land capability. The above will result in a positive impact.

Natural vegetation

Seeding of ripped and rehabilitated surfaces will re-instate the natural vegetation of the area, hence a positive impact will result.

Animal life

Depending on the final land use, the general rehabilitation of the disturbed areas will see animal life migrating back to the area.

Surface water

Rehabilitation and shaping of the disturbed areas and removing of the pollution control facilities and diversion trenches/berms will result in the re-establishing of the surface water run-off patterns.

Groundwater

No additional impacts on the groundwater of the study area other than the impacts discussed in the operational phase are expected during the decommissioning phase of the project.

Air quality

Removal of the carbonaceous layer from the R.O.M stockpiling area, ripping, and rehabilitating of all haul roads and seeding of ripped and rehabilitated surfaces will result in the generation of dust. Wind blowing over exposed areas will also result in the generation of dust. In view of this, the generation of dust during the decommissioning phase will impact on the air quality of the area.

Noise

Movement of mining machinery during this phase of mining due to the rehabilitation work being conducted will generate noise. Machine operators and other employees near mine machinery will be exposed to noise levels in excess of 85 dBA.

Visual aspects

All mine surface activities during this phase of mining will be visible from a certain distance from the mine. Dust generated from the mine may be visible from a certain distance from the mine. The potential visual impact sites will include the nearby town and several farm roads.

Interested and affected parties

All interested and affected persons would have been identified and consulted during the environmental impact assessment. Through this consultation all concerns will be recorded and measures to address the concerns identified. During the decommissioning phase the mine will continue to apply an open-door policy with the public, hence the public will have access to the mine and documentation through relevant channels. Any concerns/complaints raised will be addressed promptly.

9.4 DESCRIPTION OF THE PROPOSED METHOD OF ASSESSING THE ENVIRONMENTAL ASPECTS

The following prediction and evaluation of impacts is based on the proposed activities to be conducted at the proposed development area.

The evaluation distinguishes between significantly adverse and beneficial impacts and allocates significance against national regulations, standards and quality objectives governing:

- Health & Safety;
- Protection of Environmentally Sensitive Areas;
- Land use; and
- Pollution levels.

Irreversible impacts are also identified.

The significance of the impacts is determined through the consideration of the following criteria:

Probability	: likelihood of the impact occurring
Area (Extent)	: the extent over which the impact will be experienced.
Duration	: the period over which the impact will be experienced.
Intensity	: the degree to which the impact affects the health and welfare of humans and the environment (includes the consideration of unknown risks, reversibility of the impact, violation of laws, precedents for future actions and cumulative effects).

The above criteria are expressed for each impact in tabular form according to the following definitions:

Probability (P)	Definition
Low	There is a slight possibility (0 – 30%) that the impact will occur.
Medium	There is a 30 –70% possibility that the impact will occur.
High	The impact is definitely expected to occur (70% +) or is already occurring.
Area/Extent (E)	Definition
Small	0 – 40 ha
Medium	40 – 200 ha
Large	200 + ha
Duration (D)	Definition
Short	0 – 5 years
Medium	6 – 25 years
Long	26 – 100 years or impact cease after operational life of project
Permanent	101 + years
Intensity (I)	Definition
Low	<p>Does not contravene any laws.</p> <p>Is within environmental quality standards, thresholds, targets or objectives.</p> <p>Will not constitute a precedent for future actions.</p> <p>Effects observable and is reversible with time without human intervention.</p> <p>Will not result in the loss of irreplaceable resources or will result in the loss of least concerned resourced.</p> <p>Will have a slight impact on the health and welfare of humans or the environment.</p>
Medium	<p>Does not contravene any laws.</p> <p>Will not constitute a precedent for future actions.</p> <p>Is not within environmental quality standards, thresholds, targets or objectives.</p> <p>Effects observable and is reversible through rehabilitation or human intervention.</p> <p>Will result in the loss of irreplaceable resources (Vulnerable and Near Threatened).</p>

Will have a moderate impact on the health and welfare of humans or the environment.

High

Contravene laws.

May constitute a precedent for future actions.

Is not within environmental quality standards, thresholds, targets or objectives.

Extensive effects – irreversible alteration to the environment.

Will result in the loss of irreplaceable resources (Endangered or critically endangered).

Will have a significant impact on the health and welfare of humans or the environment.

Significance and Risk Category (S)	Definition
Negligible	The impact/risk is insubstantial and does not require management
Low	The impact/risk is of little importance, but requires management
Medium	The impact/risk is important; management is required to reduce negative impacts to acceptable levels
High	The impact/risk is of great importance, negative impacts could render options or the entire project unacceptable if they cannot be reduced or counteracted by significantly positive impacts, and management of these impacts is essential
Positive (No risk identified)	The impact, although having no significant negative impacts, may in fact contribute to environmental or economical health

9.5 POSITIVE AND NEGATIVE IMPACTS FROM THE PROPOSED ACTIVITY

See section 9.1 for the description of impacts from the proposed activity, which include impacts from the alternative site.

9.6 POSSIBLE MITIGATION MEASURES THAT COULD BE APPLIED

Mitigation measures that could be applied have been detailed in section 9.1 under the impact assessment.

10 PLAN OF STUDY

10.1 DESCRIPTION OF ALTERNATIVES TO BE CONSIDERED AS PART OF THE ENVIRONMENTAL IMPACT ASSESSMENT

Based on the outcomes of the alternatives measured in the draft Scoping Report, no alternatives will be considered as part of the Environmental Impact Assessment.

The option of not proceeding with the proposed Nooitgedacht Colliery was assessed in this draft Scoping Report. However, during the EIA phase, consultation with Interested and Affected Parties and studies undertaken will be considered when investigating the option of not proceeding with the proposed project.

10.2 DESCRIPTION OF ASPECTS TO BE ASSESSED AS PART OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

The purpose of an EIA is to provide adequate and appropriate information about the potential positive and negative impacts of a proposed development and associated management actions. This process cannot be undertaken by the EAP alone. The use of relevant specialists in the environmental assessment process adds value into the process and ensures that enough information is supplied, which will assist in addressing key issues and concerns, and allows for an informed decision-making for the proposed project.

Through the pre-application planning, screening, and scoping for the proposed project, all issues that may arise from the proposed project were identified. Based on the issues, identified data must be obtained in order to determine whether the issues will affect the environment and what measures must be undertaken to manage the issues. In view of the above, specialist studies were identified in order to address the above. In addition to the above and since it is a requirement for the submission of the NEMA IEA application, an Environmental Screening Tool Report for the proposed project was generated from the national web based Environmental Screening Tool, which identified environmental sensitivities for the proposed project area, refer to **Appendix D**. Based on the identified environmental sensitivities of the project area, a list of specialist assessments was identified for inclusion in the environmental impact assessment.

Based on the environmental screening tool report, a list specialist assessment must be undertaken for the proposed project. Note that the specialist assessments identified were based on a very high and high environmental sensitivities. Below is the list of the specialist assessments that were identified i.e.:

- Agricultural Impact Assessment
- Archaeological and Cultural Heritage Impact Assessment
- Palaeontology Impact Assessment
- Terrestrial Biodiversity Impact Assessment
- Aquatic Biodiversity Impact Assessment

- Animal Species Assessment
- Civil Aviation Assessment

10.3 DESCRIPTION OF THE PROPOSED METHOD OF ASSESSING THE ENVIRONMENTAL ASPECTS

The methods for assessing environmental aspects as detailed under section 9.4 of this report will be used during the environmental impacts phase of the proposed project.

10.4 STAGES AT WHICH THE COMPETENT AUTHORITY WILL BE CONSULTED

The competent authority will be consulted on submission of the draft and final SR, which will be submitted to include comments received from I&APs. On acceptance of the final SR, a draft EIR/EMPr will be compiled. After consultation with I&APs, including the competent authority, the final EIR/EMPr will then be submitted to the competent authority including comments (if any) received from I&APs.

10.5 PARTICULARS OF PUBLIC PARTICIPATION PROCESS TO BE FOLLOWED WITH REGARD TO THE ENVIRONMENTAL IMPACT ASSESSMENT

10.5.1 Details of Engagement Process to be followed

The draft EIR/EMPr will be made available for comment to all registered and potential I&APs during the EIA phase of the proposed Nooitgedacht Colliery.

The following methods of notification will be used to notify the registered and potential I&APs of the opportunity to comment on the draft EIR/EMPr during the public participation process for the proposed project:

- Written notices inviting comments on the draft EIR/EMPr will be sent to all I&APs.
- Advertisements inviting potential I&APs to comment on the draft EIR/EMPr will be placed in Highvelder newspaper.
- The draft EIR/EMPr will be submitted to commenting authorities.
- A copy of the draft EIR/EMPr will be placed at Ermelo regional library

10.5.2 Description of Information to be provide to the Interested and Affected Parties

The following information will be provided to the I&APs:

- The site plan (mining and surface layout plan for the proposed project);
- List of activities to be authorised. This will include the scale and extent of activities to be authorised;
- Typical impacts of activities to be authorised. Environmental studies have been undertaken and will be revised where necessary to include comments from the I&APs. These studies were and will be used for the compilation of the SR and the EIR/EMPr, respectively. These reports,

which will determine the predicted impacts associated with the proposed project on the environmental aspects will be provide to the I&APs;

- The duration of the activity applied for will be provided; and
- Sufficient detail of the intended operation to enable the I&APs to assess what impact the proposed project will have on them will be provided to the I&APs.

10.6 DESCRIPTION OF THE TASKS TO BE UNDERTAKEN DURING THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

10.6.1 Approach to Environmental Impact Assessment

The term ‘environment’ is used in the broadest sense in an EIA. It covers the physical, biological, social, economic, cultural, historical, institutional, and political environments.

An EIA is a good planning tool. It identifies the environmental consequences of a proposed project from the beginning and helps to ensure that the project, over its life cycle, will be environmentally acceptable and integrated into the surrounding environment in a sustainable way.

10.6.2 Environmental Impact Assessment Process Followed

Under Section 24 of the NEMA, the Minister promulgated the regulations pertaining to environmental impact assessments (EIA Regulations, 2014) under Government Notice R326 in Government Gazette 38282 of 4 December 2014. These EIA regulations repealed the 2010 EIA regulations and therefore any process relating to environmental authorisations must be undertaken under the EIA Regulations, 2014.

Chapter 4 of the EIA Regulations, 2014 deals with the provisions for application for environmental authorisation. In view of the above, Tunnel Vision Resources (Pty) Limited is obliged to comply with provisions of Chapter 4 for the intended IEA application for the identified activities of the proposed Nooitgedacht Colliery.

Part 3 of Chapter 4 of the EIA Regulations, 2014, contemplate process to be undertaken for the application for IEA for the proposed Nooitgedacht Colliery, which is the S & EIR process. The process to be followed is describe below.

Application to the Competent Authority

In terms of section 24 of the National Environmental Management Act, 1998 (Act 107 of 1998), the Minister responsible for mineral resources and energy is the competent authority for environmental matters relating to mining and associated activities. In view of the above, the application for the IEA for the proposed Nooitgedacht Colliery was submitted to the DMRE, eMalahleni Regional Office for their consideration and decision making.

Scoping Phase

According to Regulation 21 of the EIA Regulations, 2014, a SR must be submitted to the competent authority within 44 days after the submission of the IEA application. The 44 days period from the date of submission of the IEA application will expire on the 10th of March 2023. On submission, the competent authority will evaluate and accept or reject the SR.

As part of the public participation, the draft SR was made available to the competent authority, potential and registered I&APs for their comment from the 03rd of February 2023 to 06th of March 2023 for thirty (30) days.

EIA Phase

In compliance with Regulation 23 of the EIA Regulations, 2014, an EIR/EMPr will be submitted to the competent authority within 106 days after the acceptance of the SR.

As part of the public participation, the draft EIR/EMPr will be made available to the competent authority, potential and registered I&APs for their comment for a period of not less than 30 days during the EIA phase.

Decision on the S&EIR application

In compliance with Regulation 24 of the EIA Regulations, 2014, the competent authority will within 107 days of receipt of the EIR/EMPr grant or refuse the environmental authorisation.

Information Gathering

Environmental baseline data has been obtained through various agencies, pertaining to surface water quantities and qualities, geohydrological data and modelling, topographical analyses, soil surveys, vegetation surveys, wetland surveys, heritage, climate and geological conditions. Historic land use was determined through available data and by visual observations made during various field studies. The data accumulated and analysed is sufficient to gain a baseline indication of the present state of the environment. The use of this baseline study for impact assessments is thus justified and reliable conclusions could be made.

The specialist studies will be conducted and will be referenced during the compilation of the EIR/ EMPr


10.7 MEASURES TO AVOID, REVERSE, MITIGATE OR MANAGE IDENTIFIED IMPACTS AND TO DETERMINE THE EXTENT OF RESIDUAL RISKS THAT NEED TO BE MONITORED

Please refer to section 9.1 for the typical measures that will be undertaken to reduce the severity of the predicted impacts on the environmental aspects. Please note that more detailed measures to avoid, reverse, mitigate or manage the impacts to be identified during the EIA phase will be provided in the draft and final EIR/EMPr for the proposed Nooitgedacht Colliery.

11.UNDERTAKING

Herewith I, the person whose full names is stated below, confirm that I am the EAP authorised to act as representative of Geovicon Environmental (Pty) Limited, the company commissioned by the applicant in terms of Regulation 12 of the EIA Regulations, 2014 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and confirm that:

- The above report is compiled with all relevant available information pertaining to the proposed project.
- All relevant stakeholders and I&APs were consulted and any comments received were included in the compilation of this report.
- Any responses provided to I&APs by the EAP is included in this report.
- The plan of study for the proposed project is included in this report and was provided to all I&APs to ensure that they are aware and agree to the plan of study for undertaking the Environmental Impact Assessment.

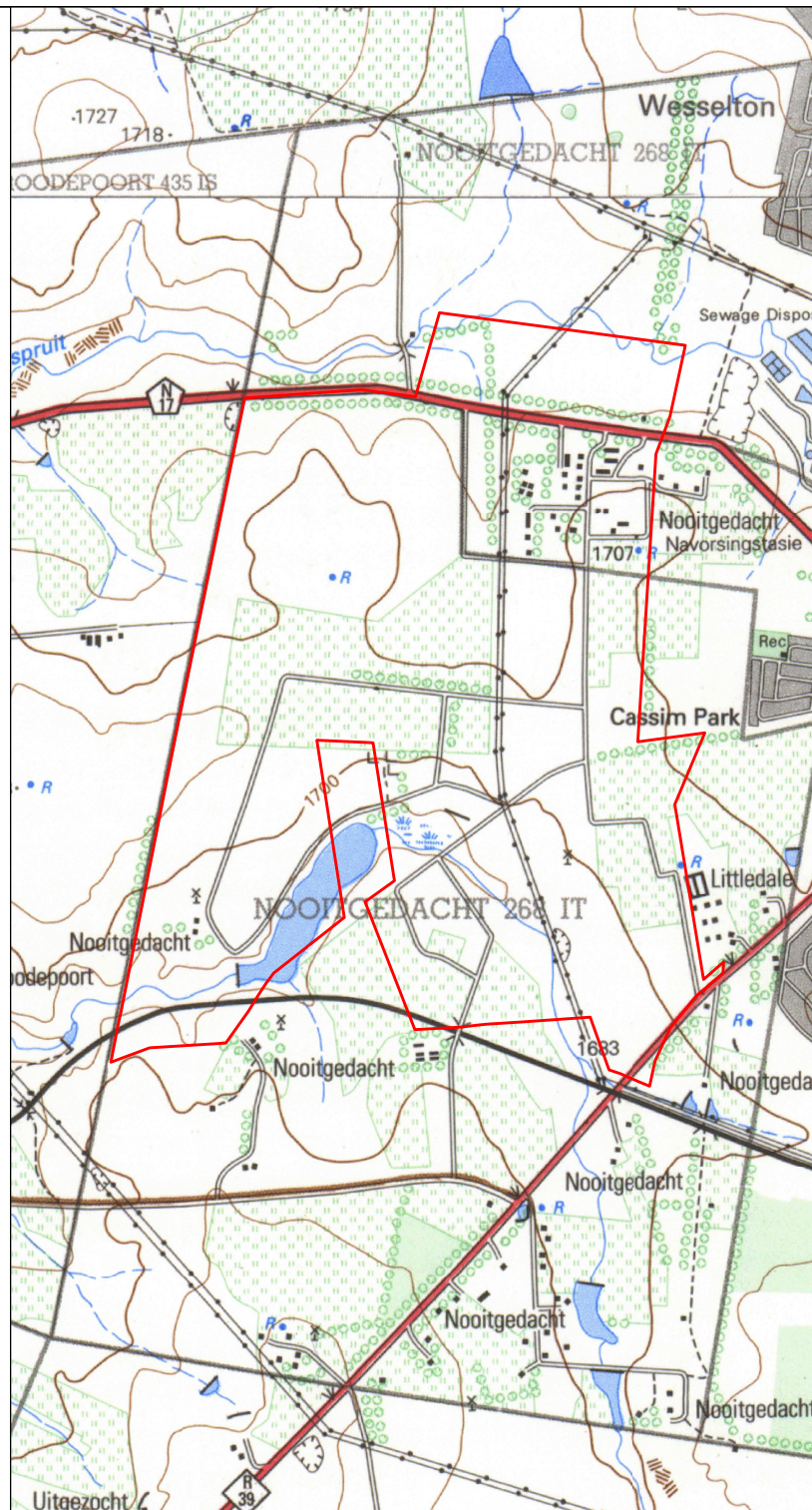
Full Names and Surname	Ornassis Tshepo Shakwane
Date	01/02/2023
Signature	

Appendix A

Regulation 2.2 Plan

MINING RIGHT CO-ORDINATES WG 31°

POINTS	LAT/LONG
1	26,5113199°S; 29,955862°E
2	26,5108487°S; 29,9560624°E
3	26,5076893°S; 29,9568521°E
4	26,5061416°S; 29,9446366°E
5	26,5091594°S; 29,9436392°E
6	26,5098926°S; 29,943415°E
7	26,5095503°S; 29,9407434°E
8	26,5098874°S; 29,9349086°E
9	26,5248861°S; 29,9313505°E
10	26,52645°S; 29,9309976°E
11	26,5372869°S; 29,928514°E
12	26,5378515°S; 29,9283652°E
13	26,5395546°S; 29,9279818°E
14	26,5389271°S; 29,9299007°E
15	26,5387326°S; 29,9337097°E
16	26,5373136°S; 29,9348428°E
17	26,5365679°S; 29,9353635°E
18	26,5360778°S; 29,9357278°E
19	26,5356181°S; 29,9361112°E
20	26,5331674°S; 29,939659°E
21	26,525218°S; 29,9383545°E
22	26,5253573°S; 29,9411507°E
23	26,5315329°S; 29,9421616°E
24	26,5324636°S; 29,940689°E
25	26,5365108°S; 29,9424095°E
26	26,537144°S; 29,9426746°E
27	26,5382082°S; 29,9431171°E
28	26,5381033°S; 29,9454327°E
29	26,5380461°S; 29,9460869°E
30	26,537987°S; 29,9466801°E
31	26,5379012°S; 29,9484445°E
32	26,5377124°S; 29,9518492°E
33	26,5400793°S; 29,9527666°E
34	26,5402586°S; 29,9533388°E
35	26,5404074°S; 29,9537089°E
36	26,5405084°S; 29,9539854°E
37	26,5406114°S; 29,9542391°E
38	26,5408155°S; 29,9547732°E
39	26,5396883°S; 29,9550536°E
40	26,5382122°S; 29,9558261°E
41	26,5368142°S; 29,9571231°E
42	26,5357848°S; 29,9584712°E
43	26,5352922°S; 29,9585137°E
44	26,5360723°S; 29,9574989°E
45	26,528224°S; 29,9561486°E
46	26,5250294°S; 29,957665°E
47	26,5254146°S; 29,9543194°E
48	26,5125313°S; 29,9553534°E
1	26,5113199°S; 29,955862°E



TUNNEL VISION RESOURCES (PTY) LTD REG NO: 2019/615403/07

APPLICATION FOR MINING RIGHT

Plan compiled in accordance with
Regulation 2(2) of the Mineral & Petroleum
Resources Development Act 2002
(ACT 28 of 2002)

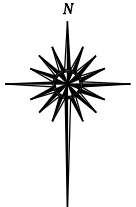
Scale 1 : 950

LEGEND



MINING RIGHT AREA

National Freeway, National Route	.....
Arterial Route	.....
Main Road	.....
Secondary Road, Bench Mark	.....
Other Road, Bridge	.....
Track and Hiking Trail	.....
Railway, Station or Siding	.....
Other Railway, Tunnel	.....
Embankment, Cutting	.....
Power Line	.....
Built-up Area	.....
Buildings, Ruin	.....
Post Office, Police Station, Store	.....
Place of Worship, School, Hotel	.....
Fence, Wall	.....
Windpump/Monument	.....
Communication Tower	.....
Mine Dump, Excavation	.....
Trigonometrical Station, Marine Beacon	.....
Lighthouse and Marine Light	.....
Cemetery, Grave	.....
International Boundary and Beacon	.....
Provincial Boundary	.....
Game, Nature Reserve & State Forest Boundary	.....
Perennial River	.....
Perennial Water	.....
Non-perennial River	.....
Non-perennial Water	.....
Dry Water Course	.....
Dry Pan	.....
Marsh and Vlei	.....
Pipeline (above ground)	.....
Water Tower, Reservoir, Water Point	.....
Coastal Rocks	.....
Prominent Rock Outcrop	.....
Erosion, Sand	.....
Woodland	.....
Cultivated Land	.....
Orchard or Vineyard	.....
Recreation Ground	.....
Row of Trees	.....



The figure lettered 1-48 AND 1 represent a Mining Right area in extent of approximately 759,41ha, comprising of portions 2,6,52, 103,105,253 and a portion of RE of the farm NOOITGEDACHT 268 IT, Located 1km West of the town Ermelo, in the Magisterial district of ERMELO for which TVR (PTY) LTD REG NO: 2019/615403/07 has applied for a mining right in terms of Section 16 of the Mineral and Petroleum Resources Development Act, 2002, (Act 28 of 2002), but subject to Regulation 17 of the Mine Health and Safety Act, 1996 (Act 29 of 1996), excluding any area within 100 meters of any public road, railway, cemetery, residential area or public area.

SIGNED:
REGIONAL MANAGER
MPUMALANGA PROVINCE

SIGNED:
TVR (PTY) LTD
REG NO: 2019/615403/07



Contact : 012 472 0328
Email : info@xakwa.com
tiisetso@xakwa.com

Address : 175 Corobay
Waterkloof Glen
0010

Appendix C: Deed's List

Any personal information obtained from this search will only be used as per the Terms and Conditions agreed to and in accordance with applicable data protection laws including the Protection of Personal Information Act, 2013 (POPI), and shall not be used for marketing purposes.

SEARCH CRITERIA

Search Date	2023/01/26 17:18	Farm Number	268
Reference	-	Registration Division	IT
Report Print Date	2023/01/26 17:18	Portion Number	A
Farm Name	-	Remaining Extent	NO
Deeds Office	Mpumalanga	Search Source	WinDeed Database

PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	REPUBLIEK VAN SUID-AFRIKA	T8842/1903	1903/10/02	-
1	NEDERDUITSE GEREFORMEERDE KERK ERMELO	T2447/1892	-	-
2	REPUBLIEK VAN SUID-AFRIKA	T8725/1966	1966/03/31	-
3	KENETH MAGAGULA FAMILY TRUST	T14327/2018	2018/11/12	850 000
4	MUN ERMELO	T5150/1964	1964/02/18	-
5	JACOBA JOHANNA CORNELIA CARR TESTAMENTARY TRUST	T16816/1986	1986/04/24	SECT 40
6	PROVINCIAL GOVERNMENT OF MPUMALANGA	T3617/1909	1909/06/28	-
8	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
9	REPUBLIEK VAN SUID-AFRIKA	T1363/1895	-	-
10	MUN ERMELO	G17/1931	1931/02/07	-
11	MSUKALIGWA LOCAL MUNICIPALITY	G361/1957	1957/10/24	-
13	MSUKALIGWA LOCAL MUNICIPALITY	G51/1907	1907/03/14	-
14	TRANSNET LTD	T29242/1943	1943/11/20	-
16	MDLULI VELI ABSALOM	T150151/2001	2001/12/13	700 000
18	NOOITGEDACHT 268 PLOT PTY LTD	T7808/2021	2021/07/05	850 000

DISCLAIMER

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PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
20	M & M JASSAT PROP PTY LTD	T15297/2018	2018/11/30	585 000
22	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
24	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
25	MULLER CORNELIS JOHANNES	T7016/1988	1988/02/04	112 500
31	DEMOCRACY ZWANE FAMILIE TRUST	T11447/2014	2014/08/04	2 626 260
32	MUN ERMELO	G17/1931	1931/02/07	-
35	PROVINCIAL GOVERNMENT OF MPUMALANGA	T1560/1965	1965/01/20	-
36	PROVINCIAL GOVERNMENT OF MPUMALANGA	T7074/1938	1938/04/25	-
37	MUN ERMELO	G171/1938	1938/08/26	-
46	REPUBLIEK VAN SUID-AFRIKA	T26281/1965	1965/07/16	-
48	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
49	THERON CORNELIA ALETTA	T76577/1997	1997/08/04	-
50	NGWENYA BONGANI STEPHEN	T83084/2005	2005/07/01	570 000
51	MUN ERMELO	T33958/1969	1969/08/13	-
52	REPUBLIEK VAN SUID-AFRIKA	T42601/1964	1964/11/23	-
55	MUN ERMELO	T48337/1985	1985/11/28	-
57	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
61	HONEY DROP CC	T2036/2003	2003/01/10	370 000
62	JACOBS RYNO DUARTE	T13011/2012	2012/11/29	950 000
63	JOHAN SMIT FAMILIE TRUST	T8514/1990	1990/02/08	35 000
64	MPHEPHETHA & JOBE CC	T62863/2003	2003/05/30	210 000
65	MAPHANGA NOTHANDO PATRICIA	T12506/2022	2022/11/24	1 850 000
66	FOURIE JAN ANDRIES	T35414/1993	1993/05/12	320 000
67	AMBER MOUNTAIN INV	T179/2013	2013/01/11	1 050 000

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PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	142 PTY LTD			
69	ROOYEN ERASMUS WILLEM VAN	T8906/2021	2021/07/30	1 200 000
70	GCL HOLDINGS PTY LTD	T809/2022	2022/02/07	1 200 000
71	HUMMINGBIRD TRUST	T72426/2004	2004/05/31	365 000
72	NDLAMLENZE FAMILY TRUST	T8987/2012	2012/08/14	311 000
75	MUN ERMELO	G178/1949	1949/05/03	-
76	CHURCH OF THE PROVINCE OF SOUTHERN AFRICA-SOUTH EASTERN TRANSVAAL	T31821/1951	1951/12/24	-
77	DUINEBESIE BELEGGINGS PTY LTD	T103541/2006	2006/08/16	680 000
81	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
85	MULLER WILLEM JACOBUS	T5720/2003	2003/01/27	240 000
86	MUN ERMELO	G262/1952	1952/07/12	-
90	PROVINCIAL GOVERNMENT OF THE PROVINCE OF MPUMALANGA	T6192/2013	2013/06/25	-
95	PROVINCIAL GOVERNMENT OF THE PROVINCE OF MPUMALANGA	T13303/2009	2009/11/19	-
97	MSUKALIGWA LOCAL MUNICIPALITY	T12017/1958	1958/05/13	-
100	TRANSNET LTD	T13806/1962	1962/07/04	-
101	MUN ERMELO	T66219/1987	1987/11/27	33 000
102	PROVINCIAL GOVERNMENT OF MPUMALANGA	T7118/1959	1959/03/24	-
103	PROVINCIAL GOVERNMENT OF MPUMALANGA	T33864/1982	1982/09/20	-
105	PROVINCIAL GOVERNMENT OF MPUMALANGA	T33864/1982	1982/09/20	-
106	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
112	PROVINCIAL	T4311/1978	1978/02/21	-

DISCLAIMER

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PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	GOVERNMENT OF MPUMALANGA			
115	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
117	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
118	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
121	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
135	MUN ERMELO	G530/1968	1968/12/02	-
138	GREEFF DEON	T44176/2003	2003/04/16	145 000
147	PROVINCIAL GOVERNMENT OF MPUMALANGA	T18140/1975	1975/06/09	-
148	PROVINCIAL GOVERNMENT OF MPUMALANGA	T41739/1976	1976/11/22	-
149	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
150	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
151	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
152	TRANSNET LTD	T34697/1979	1979/10/03	-
156	PROVINCIAL GOVERNMENT OF MPUMALANGA	T45077/1980	1980/09/16	-
159	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
162	TRANSNET LTD	T23774/1989	1989/04/17	-
163	TRANSNET LTD	T3460/1982	1982/02/03	-
166	TRANSNET LTD	T35612/1984	1984/07/26	-
167	TRANSNET LTD	T49338/1981	1981/10/15	-
168	TRANSNET LTD	T42631/1981	1981/09/04	-
169	TRANSNET LTD	T35612/1984	1984/07/26	-
172	TRANSNET LTD	T12062/1990	1990/02/22	-
173	TRANSNET LTD	T12062/1990	1990/02/22	-
183	MSUKALIGWA LOCAL MUNICIPALITY	T73535/2003	2003/06/24	TRANSFER BY ENDO
184	REPUBLIEK VAN SUID-	T33865/1982	1982/09/20	-

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PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	AFRIKA			
185	REPUBLIEK VAN SUID-AFRIKA	T33865/1982	1982/09/20	-
186	MUN ERMELO	T34550/1983	1983/08/23	-
187	MUN ERMELO	T34550/1983	1983/08/23	-
188	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
189	TRANSNET LTD	T1487/1990	1990/01/09	-
190	TRANSNET LTD	T1487/1990	1990/01/09	-
191	TRANSNET LTD	T23774/1989	1989/04/17	-
192	TRANSNET LTD	T12062/1990	1990/02/22	-
193	TRANSNET LTD	T12062/1990	1990/02/22	-
194	TRANSNET LTD	T12062/1990	1990/02/22	-
195	TRANSNET LTD	T12062/1990	1990/02/22	-
198	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
199	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
200	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
201	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
202	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
203	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
204	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
205	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
206	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
213	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
216	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
217	SEA PIKE HENGEL KLUB	T58599/1998	1998/05/28	-
218	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
219	DEMOCRACY ZWANE	T480/2016	2016/01/15	1 497 450

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PORTION LIST

Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
	FAMILIE TRUST			
223	VUKILE PROPERTY LTD	T3800/2017	2017/03/27	AGREEMENT
224	MAROELA FAMILIE TRUST	T507/2008	2008/01/10	T/T
227	L D A BELEGGINGS TRUST	T15480/2008	2008/09/25	3 990 000
228	KIM'S FARM CC	T6767/2009	2009/07/17	370 500
229	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
230	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
231	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
232	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
233	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
234	GERT SIBANDE DISTRICT MUNICIPALITY	T3935/2011	2011/04/21	CCT
235	GERT SIBANDE DISTRICT MUNICIPALITY	T3937/2011	2011/04/21	CCT
236	MSUKALIGWA LOCAL MUNICIPALITY	T12476/2009	2009/11/04	T/T
237	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-
238	MSUKALIGWA LOCAL MUNICIPALITY	T12478/2009	2009/11/04	T/T
251	BULK COMMODITY STORAGE CC	T3687/2014	2014/02/28	383 040
254	S A DEMOCRACY INV CC	T11273/2018	2018/09/11	1 219 800
259	MSUKALIGWA LOCAL MUNICIPALITY	T6738/2021	2021/06/15	-

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Appendix D:
**National Web Based Environmental
Screening Tool Report**

**SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS
REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE
ENVIRONMENTAL SENSITIVITY**

EIA Reference number: MP 30/5/1/2/2/10376 MR

Project name: Nooitgedacht Colliery

Project title: Nooitgedacht Colliery

Date screening report generated: 31/01/2023 15:13:27

Applicant: Tunnel Vision Resources (Pty) Limited

Compiler: Geovicon Environmental (Pty) Limited

Compiler signature:
.....

Application Category: Mining|Mining Right

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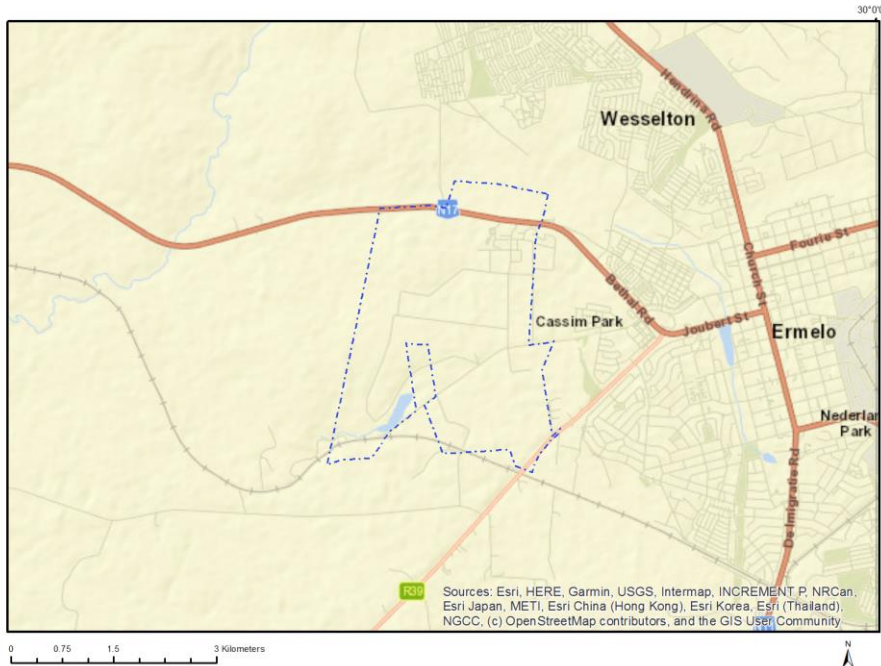
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Proposed Project Location

Orientation map 1: General location



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	DE ROODEPOORT	435	0	26°31'6.23S	29°53'56.76E	Farm
2	NOOITGEDACHT N). -	268	0	26°31'38.05S	29°58'2.27E	Farm
3	NOOITGEDACHT N). -	268	46	26°32'15.23S	29°56'18.05E	Farm Portion
4	NOOITGEDACHT N). -	268	2	26°31'54.7S	29°56'52.7E	Farm Portion
5	NOOITGEDACHT N). -	268	193	26°32'14.51S	29°56'39.25E	Farm Portion
6	NOOITGEDACHT N). -	268	103	26°31'52.7S	29°56'40.66E	Farm Portion
7	NOOITGEDACHT N). -	268	253	26°30'45.71S	29°56'56.24E	Farm Portion
8	NOOITGEDACHT N). -	268	35	26°32'39.98S	29°56'14.89E	Farm Portion
9	NOOITGEDACHT N). -	268	52	26°31'51.15S	29°56'3.24E	Farm Portion
10	DE ROODEPOORT	435	13	26°32'24.31S	29°55'30.32E	Farm Portion
11	NOOITGEDACHT N). -	268	6	26°31'54.21S	29°57'3.98E	Farm Portion
12	NOOITGEDACHT N). -	268	195	26°32'11.93S	29°56'2.43E	Farm Portion
13	NOOITGEDACHT N). -	268	5	26°32'21.28S	29°57'24.75E	Farm Portion
14	NOOITGEDACHT N). -	268	206	26°31'52.44S	29°57'28.16E	Farm Portion
15	NOOITGEDACHT N). -	268	3	26°32'3.22S	29°57'37.01E	Farm Portion
16	NOOITGEDACHT N). -	268	105	26°32'3.68S	29°56'35.32E	Farm Portion
17	NOOITGEDACHT N). -	268	172	26°32'12.26S	29°55'54.61E	Farm Portion
18	NOOITGEDACHT N). -	268	0	26°30'48.9S	29°56'39.29E	Farm Portion
19	NOOITGEDACHT N). -	268	173	26°32'16.46S	29°56'46.44E	Farm Portion
20	NOOITGEDACHT N). -	268	52	26°32'16.51S	29°55'53.44E	Farm Portion
21	NOOITGEDACHT N). -	268	0	26°32'13.11S	29°58'32.01E	Farm Portion
22	DE ROODEPOORT	435	7	26°32'0.66S	29°55'33.29E	Farm Portion
23	DE ROODEPOORT	435	7	26°32'43.83S	29°55'25.61E	Farm Portion
24	DE ROODEPOORT	435	16	26°30'41.96S	29°55'9.71E	Farm Portion
25	NOOITGEDACHT N). -	268	105	26°32'16.13S	29°56'37.47E	Farm Portion
26	BRAK FONTEIN SETTLEMENT	268	239	26°30'34.31S	29°56'36.15E	Farm Portion

27	NOOITGEDACHT N). -	268	112	26°30'53.19S	29°57'27.15E	Farm Portion
28	DE ROODEPOORT	435	1	26°30'26.39S	29°55'7.88E	Farm Portion

Development footprint¹ vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No nearby wind or solar developments found.

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is:
Mining | Mining Right.

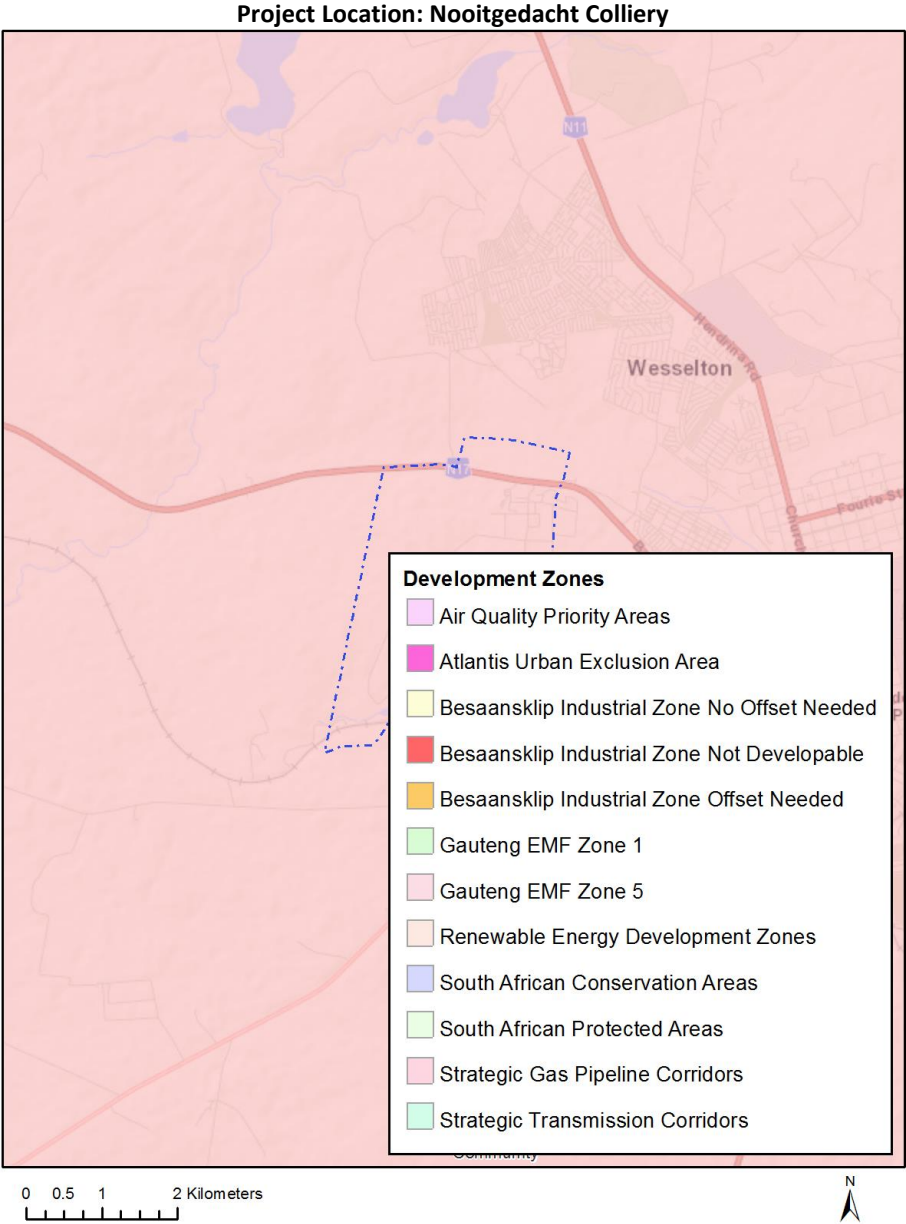
Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf
Strategic Gas Pipeline Corridors	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf

¹ “development footprint”, means the area within the site on which the development will take place and includes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones



Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme	X			
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

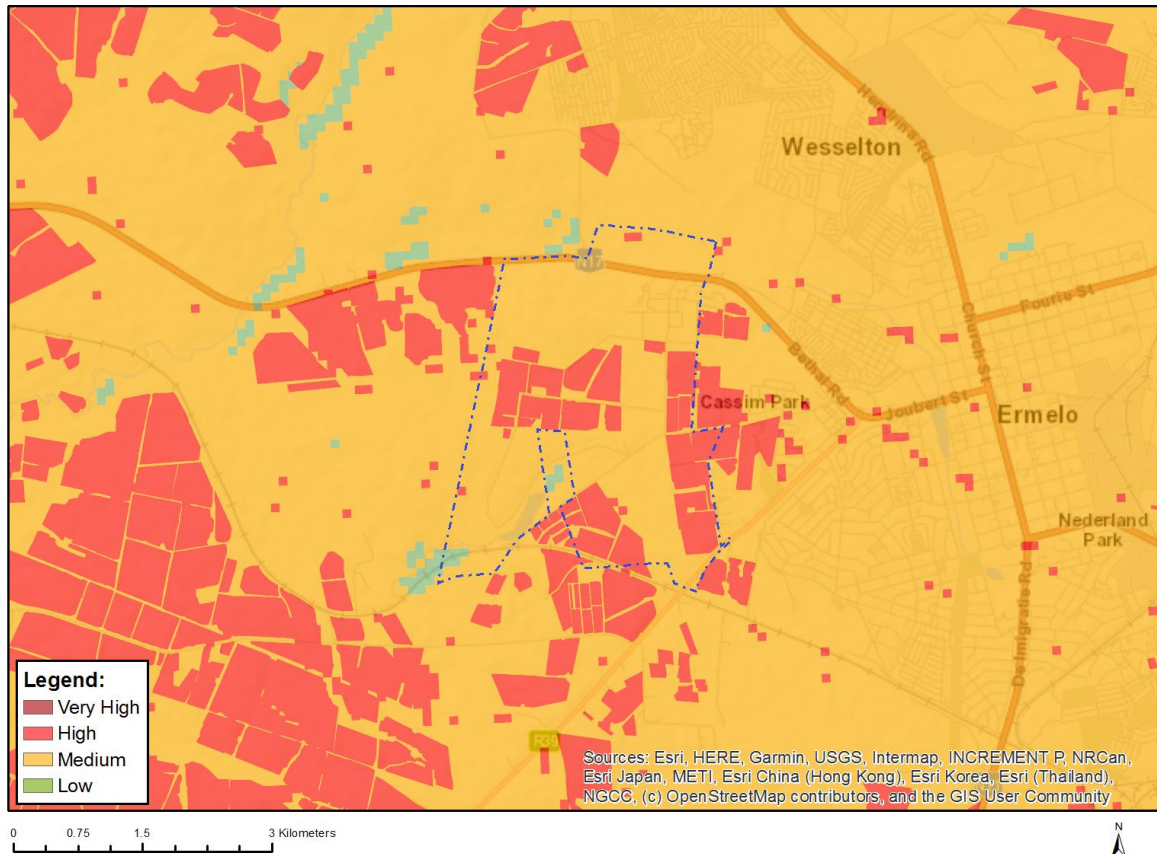
N o	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
5	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
6	Aquatic Biodiversity	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols

	sity Impact Assessment	/Gazetted Aquatic Biodiversity Assessment Protocols.pdf
7	Hydrology Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
8	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Noise Impacts Assessment Protocol.pdf
9	Radioactivity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
10	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
11	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
12	Climate Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
13	Health Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
14	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
15	Ambient Air Quality Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
16	Seismicity Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
17	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf
18	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species Assessment Protocols.pdf

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

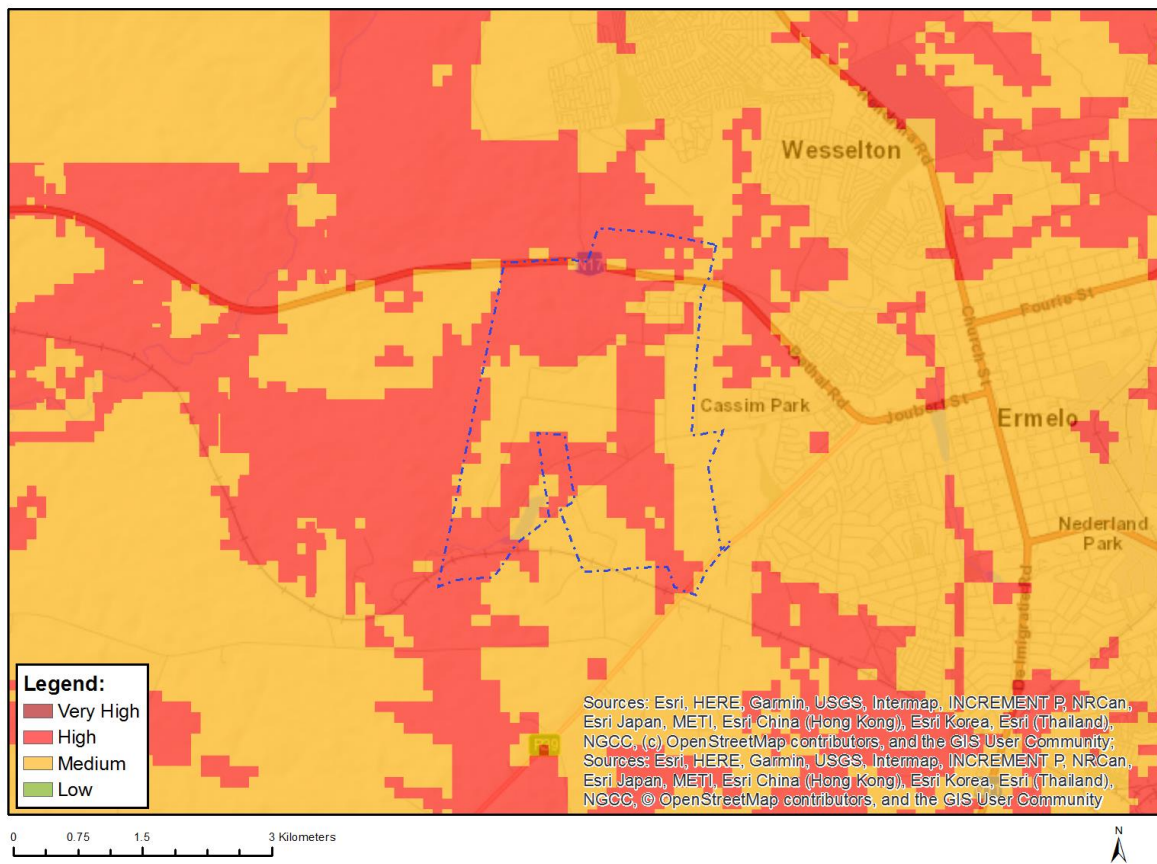


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High
Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL 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)
High	Aves-Geronticus calvus
Medium	Aves-Tyto capensis
Medium	Aves-Hydroprogne caspia
Medium	Aves-Balearica regulorum
Medium	Aves-Sagittarius serpentarius
Medium	Aves-Eupodotis senegalensis
Medium	Insecta-Lepidochrysops procera
Medium	Mammalia-Crociodura maquassiensis
Medium	Mammalia-Ourebia ourebi ourebi

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

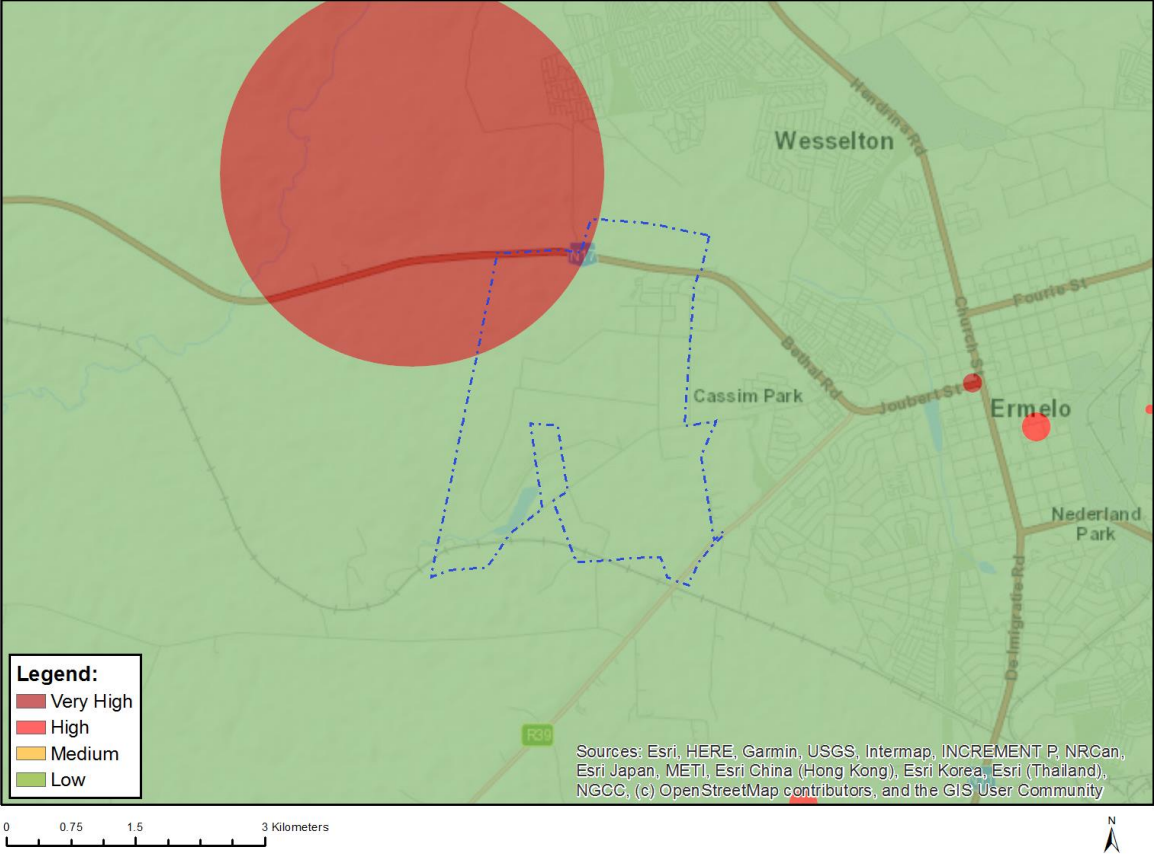


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Wetlands and Estuaries

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

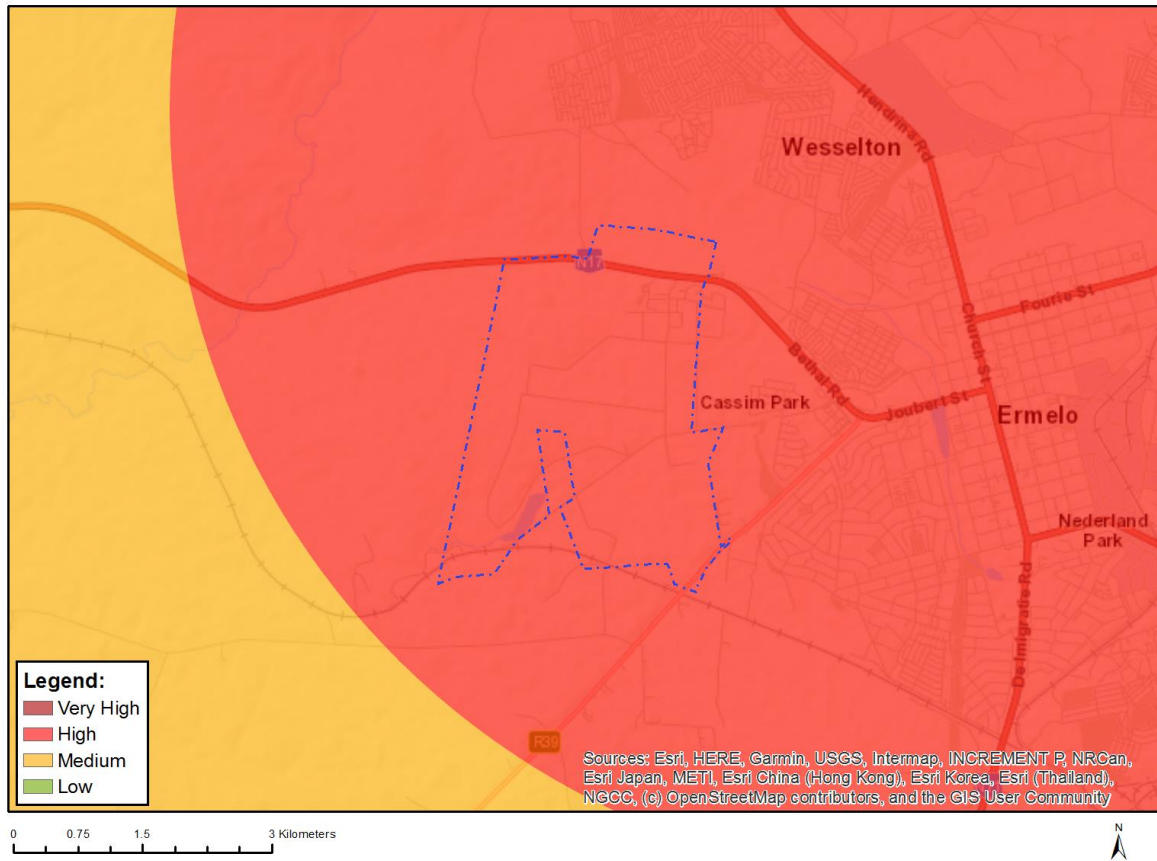


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Within 2km of a Grade II Heritage site

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

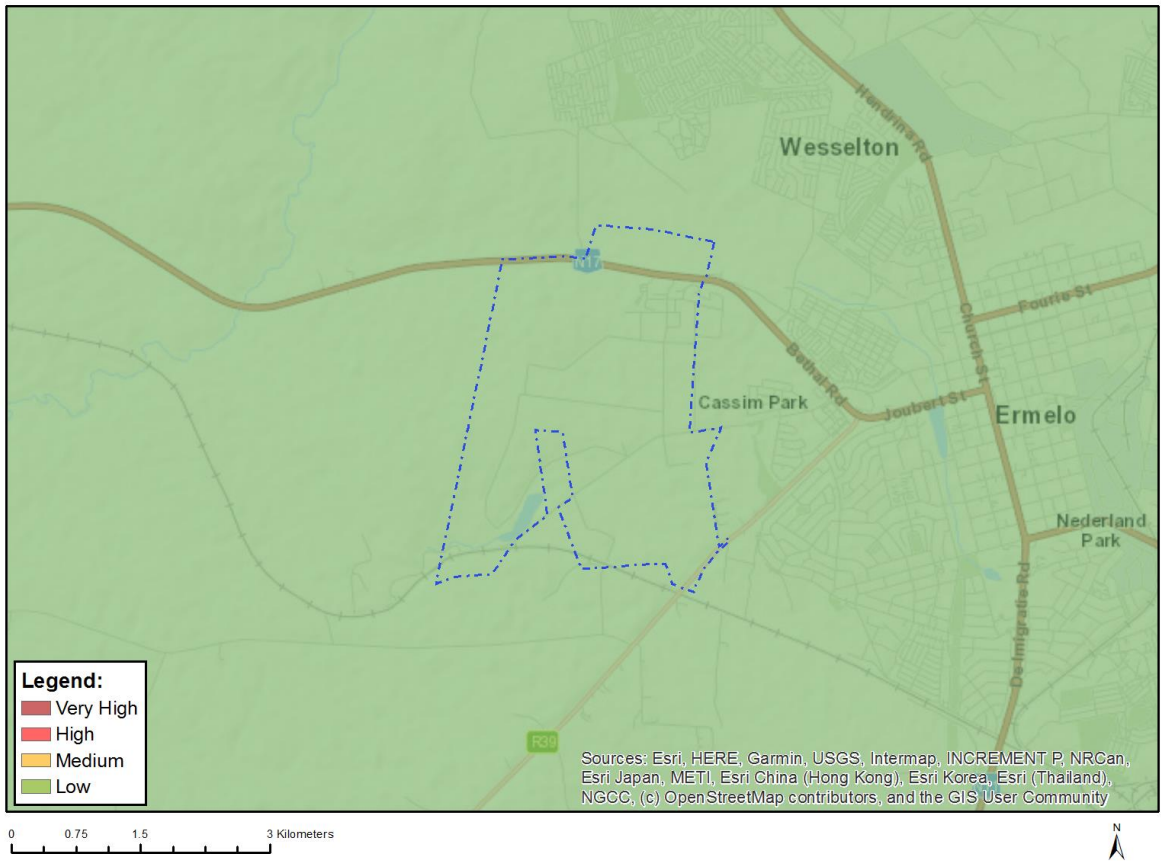


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 8 km of other civil aviation aerodrome

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

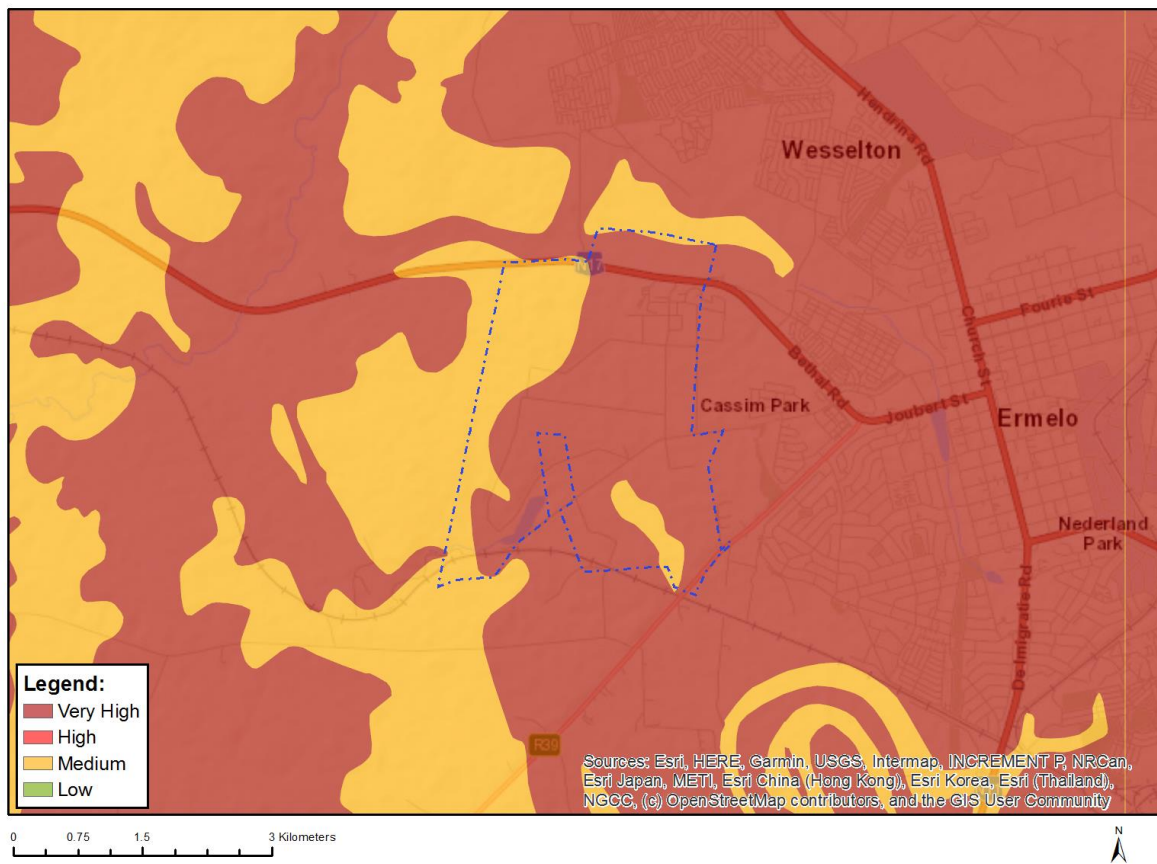


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

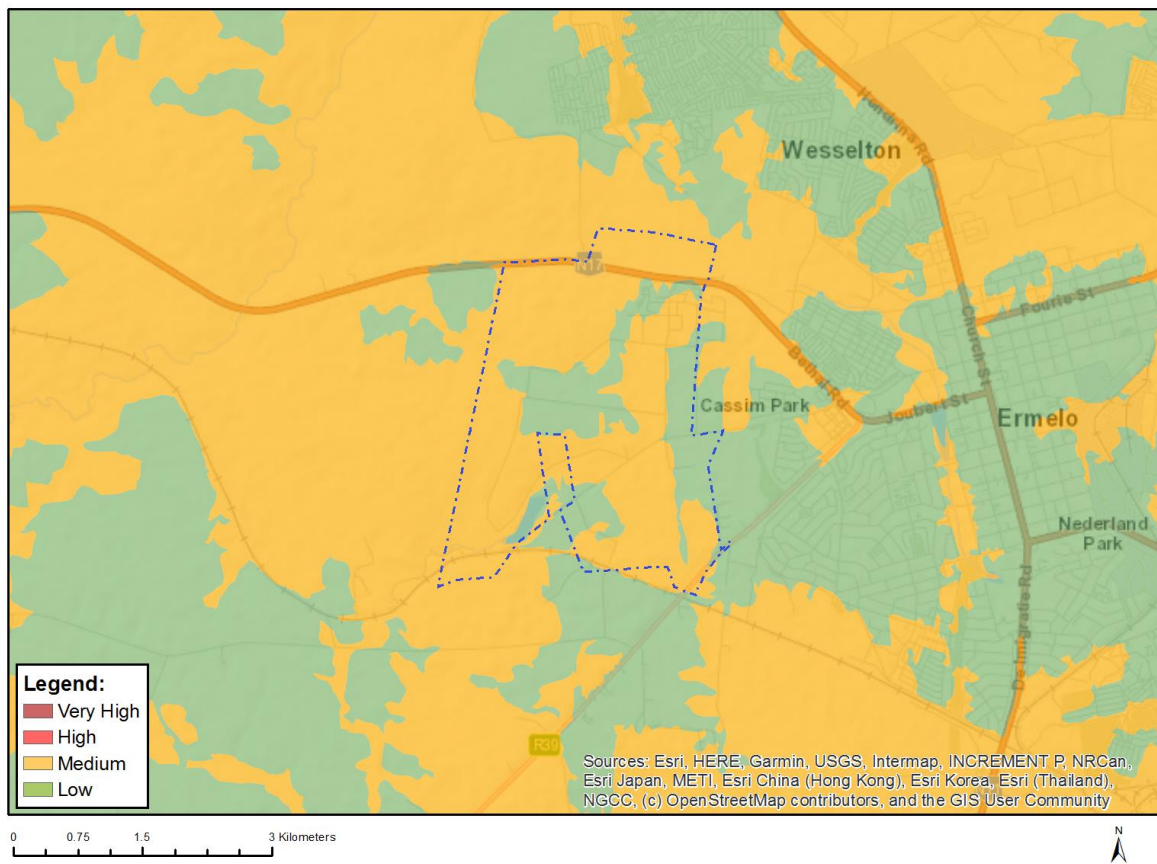


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Features with a Medium paleontological sensitivity
Very High	Features with a Very High paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



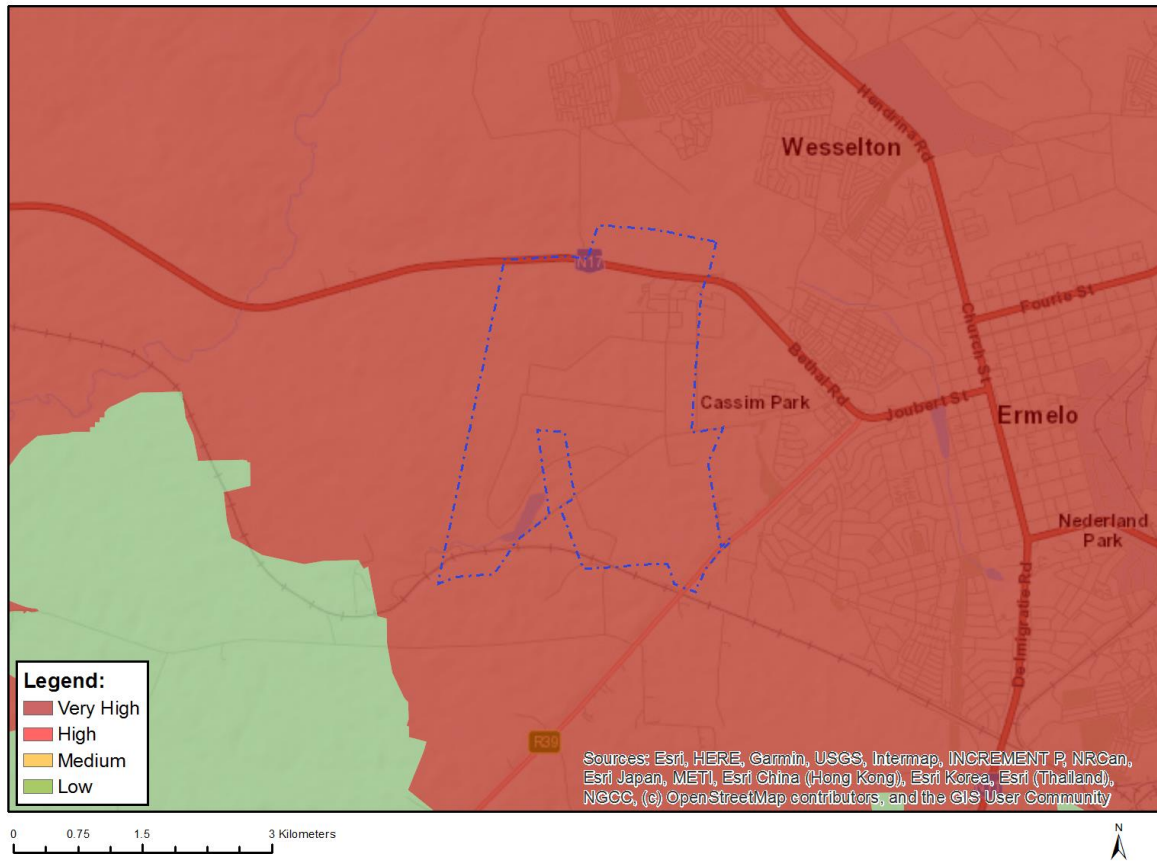
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their 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	Sensitive species 1252
Medium	Khadia carolinensis
Medium	Aspidoglossum xanthosphaerum
Medium	Miraglossum davyi
Medium	Sensitive species 41
Medium	Sensitive species 691
Medium	Pachycarpus suaveolens
Medium	Sensitive species 851

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Critical biodiversity area 1
Very High	Critical biodiversity area 2
Very High	Protected Areas Expansion Strategy
Very High	Vulnerable ecosystem