ENVIRONMENTAL & ENGINEERING

REPORT

YOCTOLUX COLLIERIES (PTY) LTD

MAFATIKI COLLIERY

INTEGRATED ENVIRONMENTAL AUTHORISATION APPLICATION IN SUPPORT OF A MINING RIGHT APPLICATION

DMRE REF: GP 30/5/1/2/2/10116 MR

DRAFT SCOPING REPORT FOR PUBLIC REVIEW

REPORT REF: 22-2095-AUTH (MAFATIKI COLLIERY UG MINING RIGHT S&EIA & IWULA)

UNDERGROUND MINING RIGHT APPLICATION FOR COAL IN RESPECT OF PORTIONS 2, 3, 4, 5 AND A PORTION OF THE REMAINING EXTENT OF PORTION 6 OF THE FARM LEEUWKOP 299 IR. PORTIONS 1, 2, 3, 4, 6, 7, 8, 11, 23, 25, 27, AND A PORTION OF PORTION 14, AND THE REMAINING EXTENT OF PORTIONS 5, 12 AND PORTION 21 AND 22 OF THE FARM WINTERHOEK 314 IR. PORTIONS 17, 18, 56 AND THE REMAINING EXTENT OF PORTION 23 OF THE FARM NOOITGEDACHT 294 IR. PORTIONS 7, 8, 18, 19, 25, 26, 31, 33 AND 39 OF THE FARM PALMIETFONTEIN 316 IR SITUATED IN THE MAGISTERIAL DISTRICT OF NIGEL, LOCATED IN THE LESEDI LOCAL MUNICIPALITY AND THE SEDIBENG DISTRICT MUNICIPALITY OF GAUTENG PROVINCE.

VERSION BB
30 June 2023

Document and Quality Control:

Document No:	22-2095-AUTH (Mafatiki Colliery UG Mining Right - Draft Scoping Report)			
AA – draft	20/06/2023	Lian Roos		First draft for review / comments
BB – draft	28/06/2023	Riana Panaino		Technical review
CC – draft		Leoni le Roux		Quality review
Approved for Distribution:				
0.0		Riana Panaino		Final report

Quality Control By:

Nature of Signoff:	Responsible Person:	Role / Responsibility	Qualification
Author	Lian Roos	Environmental Consultant	BSc Hons (App Sci) Water Utilisation BSc Environmental Science EAPASA - Candidate EAP (2022/4550)
Technical Reviewer	Riana Panaino	Divisional Head - Environmental Authorisations	BSc Hons Biodiversity and Conservation SACNASP - Professional Natural Scientist (117170) EAPASA – Registered EAP (2021/4135)
Quality Reviewer	Leoni le Roux	Project Administration	Professional Secretary and Personal Assistant

DISCLAIMER:

DECLARATION OF INDEPENDENCE

I, Lian Roos, declare that;

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing:
    - any decision to be taken with respect to the application by the competent authority; and
    - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.

20/06/2023

_____ _____

Signature **Date**

Mr. Lian Roos

BSc Hons (App Sci) Water Utilisation

BSc Environmental Science

EAPASA – Candidate EAP (2022/4550)

I, Riana Panaino, declare that;

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing:
    - any decision to be taken with respect to the application by the competent authority; and
    - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.

28/06/2023

Signature **Date**

Mrs Riana Panaino
BSc Hons Biodiversity and Conservation
SACNASP - Professional Natural Scientist (117170)
EAPASA – Registered EAP (2021/4135)

mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

SCOPING REPORT

FOR LISTED ACTIVITIES ASSOCIATED WITH MINING RIGHT ACTIVITIES

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

NAME OF APPLICANT:	**YOCTOLUX COLLIERIES (PTY) LTD**
TEL NO:	**083 476 1247**
FAX NO:	**086 696 4891**
POSTAL ADDRESS:	**P O BOX 14522, HATFIELD, 0028**
PHYSICAL ADDRESS:	**TIJGER VALLEY OFFICE PARK** **CONCEPT HOUSE A UNIT 15** **PONY STREET** **SILVERLAKES, 0081** **PRETORIA**
FILE REFERENCE NUMBER SAMRAD:	**GP 30/5/1/2/2 (10116) MR**

IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting or mining right if among others the mining "will not result in unacceptable pollution, ecological degradation or damage to the environment".

Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17 (1) (c) the competent Authority must check whether the application has taken into account any minimum requirements applicable or instructions or guidance provided by the competent authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorisation being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

1. OBJECTIVE OF THE SCOPING PROCESS

1) The objective of the scoping process is to, through a consultative process—

(a) identify the relevant policies and legislation relevant to the activity;

(b) motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;

(c) identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;

(d) identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;

(e) identify the key issues to be addressed in the assessment phase;

(f) agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and

(g) identify suitable measures to avoid, manage, or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

CONTENTS

Annexures -

List of Figures -

List of Tables

SCOPING REPORT

Background

Yoctolux Collieries (Pty) Ltd is proposing the development of a new greenfield underground coal mining operation (Mafatiki Colliery) near the towns of Devon and Leandra in the Lesedi Local Municipality of Gauteng Province and on the border with Mpumalanga Province. The Mining Right area will comprise:

- Portions 2, 3, 4, 5 and a portion of the remaining extent of Portion 6 of the farm Leeuwkop 299 IR
- Portions 1, 2, 3, 4, 6, 7, 8, 11, 23, 25, 27, and a portion of Portion 14, and the remaining extent of Portions 5, 12 and Portion 21 and 22 of the farm Winterhoek 314 IR
- Portions 17, 18, 56 and the remaining extent of Portion 23 of the farm Nooitgedacht 294 IR
- Portions 7, 8, 18, 19, 25, 26, 31, 33 and 39 of the farm Palmietfontein 316 IR

The proposed underground coal mining operation requires a Mining Right in terms of Section 22 of the Mineral and Petroleum Resources Development Act (Act No.28 of 2002) (MPRDA) and Environmental Authorisation in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) for the listed activities that fall under NEMA's EIA Regulations 2014, as amended, (Listing Notices GNR 983, 984 and 985) regulated by the DMRE.

The following activities and infrastructure are planned for the proposed underground coal mining operation:

- Two decline shafts (adits)
- Ventilation shafts
- Substation & Transmission lines
- Bord-and-pillar and longwall mining method
- Access roads to ventilation systems
- Box cut to access the underground
- Mobile crushing and screening of the ROM coal
- Hauling, access road, haul road,
- Offices;
- Sanitation and change house;
- Fuel storage;
- Pollution control facility/dam(s);
- Clean and dirty water separation system;
- Topsoil, subsoil, overburden, and ROM stockpiles;
- Weighbridge;
- Waste management;
- Conveyor belts
- Workshops & hard park areas

No resource beneficiation in the form of a wash plant will be undertaken on site, and therefore no discard or slurry ponds will be present.

Eco Elementum (Pty) Ltd has been appointed by the applicant as the independent Environmental Assessment Practitioners (EAP), to undertake the Integrated Environmental Authorisation (EA) process. A full Scoping & EIA process is required in terms of the NEMA 2014 amended regulations for the application of a Mining Right.

2. CONTACT PERSON AND CORRESPONDENCE ADDRESS

2.a DETAILS OF THE EAP:

Name of The Practitioner:	For Eco Elementum (Pty) Ltd Lian Roos – Candidate EAP (2022/4550) Riana Panaino – Principal EAP (2021/4135)
Tel No.:	012 807 0383
e-mail address:	lian@ecoe.co.za / riana@ecoe.co.za

2.a.i Expertise of the EAP

2.a.i.1 The qualification of the EAP

Refer to Annexure 2 for a CV of the EAP. Therein the qualifications and professional registration of the EAP are provided.

Name	Lian Roos
Company	Eco Elementum (Pty) Ltd
Position	Environmental Consultant
Location	Block@Nature, Block B, 472 Botterklapper Street, Lynnwood, Pretoria East, 0184
Email	lian@ecoe.co.za
Phone Number	012 807 0383
Education	BSc Hons (App Sci) Water Utilisation, University of Pretoria BSc Environmental Science, University of Pretoria
Professional registration	**EAPASA - Candidate EAP (2022/4550)**
Name	**Riana Panaino**
Company	Eco Elementum (Pty) Ltd
Position	Divisional Head - Environmental Authorisations Environmental Consultant
Location	Block@Nature, Block B, 472 Botterklapper Street, Lynnwood, Pretoria East, 0184
Email	riana@ecoe.co.za
Phone Number	012 807 0383
Education	BSc Hons Biodiversity and Conservation, University of Johannesburg BSc (Botany & Zoology), University of Johannesburg
Professional registration	**EAPASA – Registered EAP (2021/4135)** SACNASP – Professional Natural Scientist (117170)

2.a.i.2 Summary of the EAP's past experience

Refer to Annexure 2 for a CV of the EAP. Therein a summary of the EAP past experience and professional skills are provided.

2.b DESCRIPTION OF THE PROPERTY

Table 2-1: Description of Property

Farm Name:	Leeuwkop 299 IR	Portions 2, 3, 4, 5 and a portion of the remaining extent of Portion 6
	Winterhoek 314 IR	Portions 1, 2, 3, 4, 6, 7, 8, 11, 23, 25, 27, and a portion of Portion 14, and the remaining extent of Portions 5, 12 and Portion 21 and 22
	Nooitgedacht 294 IR	Portions 17, 18, 56 and the remaining extent of Portion 23
	Palmietfontein 316 IR	Portions 7, 8, 18, 19, 25, 26, 31, 33 and 39
Application area (ha)	4681 ha	
Magisterial district:	Magisterial District of Nigel Lesedi Local Municipality Sedibeng District Municipality	
Distance and direction from nearest town	The center of the proposed underground Mining Right site is located 5km northeast of the town of Devon	
21-digit Surveyor General Code for each farm portion	T0IR00000000029900002 T0IR00000000029900003 T0IR00000000029900004 T0IR00000000029900005 T0IR00000000029900006	
	T0IR00000000031400001 T0IR00000000031400002 T0IR00000000031400003 T0IR00000000031400004 T0IR00000000031400005 T0IR00000000031400006 T0IR00000000031400007 T0IR00000000031400008 T0IR00000000031400011 T0IR00000000031400012 T0IR00000000031400014 T0IR00000000031400021 T0IR00000000031400022 T0IR00000000031400023 T0IR00000000031400025 T0IR00000000031400027	
	T0IR00000000029400017 T0IR00000000029400018 T0IR00000000029400023 T0IR00000000029400056	
	T0IR00000000031600007 T0IR00000000031600008	

	T0IR00000000031600018 T0IR00000000031600019 T0IR00000000031600025 T0IR00000000031600026 T0IR00000000031600031 T0IR00000000031600033 T0IR00000000031600039
Description of the overall activity. (Indicate Mining Right, Mining Permit, Prospecting right, Bulk Sampling, Production Right, Exploration Right, Reconnaissance permit, Technical co-operation permit, Additional listed activity)	Yoctolux Collieries (Pty) Ltd is proposing the development of a new greenfield underground coal mining operation (Mafatiki Colliery) near the towns of Devon and Leandra in the Lesedi Local Municipality of Gauteng Province and on the border with Mpumalanga Province. The proposed coal mining operation requires a Mining Right in terms of Section 22 of the Mineral and Petroleum Resources Development Act (Act No.28 of 2002) (MPRDA) and Environmental Authorisation in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) for the listed activities that fall under NEMA's EIA Regulations 2014, as amended, (Listing Notices GNR 983, 984 and 985) regulated by the DMRE. The following activities and infrastructure are planned for the underground coal mining operation: ○ Two decline shafts (adits) ○ Ventilation shafts ○ Substation & Transmission lines ○ Bord-and-pillar and longwall mining method ○ Access roads to ventilation systems ○ Box cut to access the underground ○ Mobile crushing and screening of the ROM coal ○ Hauling, access road, haul road, ○ Offices; ○ Sanitation and change house; ○ Fuel storage; ○ Pollution control facility/dam(s); ○ Clean and dirty water separation system; ○ Topsoil, subsoil, overburden, and ROM stockpiles; ○ Weighbridge; ○ Waste management; ○ Conveyor belt ○ Workshops & hard park areas No beneficiation in the form of a wash plant will be undertaken on site, and therefore no discard or slurry ponds will be present. A full Scoping & EIA process is required in terms of the NEMA 2014 amended regulations for the application of a Mining Right.

2.c LOCALITY MAP

(Show nearest town, scale not smaller than 1:250000 attached as Appendix 3).

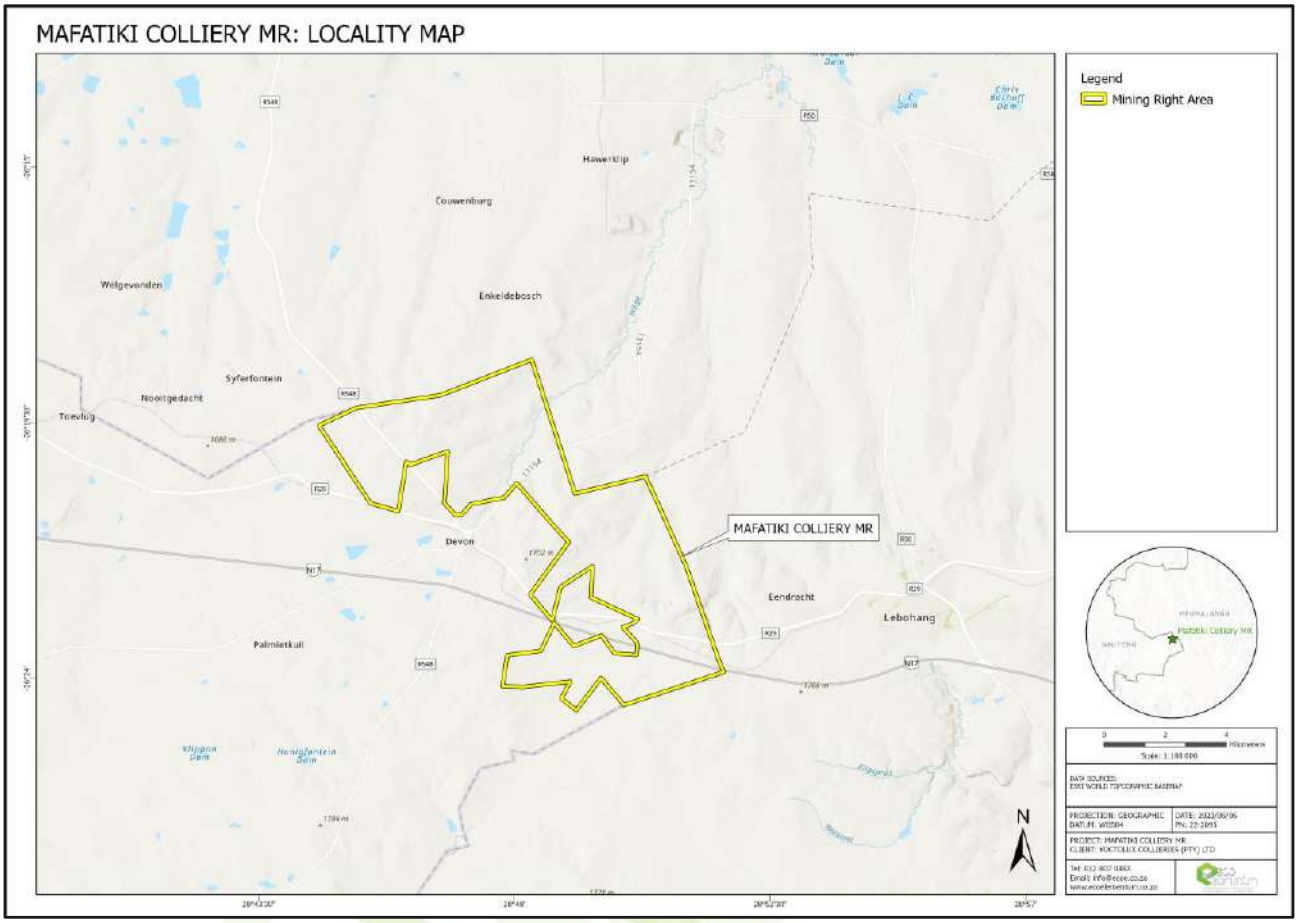


Figure 2-1: Locality map of the proposed underground coal mining right operations – Mafatiki Colliery

2.d DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY.

2.d.i Listed and specified activities

Provide a plan drawn to a scale acceptable to the competent authority but not less than 1: 10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site and attach as Appendix 4.

Table 2-2: Listed and specified activities

APPLICABLE LISTING NOTICE (GNR 983, GNR 984 or GNR 985; as amended)		Name of Activity	Aerial extent of the Activity Ha or m²	Waste Management Authorisation
GNR 983 – Listing Notice 1				
9	The development of infrastructure exceeding 1 000 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 railway line reserve; or (b) where such development will occur within an urban area.	Stormwater management structures	<1000m	No
10	The development and related operation of infrastructure exceeding 1 000 meters in length for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 meters or more; or (ii) with a peak throughput of 120 liters per second or more; excluding where— (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or	Process / Waste / Return Water pipeline infrastructure	<1000m	No

APPLICABLE LISTING NOTICE (GNR 983, GNR 984 or GNR 985; as amended)		Name of Activity	Aerial extent of the Activity Ha or m²	Waste Management Authorisation
	(b) where such development will occur within an urban area.			
11	The development of facilities or infrastructure for the transmission and distribution of electricity— (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.	Substation & transmission lines	Approx. 1000 m²	No
12	The development of (ii) infrastructure or structures with a physical footprint of 100 square metres or more, where such development occurs- (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.	Infrastructure like site offices, ventilation shafts, access control areas, workshops, hardpark areas which may be in close proximity to wetlands.	>100m²	No
13	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 meters or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2 of 2014.	Process and stormwater storage	Process water, stormwater dams with a combined capacity of >50 000 m³	No
24	The development of a road— (i) 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) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;	Access and haul roads	5000m length 13m width Approx. 65 000m²	No
25	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.	Ablutions & change house with sewage treatment plant(s)	>2000m³ 5000m²	No
GNR 984 – Listing Notice 2				
4	The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.	Hydrocarbon storage	>500m³	No
6	The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national	The application for a mining right requires an Integrated Water use Licence in terms of	>50 000m³	No

APPLICABLE LISTING NOTICE (GNR 983, GNR 984 or GNR 985; as amended)		Name of Activity	Aerial extent of the Activity Ha or m²	Waste Management Authorisation
	or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding- (i) activities which are identified and included in Listing Notice 1 of 2014; (ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; (iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or (iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.	Section 21 (g) for pollution control dams (PCDs) dust suppression and stockpiles.		
15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	Site clearance Topsoil & subsoil stripping & stockpiling for surface infrastructure area	100ha	No
17	Any activity including the operation of that activity which requires a Mining Right in terms of 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 mining 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).	Incline shaft(s) and portals at Leeuwkop and Winterhoek sections Ventilation shaft(s) Underground mining	5ha per shaft 2500 m² per shaft 4681 ha Mining Right area. Mineral boundary area yet to be determined	No
GNR 985 – Listing Notice 3				
4	The development of a road wider than 4 metres with a reserve less than 13.5 metres. (c) Gauteng (i) A protected area identified in terms of NEMPAA, excluding conservancies;	Access and hauling roads	5000m length 13m width Approx. 65 000m²)	No

APPLICABLE LISTING NOTICE (GNR 983, GNR 984 or GNR 985; as amended)		Name of Activity	Aerial extent of the Activity Ha or m²	Waste Management Authorisation
	(ii) National Protected Area Expansion Strategy Focus Areas; (iii) Gauteng Protected Area Expansion Priority Areas; (iv) Sites identified as Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans; (v) Sites identified within threatened ecosystems listed in terms of the National Environmental Management Act: Biodiversity Act (Act 10 of 2004); (vi) Sensitive areas identified in an environmental management framework adopted by the relevant environmental authority; (vii) Sites identified as high potential agricultural land in terms of Gauteng Agricultural Potential Atlas; (viii) Important Bird and Biodiversity Area (IBA); (ix) Sites or areas identified in terms of an international convention; (x) Sites managed as protected areas by provincial authorities, or declared as nature reserves in terms of the Nature Conservation Ordinance (Ordinance 12 of 1983) or the NEMPAA: (xi) Sites designated as nature reserves in terms of municipal Spatial Development Frameworks; or Sites zoned for conservation use or public open space or equivalent zoning.			
14	The development of- (i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or (ii) (ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs- (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour. (c) Gauteng	Infrastructure like site offices, ventilation shafts, access control areas, workshops, hardpark areas which may be in close proximity to wetlands.	>100m²	No

APPLICABLE LISTING NOTICE (GNR 983, GNR 984 or GNR 985; as amended)		Name of Activity	Aerial extent of the Activity Ha or m²	Waste Management Authorisation
	(i) A protected area identified in terms of NEMPAA, excluding conservancies. (ii) National Protected Area Expansion Strategy Focus Areas; (iii) Gauteng Protected Area Expansion Priority Areas; (iv) Sites identified as Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans; (v) Sites identified within threatened ecosystems listed in terms of the National Environmental Management Act: Biodiversity Act (Act 10 of 2004); (vi) Sensitive areas identified in an environmental management framework adopted by the relevant environmental authority; (vii) Sites or areas identified in terms of an international convention. (viii) Sites managed as protected areas by provincial authorities, or declared as nature reserves in terms of the Nature Conservation Ordinance (Ordinance 12 of 1983) or the NEMPAA; (ix) Sites designated as nature reserves in terms of municipal Spatial Development Frameworks; or (x) Sites zoned for conservation use or public open space or equivalent zoning.			
NEMWA (List of Waste Management Activities)				
Category B: Act 11	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 MPRDA.	Overburden stockpiles	2ha	X
Category B: Act 10	The construction of a facility for a waste management activity is listed in Category B of this Schedule.	Platform construction for overburden stockpiles	5000m²	X

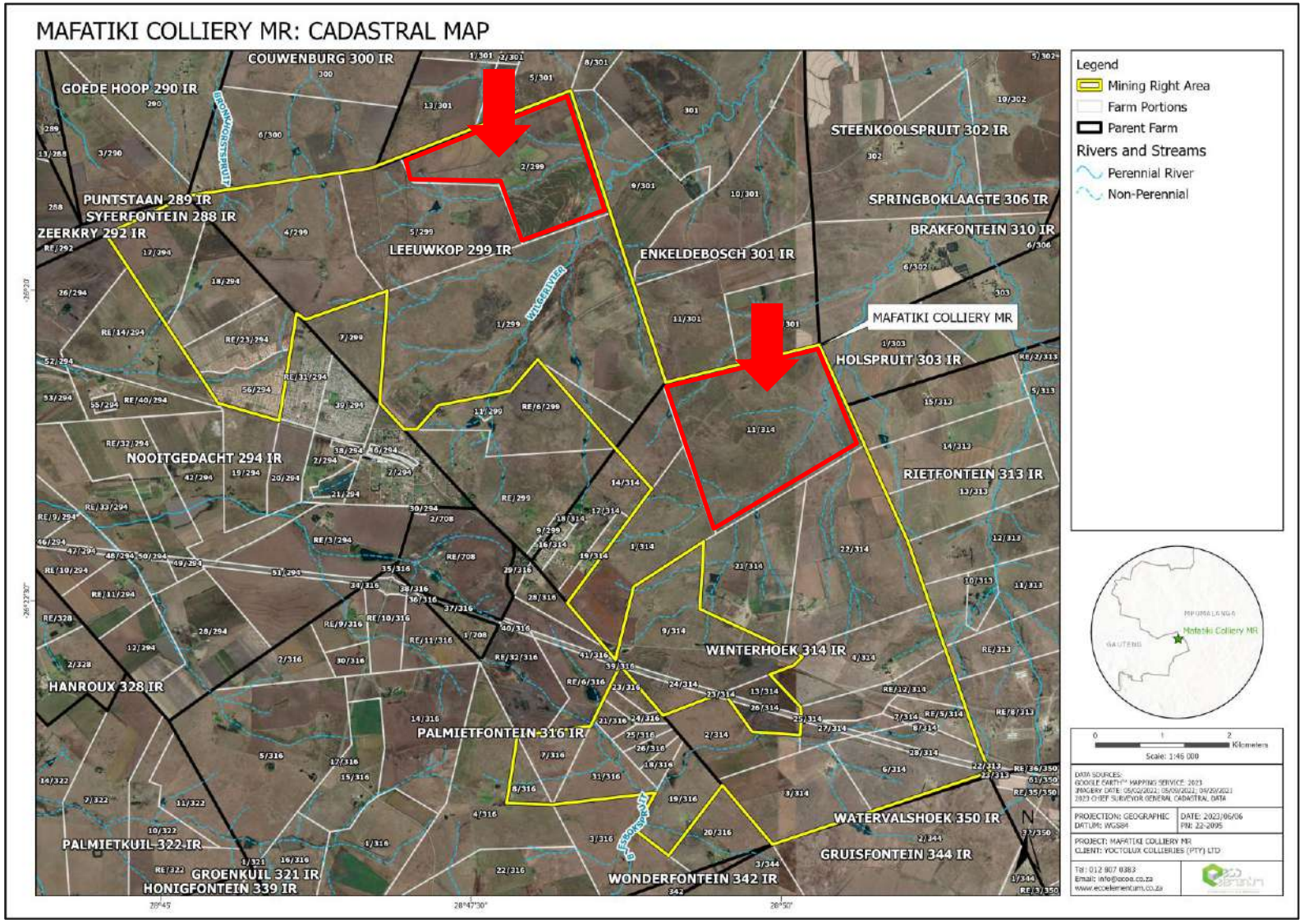


Figure 2-2: Underground mining of coal with associated adits and infrastructure (the two shaft areas are proposed respectivelty on the portions outlined in red above)

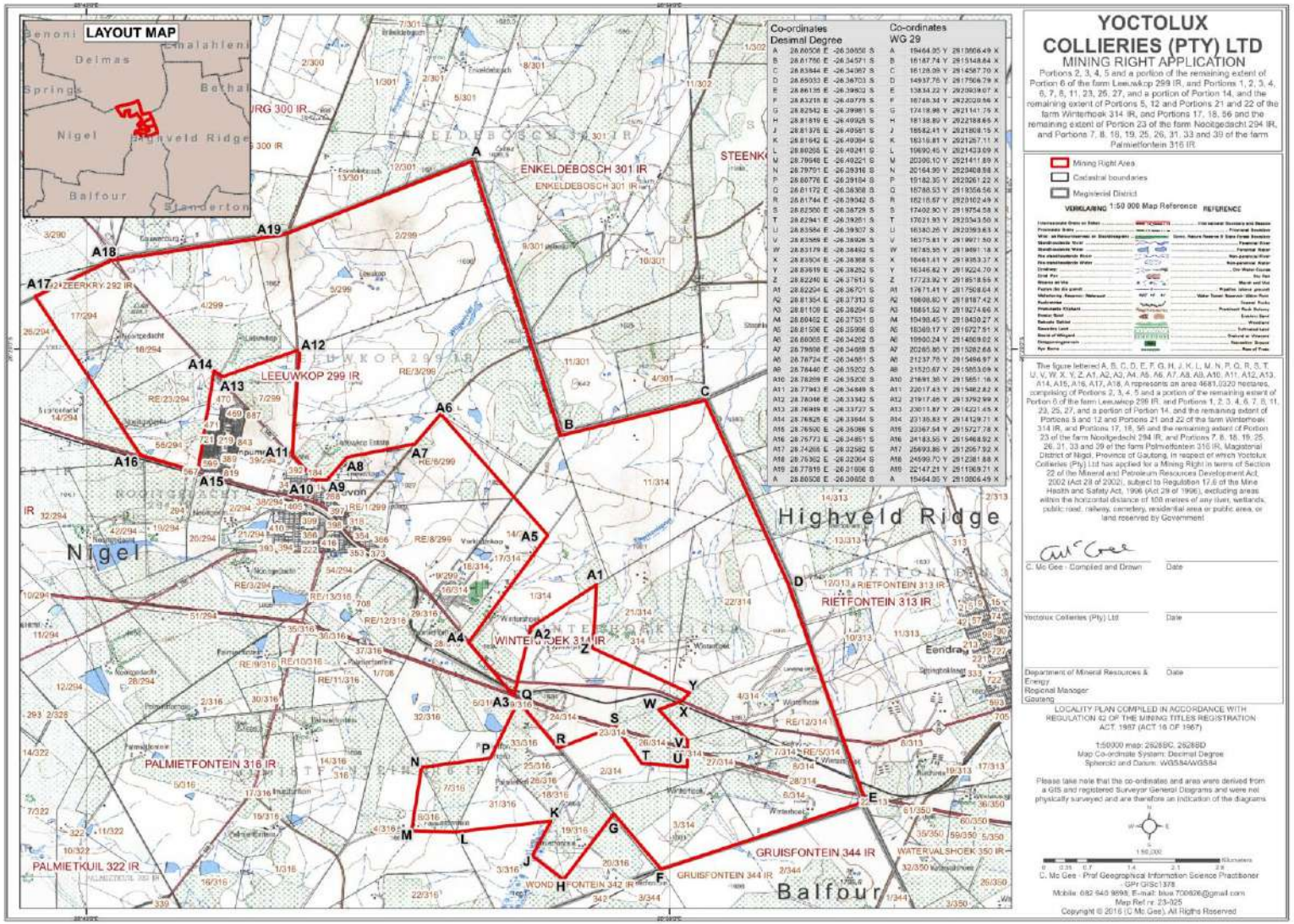


Figure 2-3: Regulation 2(2) map

2.d.ii Description of the activities to be undertaken

(Describe Methodology or technology to be employed, and for a linear activity, a description of the route of the activity)

2.d.ii.1 Infrastructure requirements

- Two decline shafts (adits)
- Ventilation shafts
- Substation & Transmission lines
- Bord-and-pillar and longwall mining method
- Access roads to ventilation systems
- Box cut to access the underground
- Mobile crushing and screening of the RoM coal
- Hauling, access road, haul road,
- Offices;
- Sanitation and change house;
- Fuel storage;
- Pollution control facility/dam(s);
- Clean and dirty water separation system;
- Topsoil, subsoil, overburden, and RoM stockpiles;
- Weighbridge;
- Waste management;
- Conveyor belt
- Workshops & hard park areas

2.d.ii.2 Process description

Mining Method – Underground bord-and-pillar and longwall mining

A box cut or incline shaft will be opened where the strip ratio is the lowest with an adit. The soft overburden will be removed by mechanical methods. The hard overburden will be drilled and blasted and then removed by mechanical methods. The underground mining operations will be conducted by the applicant/owner or a mining contractor. The underground mining method to be undertaken is bord and pillar mining with continuous miners (CM) and shuttle cars, supported by roof bolters for roof support. (Refer to Figure 2-4) The mined coal from the underground workings will be transported via conveyer belts and the haul roads and stored on the Run of Mine (RoM) stockpile area.

The coal will be fed into a crushing and screening plant with a conveyor after which the coal product will be temporarily stored at the product stockpile area before being transported to the newly proposed siding for distribution or directly via truck to the relevant markets. Ventilation shafts are planned in a phased approach.

The coal depth is approximately 80 – 160 meters below the surface. The coal seams within the project area are as follows: the No. 1 Seam appears occasionally in the project area and is usually found near the pre-Karoo basement rocks. A sandstone parting separates the No. 1 and No. 2 Seams. There are some areas where the parting thins out, resulting in the No. 1 and No. 2 seams forming a composite seam. The average thickness of the No.1 Seam is 0.55 m , with a maximum thickness of 6.46 m. The No. 2 Seam is well developed over the Mafatiki Colliery. Only a portion of the No. 2 Seam is economically viable. This is known as the Seam 2 Select (S2S). The average thickness of the S2S is 2.01 m, with a maximum thickness of 7.3 m. The No.3 Seam is poorly developed over the project area and has an average thickness of 0.06 m and maximum thickness of 1.92 m. The No.4L Seam is well developed throughout the project area and is typically a coaly shale unit. The No.4L Seam floor is primarily composed of carbonaceous shale with occasional sandstone. Furthermore, the average thickness of the No.4L Seam is 3.12 m, with a maximum thickness of 9.87 m. The No.4U Seam, which consists of interbedded coal and shale units, is well developed throughout the project area. The average thickness of the No.4U Seam is 1.64 m, with a maximum thickness of 5.51 m. Finally, the No.5 Seam is typically of high quality and occurs over the majority of the area. The average thickness of a No.5 Seam is 0.74 m, with a maximum of 2.05 m.

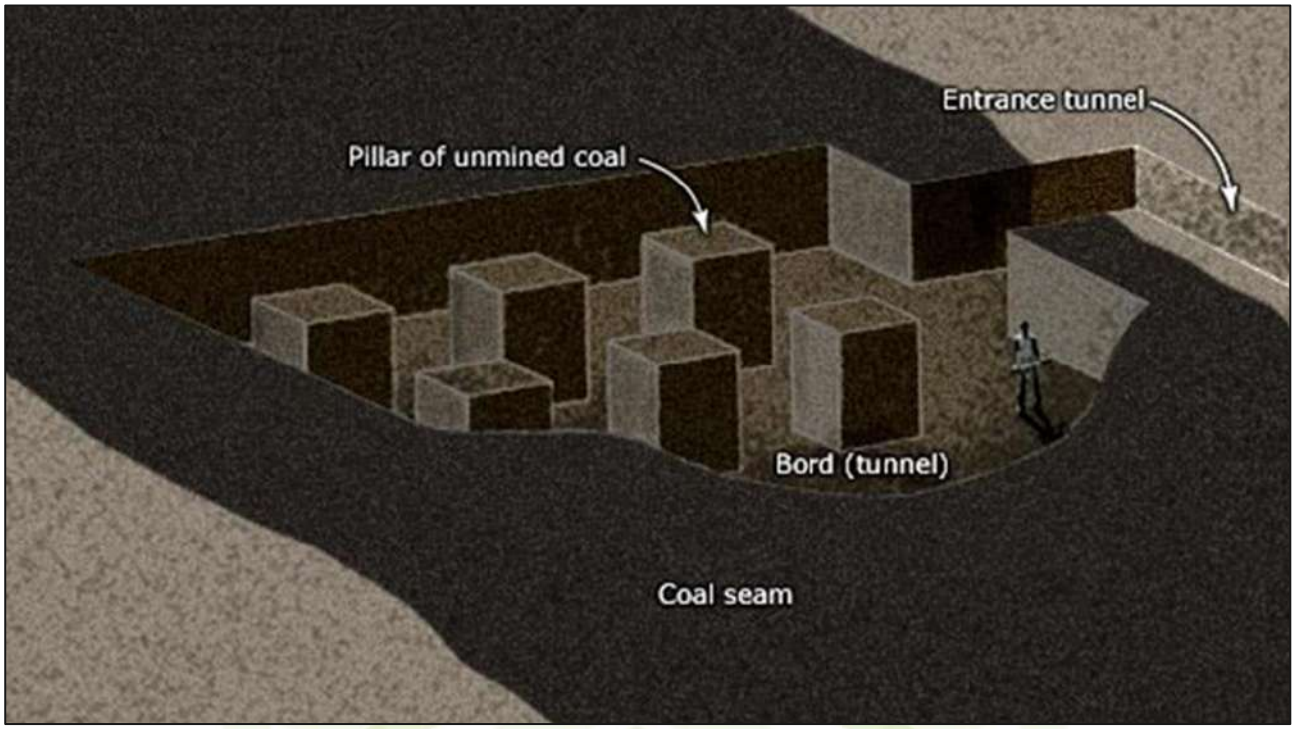


Figure 2-4: Typical Underground board and pillar method

Site Preparation (Topsoil, Subsoil, Overburden Stockpiles)

Site preparation mainly deals with the stripping and stockpiling of topsoil prior to the mining activities commencing as this might affect the quality and quantity of available valuable topsoil resources. The main objectives of soil management are to:

- Minimal removing and stockpiling of topsoil due to historical mining activities;
- Optimise the preservation and recovery of topsoil for rehabilitation;
- Identify soil resources and stripping guidelines;
- Identify surface areas requiring stripping (to minimise over clearing);
- Manage topsoil reserves to not degrade the resource;
- Identify stockpile locations and dimensions; and
- Identify soil movements for rehabilitation use.

In accordance with the objective of providing sufficient stable soil material for rehabilitation and to optimise soil recovery, the following strategies have been adopted:

- Stockpiles to be located outside proposed mine disturbance areas;
- Construction of stockpiles by dozers rather than scrapers to minimise structural degradation;
- Construction of stockpiles with a “rough” surface condition to reduce erosion hazard, improve drainage and promote revegetation; and
- Revegetation of stockpiles with appropriate fertiliser and seed to minimise weed infestation, maintain soil organic matter levels, soil structure and microbial activity and maximise the vegetative cover of the stockpile depending on the exposure timeframes.

Disturbance areas will be stripped progressively (i.e. only as required) to reduce erosion and sediment generation, to reduce the extent of topsoil stockpiles and to utilise stripped topsoil as soon as possible for rehabilitation. Rehabilitation of disturbed areas will be undertaken as practicable after infrastructures are completed or as areas are no longer required. Soil surveys over the adits areas and beneath proposed stockpile emplacements and other infrastructure areas will determine the depth of topsoil. It should be noted that it is important that for topsoil recovered from the areas it is required that underlying material is not inadvertently collected since it is unsuitable for reuse in rehabilitation.

A general protocol for soil handling is presented below and includes soil handling measures which optimise the retention of soil characteristics (in terms of nutrients and micro-organisms) favourable to plant growth:

- The surface of the completed stockpiles will be left in a "rough" condition to help promote water infiltration and minimise erosion prior to vegetation establishment;
- Topsoil stockpiles to have a maximum height of 3 m to limit the potential for anaerobic conditions to develop within the soil pile;
- Topsoil stockpiles to have an embankment grade of approximately 1V:4H (to limit the potential for erosion of the outer pile face);
- Topsoil stockpiles will be seeded and fertilised; and
- Soil rejuvenation practices will be undertaken if required prior to re-spreading as part of rehabilitation works.

Topsoil, subsoil and overburden material will be removed during the construction of the adits and stockpiled separately for the purpose of backfill rehabilitation. The topsoil stockpiles will not exceed a height of six meters which is high enough to reduce erosion impacts of stockpiled topsoil.

Access and Haul Roads Construction

The mine access road will lead off one of the existing dirt road. The dirt road will be upgraded to the applicable standards which includes a gravel road leading into the mine. The road will be used to access the mine offices, workshop complex, and mining area. Coal transportation trucks will also use this road to enter and exit the mine premises, including travelling to the weighbridge.

Semi Temporary Site and Security Offices

The site offices for the project, including a small security office at the entrance of the mining area next to the main entrance road will consist of container-type offices that is commercially available as off the shelve products, as illustrated in the image below. This ensures minimal construction requirements on site and also minimal footprint. Keeping the disturbance area small and ensuring ease of mine closure and rehabilitation after life of mine make the modular offices ideal.

Figure 2-5: Typical modular site offices and security office

Modular Sanitation and Change House

Similar to the structure indicated in the section above, will the modular sanitation and change house also be container type facilities which can easily be brought to site and also removed after life of mine. For the change house and ablution facility a septic tank system will be implemented which is temporary of nature and can also be decommissioned easily. The septic tank system will ensure a 'honey-sucker' type sewage removal vehicle can remove and dispose of sewage at an appropriate facility off site. This ensures no major construction and approval is required for a full-scale sewage treatment facility. Mobile chemical toilets will also be used during construction and supplied by an approved contractor who will be responsible for the management of these toilets. Water requirements relating to ablutions and drinking water are expected to be considerable and water should either b e sourced from the municipality or from groundwater sources.

Pollution Control Facility/Dam (Evaporation and Dust Suppression Usages)

Pollution control dams (PCDs) form an integral and important part of the water management systems on a mine. Different types of PCDs may exist on a mine site, such as process water dams, storm water dams, evaporation dams etc. The purpose of PCDs for the mine and in the water management circuits are to:

- Minimise the impact of polluted water on the water resource;
- Minimise the area that is polluted as far as possible, by separating out clean and dirty catchments; and
- Capture and retain the dirty water contribution to the PCDs that cannot be discharged to the water resource, due to water quality constraints, and manage this dirty water through recycling, reuse, evaporation and/or treatment and authorised discharge.

The image below is an example of the typical pollution control dam that will be constructed.

Figure 2-6: Typical lined pollution control dam (PCD)

Fuel Storage

The main fuel storage will be diesel in a fuel storage tank with a drip tray designed to hold 110% the capacity of the tanks.

Clean and Dirty Water Separation

A detailed surface water management plan will be drawn up as part of the Water Use License Application including the determination of flood lines, identification of sensitive receptors and existing surface water systems and flow paths, and civil engineering design reports for the required trenches and water management facilities. The Geohydrological investigation will also feed into these designs as the anticipated pollution will be modelled. Trenching around the mining area forms part of the clean and dirty water separation and is to a large extent based on the water balance as calculated by the civil engineering team.

Figures for clarification purposes have been provided below to indicate cross sections of both the dirty water and clean water diversion trenches which will be constructed around the mining area. These designs will also form part of the final master plan to be implemented during the Water Use License Application.

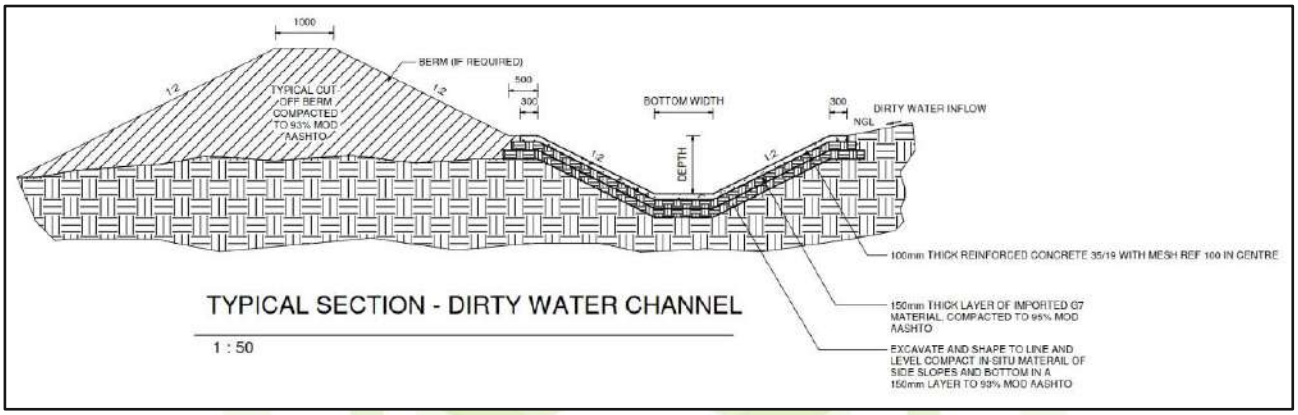


Figure 2-7: Typical Channel / Berm Cross Section For polluted (dirty) water diversion

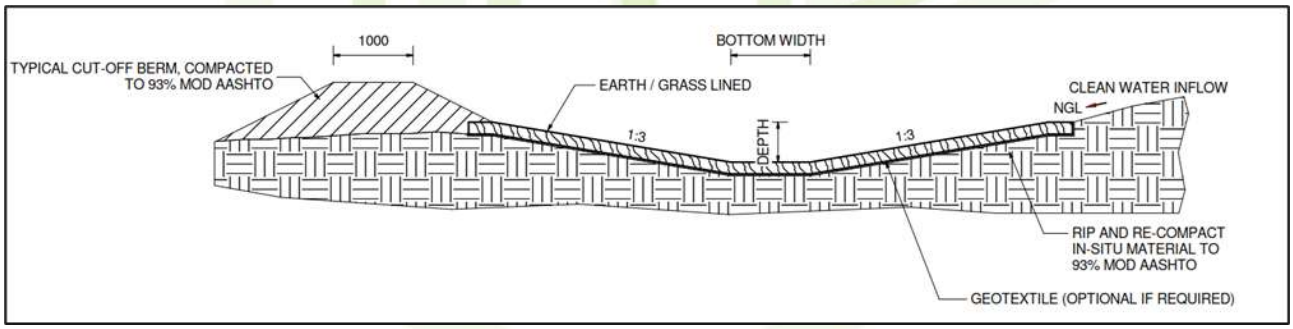


Figure 2-8: Typical channel/berm cross section for clean water diversion

Fencing

Fencing of the entire mining area will be required as a means of ensuring safety and also keeping trespassers at bay. Fences will be clearly demarcated, and appropriate signage will be displayed, similar to the signs in the images below. Fencing of the sensitive receptors such as wetlands will also take place ensuring no mining personnel will enter these areas and that it will remain protected for the duration of the project. Sites of archaeological and heritage importance will also need to be fenced off while safe access to these sites will be provided. The necessary signage will also be erected at sites of archaeological and/or heritage importance to ensure visitors can easily and safely access the premises.

Figure 2-9: Typical mine fence signage

Staff and Visitors Parking

Designated parking areas will be constructed by compaction of the subsoil after removal, storage and preservation of the valuable layer of topsoil. Storm water management control around these areas will be implemented while the necessary signage will be erected to ensure optimal safety while reverse parking will be implemented at all parking bays. The necessary waste receptacles as well as oil spill kits will be provided at these sites in case of accidental spillage or leakage of hydrocarbon fuel/oil/greases from the vehicles.

Waste Management

Waste will be generated from the start to the decommissioning of the project. It is proposed that the waste that would be generated on site would be managed by reducing, reusing and recycling as far as possible. A certified and approved external contractor will be responsible for the removal and disposal of the waste at a registered landfill.

2.d.ii.3 Run of Mine Coal and Coal Beneficiation

Resource beneficiation will be in the form if Crushing and Screening without the need for an additional wash plant to wash coal. Therefore no discard dumps will be required on site.

2.e POLICY AND LEGISLATIVE CONTEXT

Table 2-3: Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);		REFERENCE WHERE APPLIED
The Republic of South Africa Constitution (Act No. 108 of 1996) In terms of Section 24 of the Constitution, everyone has the right to an environment that is not harmful to their health or well-being and to have the environment protected, for the benefit of present and future generations, through reasonable legislation and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while prompting justifiable economic and social development. In terms of Section 32 of the Constitution, everyone has the right to access information held by the state and private entities that is required when exercising the protection of a right. In terms of Section 33 of the Constitution, everyone has the right to administrative action that is lawful, reasonable, and procedurally fair. Everyone whose rights have been adversely affected by administrative action has the right to be given written reasons.	The constitution requires that the principles underpinned by the Sections be applied at the potential impacts identification as well as mitigation measures and public participation of the whole process.	An open and participatory public participation process will be followed. An EMP and awareness plan will be designed according to the issues raised during this process.
National Environmental Management Act (Act No. 107 of 1998) (NEMA) The NEMA provides the overarching legislation for environmental governance in South Africa, giving effect to Section 24 of the Constitution of the Republic of South Africa. NEMA sets out the fundamental principles of Integrated Environmental Management that must be adhered to to ensure sustainable development. The EIA 2014 Regulations, as amended have been created under NEMA for the administration of the Act and therein it is stipulated that specific activities relating to developments require an Environmental Authorisation from the appropriate authority (competent authority) before the activity can commence. The specific activities are specified through listing notices. Listing Notice 1 specifies activities that have a limited scale and impact and can be assessed through a simpler process called Basic Assessment (BA). After the assessment, a Basic Assessment Report (BAR) is submitted to the competent authority.	Section 28 of the NEMA includes a far-reaching general "Duty of Care" which stipulates the need to protect the environment from degradation and pollution. Specific activities relating to developments that can cause environmental degradation and pollution require an Environmental Authorisation (EA) from the appropriate authority (competent authority) before the activity can commence. Activity 17 of Listing Notice 2 states that any activity including the operation of that activity which requires a Mining Right in terms of Section 22 of the MPRDA, including associated infrastructure, structures and earthworks, directly related to mining of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and	The EA application together with a Section 22 Mining Right application was lodged with the DMRE via the South African Mineral Resources Administration System (SAMRAD) on 04 May 2023 with file reference: GP30/5/1/2/2/10116MR. The application was accepted by the competent authority on the 22nd of June 2023. Listed activities as per the EIA 2014 Regulations, as amended, have been identified (refer to Section 2, subsection 2.d.i).

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);		REFERENCE WHERE APPLIED
Listing Notice 2 identifies activities of significantly greater magnitude, which require a more extensive evaluation process. This process involves an initial Scoping Phase, followed by an Environmental Impact Assessment (EIA) and an Environmental Management Plan (EMPr). This comprehensive process is known as the S&EIR process. Listing Notice 3 addresses activities limited to specific geographical areas and concerns specific to individual provinces. These activities require the provincial authority concerned to conduct the Basic Assessment (BA) process.	Petroleum Resources Development Act, 2002 (Act No. 28 of 2002). In terms of the Activity 17 and other triggered listed activities, an S&EIR process is required.	Accordingly, the application for EA will require the undertaking of a full S&EIR process. All additional activities (listing Notices 1 & 3) will need to be conducted in accordance with the S&EIR process.
Promotion of Access to Information Act (Act No. 2 of 2000) (PAIA) PAIA recognises that everyone has a right of access to any information held by the state and by another person when that information is required to exercise or protect any right.	The S&EIR process are required to aligned with the principles underpinned by the PAIA and therefore promote that a fair and open public participation is undertaken.	The S&EIR process is aligned with the PAIA and therefore fair and open public participation is undertaken. NEMA Public Participation Process will be followed as per the 2014 EIA Guidelines (Chapter 6).
Promotion of Administrative Justice Act (Act No. 3 of 2000) (PAJA) PAJA recognizes and upholds the principles of fairness and transparency in administrative decision-making. It ensures that individuals have the right to be provided with reasons for administrative decisions, the right to be heard, and the opportunity to challenge such decisions.	The S&EIR process are required to aligned with the principles underpinned by the PAJA and therefore promote that just and transparent administrative decision-making is undertaken.	The S&EIR process is aligned with the PAJA and therefore just and transparent decision making is promoted throughout the process. Once a decision on the EA application has been reached the competent authority must notify the applicant in writing of the decision and give reasons for the decision.
Mineral and Petroleum Resources Development (Act No. 28 of 2002) (MPRDA) The MPRDA regulates the exploration, mining, and beneficiation of mineral and petroleum resources. It covers aspects such as ownership, licensing, transformation, environmental management, labor rights, revenue sharing, and regulation/enforcement. The act aims to ensure responsible and sustainable resource utilisation, promote empowerment, protect the environment, and regulate the industry's activities.	The Mineral and Petroleum Resources Development authority – DMRE requires the submission of an Environmental Authorisation (EA) Application according to the NEMA regulations, as amended and the NEM:WA regulations. DMRE also requires that for mining developments like this project, a Mining Right Application in terms of the provisions made in Section 22 of the MPRDA be submitted. A Mining Work Programme (MWP) and a Social and Labour Plan (SLP) are critical components of the Mining Right Application.	An EA application in terms of the NEMA and the NEM:WA regulations in respect of listed activities that have been triggered by applications in terms of the MPRDA have been made and submitted to the DMRE in the prescribed template. The EA application together with a Section 22 Mining Right Application was lodged with the DMRE via the South African Mineral Resources Administration System

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);		REFERENCE WHERE APPLIED
		(SAMRAD) on 04 May 2023 with file reference: GP30/5/1/2/2/10116MR. The application was accepted by the competent authority on the 22nd of June 2023. A MWP and SLP has been submitted together with the application to the competent authority (DMRE) for review as part of the application process.
NEMA Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) The EIA Regulations (GNR 982) regulate the evaluation and management of potential environmental impacts caused by development projects. They require a systematic assessment of impacts, public participation, development of mitigation measures, and the preparation of an Environmental Management Plan. The regulations also emphasize the engagement of qualified specialists, enforcement of compliance, and processes for review and appeals.	In terms of the listed activities, an S&EIR process is required. The process will be followed in terms of the "one environmental system"	Listed activities as per the NEMA Regulations, as amended, have been identified (refer to Section 2, subsection 2.d.i).
National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA) The NEM:WA regulates waste management. It provides provisions for the classification and proper handling of waste, promotes extended producer responsibility, requires the development of waste management plans, establishes licensing and permitting systems, encourages waste information systems, ensures enforcement and compliance, and emphasizes public participation and awareness in waste management. The objectives of the is to ensure responsible waste practices, minimize environmental and health risks, and promote sustainable waste management through minimization of natural resource consumption, avoiding and minimizing the generation of waste, reducing, recycling and recovering waste. GNR 921, as amended, have been created under NEM:WA for the administration of the Act and therein it is stipulated that specific activities relating to waste management require an Environmental Authorisation from the appropriate authority (competent authority) before the	In terms of the Section 19 listed waste management activities, an S&EIR process is required. The process is part of the "one environmental system". A distinction is made between Category A waste management activities, which require a basic assessment, and Category B activities, which require a S&EIR process, and Category C waste management activities which do not require a waste management license but compliance with relevant requirements or standards. According to Section 44 of the Act, the licensing procedure must be integrated with an EIA process in accordance with the GNR 982.	In terms of GN718 of 2009, under NEMWA, various Category B waste management activities are applicable to the proposed mining operation. The impacts and associated management and/or mitigation measures will be included in the EIA phase of the project. Listed activities as per the NEM:WA Regulations, as amended, have been identified (refer to Section 2, subsection 2.d.i).

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);		REFERENCE WHERE APPLIED
activity can commence. The specific activities are specified in accordance with Section 19 of the NEMA:WA.	GNR 633 includes the establishment or reclamation of a residue stockpile or residue deposit, resulting from prospecting or mining activities as a listed activity.	
National Environmental Management: Biodiversity Act (Act No.10 of 2004) (NEM:BA) The NEM:BA focuses on the conservation and sustainable management of biodiversity. Provisions for biodiversity conservation, protected areas, threatened and protected species and the control of alien and invasive species are made therein. Biodiversity management plans, the sustainable use of indigenous biological resources and compliance and enforcement measures are also enacted therein. The act aims to protect and manage the sustainable utilisation of South Africa's biodiversity, ensuring the survival of threatened species, and the regulation the management of protected areas.	The fauna and flora prevailing in the proposed project site will be handled in terms of this Act and relevant ecological studies have already been initiated.	As part of the S&EIA process, various Biodiversity & Ecological studies will be conducted for the development. These studies investigate, assess, and evaluate the impact on the biodiversity of the area associated with the development. The development footprint will be guided by any findings of the reports. Permits will be applied for where and when necessary, should any red data species be relocated.
National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEM:AQA) NEM:AQA makes provision for National ambient air quality standards, however it is generally accepted that more stringent standards can be established at the Provincial and Local levels. Emissions are controlled through the listing of activities that are sources of emission and the issuing of emission licences for these listed activities. Atmospheric emission standards have been established for each of these activities and an atmospheric licence is now required to operate. According to the Act, the Department of Environmental Affairs (DEA), the provincial environmental departments and local authorities (district and local municipalities) are separately and jointly responsible for the implementation and enforcement of various aspects of NEM:AQA. Each of these spheres of government is obliged to appoint an Air Quality Officer and to co-operate with each other and co-ordinate their activities through mechanisms provided for in the National Environment Management Act, 1998 (Act 107 of 1998).	The requirement of an Air Emissions Licence (AEL) for this development is subject to investigating, assessing, and evaluating the impact of dust fallout on the environment. Atmospheric emissions, particularly in the form of dust, must be adequately maintained to prevent dust pollution. The issuing of emission licence for Listed Activities will be the responsibility of the municipality (local or district). A designated Air Quality Officer ought to be responsible for coordinating matters pertaining to air quality management in the municipality. The appointed Air Quality Officer will be responsible for the issuing of atmospheric emission licence, or the Air Quality Officer could delegate the responsibility to the Director of community environmental services.	As part of the S&EIA process, an Air Quality Impact Assessment (AQIA) will be conducted for the development. The AQIA investigates, assesses, and evaluates the impact of dust fallout on the environment associated with the development. NEM:AQA allows an Air Quality Officer to request a dust fallout monitoring programme if there are suspicions of exceedances or the need for a dust management plan. A report with sampling data, meteorological information, and compliance results must be submitted. If the dust fallout standard is exceeded, a dust fall management plan must be developed and implemented, with progress reports provided to the Air Quality Officer.

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);		REFERENCE WHERE APPLIED
National Dust Control Regulations - Government Notice (1 November 2013) (GNR 827) GNR 827 was published in terms of the National Environmental Management Air Quality Act, which prescribes general measures for the control of dust. According to the regulations, any person conducting any activity in such a way that would give rise to dust in quantities and concentrations that exceeded the dust fallout standard set out in the regulation was impelled to, upon receipt of a notice from an air quality officer, implement a dust fallout monitoring programme.	The purpose of GNR 827 is to prescribe general measures for the control if dust in all areas. Dust management is required on site during operations. The method to be used for measuring the dust fallout rate and the guideline for locating sampling/monitoring points would be the American Standards for Testing and Materials method (ASTM D1739:1970), or an equivalent method approved by any internally recognised body.	As part of the S&EIA process, an Air Quality Impact Assessment (AQIA) will be conducted for the development. In the resulting report, dust fallout monitoring points are proposed for the development. These points measure dust fallout rates and concentration associated with the development (within and outside the boundary, at sensitive receptors, etc.).
National Water Act (Act No. 36 of 1998) (NWA) The NWA is the primary regulatory legislation, controlling and managing the use of water resources as well as the pollution thereof. This act provides for fundamental reformation of legislation relating to water resource use. It established a framework for the sustainable and equitable management of water resources. It covers various aspects, including water resource classification and allocation, integrated water resource management, water use authorisations, water conservation and demand management, water quality management, institutional arrangements, and public participation. The NWA aims to ensure the responsible and efficient use of water, protect water quality, and involve the public in decision-making processes related to water resource management. In terms of the NWA, four types of water uses exist: 1. Schedule 1 use - small volumes of water for household use only. No application for a licence needs to be made. 2. General Authorisations - larger volumes of water may be generally authorised for a specific type of water use or category of water user. These users need to register their use but do not need a licence. 3. Existing Lawful Use – this allows water use that was lawfully used before the NWA came into effect to continue until it can be converted into a licence using compulsory licensing. 4. Licensed Water Use – Licences are issued under the NWA, and require approval of an application by the Department of Water and Sanitation.	Section 21 of the NWA defines water uses which are governed in terms of the Act and for which a water use licence (WUL) is required. In terms of section 40(1) of the NWA "*a person who is required or wishes to obtain a licence to use water must apply to the relevant responsible authority for a licence.*" These water uses, in terms of Section 21, are as follows: a) water from a water resource; b) storing water; c) impeding or diverting the flow of water in a watercourse; d) engaging in a stream flow reduction activity contemplated in Section 36; e) engaging in a controlled activity identified as such in Section 37(1) or declared under Section 38(1); f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;	An integrated water use licence application (IWULA) will be conducted for any triggered Section 21 water uses associated with the development. The IWULA process will run concurrently with the S&EIA process. In a phased approach, the IWULA is submitted to DWS for comment and consideration via the Electronic Water Use Licence Application and Authorisation System (e-WULAAS). An application for a water use licence shall be subjected to an administrative, technical and legal assessment to arrive at a decision.

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);		REFERENCE WHERE APPLIED
The various water uses are contained under Section 21 of the NWA.	g) disposing of waste in a manner which may detrimentally impact on a water resource; h) disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process; i) altering the bed, banks, course, or characteristic of a watercourse; j) removing, discharging, or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and k) using water for recreational purposes.	
Regulations on Use of Water for Mining and Related Activities Aimed at the Protection of Water Resources - Government Notice (4 June 1999) (GNR 704) GNR 704 makes provision for pollution prevention and control measures on the use of water for mining and related activities aimed at the protection of water resources. This regulation aims to achieve the sufficient and effective management of stormwater associated with the development (mining and related activities).	Water resource conservation regulations for mining related activities require the separation of clean and dirty water. In terms of GNR 704, clean water runoff arising within the catchment of the areas of development is required to be diverted and returned to the natural watercourse, while all dirty water must be contained within a dirty water management system. Surface water management infrastructure is designed, managed, and operated to comply with requirements as contained in the GNR 704 of the NWA.	As part of the IWULA process, surface water management infrastructure is designed and submitted to DWS for comment and consideration. These designs tie into a Stormwater Management Plan (SWMP) that guides the management and operation of the surface water management infrastructure associated with the development. Clean and dirty water systems (channels, pollution control dams, etc.) must be designed, constructed, and maintained to ensure the separation of clean and dirty water and the conservation of water resources associated with the development.
National Heritage Resources Act (Act No. 25 of 1999) (NHRA) The protection and management of South Africa's heritage resources are regulated by the NHRA. The enforcing authority for this act is the South African National Heritage Resources	Heritage resource conservation legislation requires an impact assessment report to be submitted for development authorisations. These reports must include	As part of the S&EIA process, an AIA and a PIA will be conducted for the development and the relevant reports will be uploaded on

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);		REFERENCE WHERE APPLIED
Agency (SAHRA). SAHRA aims to conserve and control the management, research, alteration, and destruction of cultural resources of South Africa and to prosecute if necessary. It is therefore crucially important to adhere to heritage resource legislation, as many heritage sites are threatened by development.	an Archaeological Impact Assessment (AIA) and a Paleontological Impact Assessment (PIA) if triggered. These assessments are required to comply with the regulations of SAHRA in terms of Section 38(8) of NHRA for a development of this nature.	the South African Heritage Resources Information System (SAHRIS) for comment and consideration. These reports identify all heritage resources (archaeological, paleontological, graves etc.) that might occur in areas of development and make recommendations for the protection thereof or for the mitigation of the impact. The development footprint will be guided by any findings of these reports.
Conservation of Agricultural Resources Act (Act No. 43 of 1983) (CARA) CARA focuses on the conservation and sustainable use of agricultural resources. The Act provides for control over the utilisation of the natural agricultural resources in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants. The utilisation and protection of land, which is cultivated, the prevention or control of waterlogging or salination of land and the restoration or reclamation of eroded land or land which is otherwise disturbed or denuded are but some of the control measures.	The principles of CARA ought to inform the relevant specialist's scope of work when assessing and evaluating the development. Control measures will be required to manage and where possible mitigate the impacts on soil and agricultural resources associated with the development.	As part of the S&EIA process, specialist studies relating to agricultural resources (soil, agricultural potential, capability, etc.) are to be conducted and informed by CARA. The principles of CARA (protection of agricultural resources, soil, wetlands, vegetation, the control of alien invasives etc.) will guide the S&EIA process and will be included in the Rehabilitation and Closure Plan. Stakeholder engagement will also inform the sustainable use of agricultural resources associated with the development.
Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (SPLUMA) SPLUMA is the framework legislation for all spatial planning and land use management legislation in South Africa. It is aimed at incorporating the principles of sustainable development into land use and planning regulations and laws, regulating the procedures and decision-making in this area, and addressing historical spatial imbalances amongst others.	SPLUMA requires individuals (the applicant) to submit development applications for land use changes, thereby promoting comprehensive land use planning and establishing zoning controls.	The applicant must consider and apply for rezoning from the current land use to mining. This is a separate application that must be submitted to the municipal authority.
Mine Health and Safety Act, 1996 (Act No. 29 of 1996) (MHSA) MHSA aims to ensure a safe and healthy working environment in the mining industry in South Africa. It sets regulations and standards to protect the well-being of mine workers, the public,	The health and safety policy of the mine ought to be guided by the MHSA. Sensitive receptors both within and	While the S&EIR does not specifically discuss it, the preservation and protection of the environment plays a role in ensuring

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);		REFERENCE WHERE APPLIED
and the environment. The act focuses on preventing accidents, injuries, and occupational diseases through hazard identification, risk assessment, and the implementation of appropriate control measures. It emphasizes continuous improvement, establishes monitoring and enforcement mechanisms, and assigns responsibilities to mine owners, employers, and employees. Overall, the MHSA prioritizes the safety and health of individuals involved in mining operations.	outside the boundary of the proposed mining area are regulated by the Act.	a secure working environment. Risk impact assessment to be conducted.
National Development Plan (2012) The National Development Plan outlines what we should do to eradicate poverty, increase employment and reduce inequality by 2030. The Plan has the target of developing people's capabilities to be to improve their lives through education and skills development, health care, better access to public transport, jobs, social protection, rising income, housing and basic services, and safety.	Used to identify project Need and Desirability and alignment with National Policy.	To form part of the project background and socio-economic evaluation.
Gauteng Spatial Development Framework	Used to identify the municipality's long term spatial development plans. SDF to be considered in terms of the need and desirability.	The SDF should be consulted as part of the Socio-Economic Study's Scope of Work.
Sedibeng Spatial Development Framework	Used to identify the municipality's long term spatial development plans. SDF to be considered in terms of the need and desirability.	The SDF should be consulted as part of the Socio-Economic Study's Scope of Work.
Lesedi Development Framework	Used to identify the municipality's long term spatial development plans. SDF to be considered in terms of the need and desirability.	The SDF should be consulted as part of the Socio-Economic Study's Scope of Work.

2.f NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES.

(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).

The mining sector has been described as the "Continuous Sunrise Sector" by President Cyril Ramaphosa at the 'Investing in African Mining Indaba' in Cape Town during May 2022, this due to the significant contribution which the sector continues to have on the country's economy. Despite the many challenges created by the Covid-19 Pandemic, the mining sector continues to contribute substantially to export earnings, is a critical source of foreign direct investment and provides employment for a considerable number of people.

As the economic effects of the Covid-19 Pandemic begin to subside, the mining sector has significantly contributed to the recuperation of South Africa's economy. In 2021, the mining sector registered a growth of 11.8%, the largest growth seen across all the industries in the economy. The sector was able to recover production close to pre-covid conditions.

In 2019 StatSA provided a report detailing the mineral production, finances, employment, exports and imports statistics for South Africa. The results of the census conducted confirmed that the South African Mining Industry is a critical pillar of our economy, with R527,5 billion in total sales generated in 2019. Of this R527,5 billion, 61% (R323,8 billion) was sourced from outside the country through exports. Coal dominates production in South African, covering about 75% of the total mass of all minerals produced. In 2019, 306 million metric tons of coal was produced. Almost two-thirds of mining sales are from abroad, with 39% of coal produced being exported.

The extracting and processing of minerals requires a great deal of machinery and workforce. The South African mining industry employed 514 859 individuals in 2019, with 39% employed in the platinum group metals sector, 21% in the coal sector and 20% employed in the gold sector. Recent statistics note that mining in South Africa still directly employs over half a million people post-covid.

At the 4th South African Investment Conference in 2022, investments of approximately R46 billion was pledged towards mining and mineral beneficiation, showing investor confidence in South Africa's mining potential and operations.

The mining industry is identified as one of the key components toward Rapid Economic Growth in order to reduce poverty and minimise unemployment Growth (State of the Nation Address, 2019). The key issues include:

- The need for a strong capable state;
- Cost reduction for businesses and consumers;
- The need for reindustrialisation and a revitalised mining sector;
- Faster growth in tourism;
- Improved infrastructure;
- Better support for small businesses; and
- Marked reduction in unemployment.

Mining's contribution to provincial GDP (2020) is 25.9% and the sector employs 53 000 people. The activity of mining has numerous social and economic benefits in local, regional and national context. These include:

- Job creation.
- Skills development.
- SMME development.
- Local economic development.
- Contribution to local and national tax income (royalties, companies' tax etc.).
- Contribution to the national gross domestic product, and
- Future business opportunities.

The production of goods, supply of services or construction of infrastructure results in expenditure within a regional economy which has knock-on effects and results in additional expenditure which contributes to the regional economy.

2.g PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

A 20-year authorisation is requested

2.h DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED SITE AND ALTERNATIVES WITHIN THE SITE.

(This section is not about the impact assessment itself; it is about the determination of the specific site layout having taken into consideration (1) the comparison of the originally proposed site plan, the comparison of that plan with the plan of environmental features and current land uses, the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout as a result).

2.h.i Details of the development footprint alternatives considered.

With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

GIS and spatial analysis will be used to determine the location of the mining infrastructure by considering environmental sensitivities. Furthermore, the resource location determined through drilling exercises in order to locate the areas that will be most economical to mine, and the extent of the resource that will be mined. The infrastructure layout will take into account the resource location, watercourse location, and location of built structures and graves.

- The detailed infrastructure layout will be presented during the EIA phase.

a) the property on which or location where it is proposed to undertake the activity;

The underground mining project is over portions 2, 3, 4, 5 and a portion of the remaining extent of portion 6 of the farm Leeuwkop 299 IR, portions 1, 2, 3, 4, 6, 7, 8, 11, 23, 25, 27, and a portion of portion 14, and the remaining extent of portions 5, 12 and portion 21 and 22 of the farm Winterhoek 314 IR portions 17, 18, 56 and the remaining extent of portion 23 of the farm Nooitgedacht 294 IR, portions 7, 8, 18, 19, 25, 26, 31, 33 and 39 of the farm Palmietfontein 316 IR and is located in the Highveld Coalfield. The project location is bound to the current location due to the underlying geology, surrounding wetlands and the applicant's existing prospecting rights. The greater area has also been impacted by historic underground mining and some sections have already been transformed from its natural state. Therefore, no alternative properties were considered.

b) the type of activity to be undertaken;

Only underground mining is considered by the applicant, due to the nature of the mining area and the extremely deep nature of the coal reserve. Open Cast mining would be an alternative, however, would not be feasible due to the depth of the coal seam. Underground Coal Gassification is another alternative; however, this would not provide Coal as a product and the employment would be lower.

c) the design or layout of the activity;

Location of infrastructure on site will be based on the most effective and cost sensitive way to handle clean and dirty water separation as well as the location of the coal resource and surrounding wetlands. Sensitive areas will be avoided as far as possible.

d) The technology to be used in the activity

The technology proposed will be the most economically viable technology for the proposed operation.

e) the operational aspects of the activity; and

Bord and pillar mining, is a highly versatile and reliable method for extracting flat or gently dipping ore bodies. It offers stability and safety through the creation of solid pillars that provide support to the overlying strata. With its widespread use in coal, salt, and potash mining, bord and pillar mining has consistently proven its effectiveness and remains a preferred choice for efficient and secure underground

extraction. Embrace the power of bord and pillar mining and unlock the potential of your ore deposits with confidence and peace of mind. Stooping and underground coal gasification are alternative underground mining methods but is not suited to the nature of the mineral deposit that favours mining flat or gently dipping reserves. No feasible alternative technologies are viable to conduct the underground mining. Alternative technologies to the management of water, dust, and noise will be considered as mitigation measures in this report.

f) the option of not implementing the activity.

Should the applicant not have the opportunity to mine a very viable and sizable coal reserve, the opportunity for job creation and resource utilisation will be lost. Due to the underground nature of the proposed activities, most of the surface activities would still be able to continue in conjunction with the proposed mining. The surface infrastructure will only sterilise small areas within the larger MR area. The long term effect of not implementing the project, is therefore not favoured.

2.h.ii Details of all alternatives considered.

With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

a) the type of activity to be undertaken;

Only underground mining is considered by the applicant, due to the nature of the mining area and the extremely deep nature of the coal reserve. Open Cast mining would be an alternative, however, would not be feasible due to the depth of the coal seam. Underground Coal Gassification is another alternative; however, this would not provide Coal as a product and the employment would be lower.

b) the design or layout of the activity;

Location of infrastructure on site will be based on the most effective and cost sensitive way to handle clean and dirty water separation as well as the location of the coal resource and surrounding wetlands. Sensitive areas will be avoided as far as possible.

c) the technology to be used in the activity

The technology proposed will be the most economically viable technology for the proposed operation

d) the operational aspects of the activity; and

Bord and pillar mining, is a highly versatile and reliable method for extracting flat or gently dipping ore bodies. It offers stability and safety through the creation of solid pillars that provide support to the overlying strata. With its widespread use in coal, salt, and potash mining, bord and pillar mining has consistently proven its effectiveness and remains a preferred choice for efficient and secure underground extraction. Embrace the power of bord and pillar mining and unlock the potential of your ore deposits with confidence and peace of mind. Stooping and underground coal gasification are alternative underground mining methods but is not suited to the nature of the mineral deposit that favours mining flat or gently dipping reserves. No feasible alternative technologies are viable to conduct the underground mining. Alternative technologies to the management of water, dust, and noise will be considered as mitigation measures in this report

e) the option of not implementing the activity.

Should the applicant not have the opportunity to mine a very viable and sizable coal reserve, the opportunity for job creation and resource utilisation will be lost. Due to the underground nature of the proposed activities, most of the surface activities would still be able to continue in conjunction with the proposed mining. The surface infrastructure will only sterilise small areas within the larger MR area. The long term effect of not implementing the project, is therefore not favoured.

2.h.iii Details of the Public Participation Process Followed

(Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.))

Section 41 of NEMA Regulation 982 (specifically Chapter 6) set out the Legal and Regulatory Requirement for Public Participation. The Public Participation Process (PPP) aims to involve the authorities and I&APs in the project process, and determines their needs, expectations and perceptions which in turn ensures a complete and comprehensive environmental study. An open and transparent process will/has been followed at all times and is based on reciprocal dissemination of information. The following was/will be undertaken during the PPP:

- Identification of Interested and Affected Parties (IAPs);
- Consultation with selected landowners;
- Notification of IAPs regarding the proposed project via a local newspaper advert; the placing of site notices at conspicuous places, the sending of notices to affected parties via email (in the form of Background Information Documents) and SMS'.
- A public information meeting (open day) with IAPs will be held during the EIA phase ;
- Gathering comments, issues and concerns from IAPs;
- Responding to IAP comments, issues and concerns;
- Compilation and submission of results of consultation report to the DMRE; and
- Providing IAPs with the opportunity to review and comment on the Draft Scoping and EIA Reports.

2.h.iv Summary of issues raised by I&APs

(Complete the table summarising comments and issues raised, and reaction to those responses)

Once issues are raised and comments are received and by Interested and Affected Parties (I&APs), then this section will be populated. Proof of Public Participation will be included in the Final Scoping Report after the 30-day commenting period. Please remember to notify the EAP in order to be registered as an I&AP for this project. Environmental Assessment Practitioner - Eco Elementum lian@ecoe.co.za ; riana@ecoe.co.za

2.h.v The Environmental attributes associated with the sites

2.h.v.1 Baseline Environment

2.h.v.1.a Type of environment affected by the proposed activity.

(Its current geographical, physical, biological, socio- economic, and cultural character).

GEOLOGY

Regional Geological Setting

The Karoo Supergroup, which hosts South Africa's most important coal deposits, is of Late Carboniferous to Middle Jurassic (320-180 Ma) age. The supergroup is mainly hosted by the main Karoo and Kalahari basins as well as smaller subsidiary basis across southern Africa. The main Karoo basin is a retro-arc foreland basin that formed behind the Cape fold-thrust belt (Johnson et al., 1996) and hosts the Dwyka, Ecca, Beaufort, and Stormberg lithostratigraphic units (Catuneanu et al., 2005). Sediments were deposited in the great Gondwana basin which comprised part of Africa, Australia, India, Antarctica, and South America. The coal-bearing units were mainly formed during deltaic and fluvial depositional environments (Cairncross, 2001)

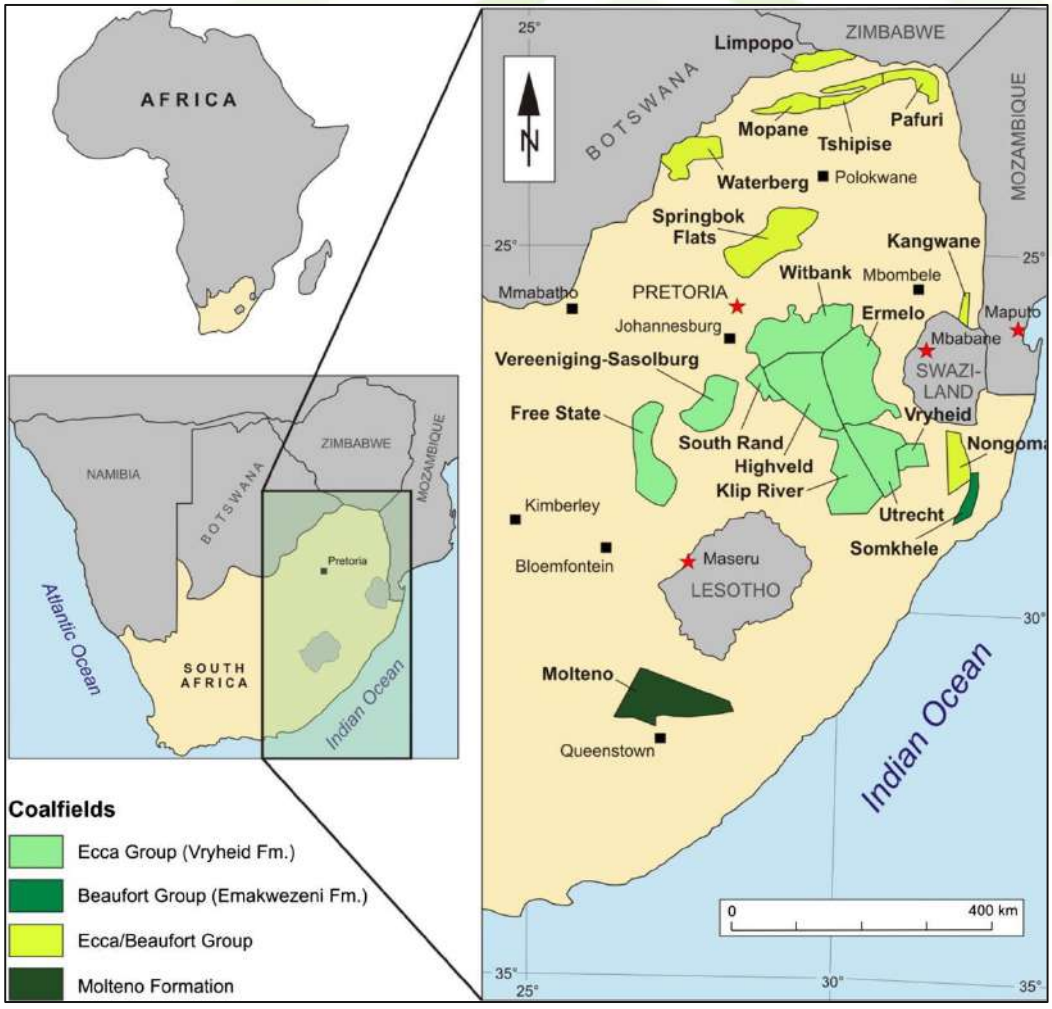


Figure 2-10: Coalfields of South Africa (Hancox and Götz, 2014)

The Dwyka Group forms the base of the Karoo Supergroup and is representative of cold glacial conditions during which lithological units like tillite and diamictite were deposited. The Dwyka Group is insignificant because no coal occurs within or beneath this unit and exploration boreholes are typically terminated when this group is intersected as it is a good marker for the lower limit of possible coal

occurrence (Hancox and Götz, 2014). The Ecca Group occurs above the Dwyka Group and contains the main coal-bearing lithologies of the Karoo Supergroup.

The Ecca Group comprises fluvial- and shallow marine rock types like sandstone, grit, clay, and mudstone/shale. It is representative of warmer global conditions favourable to sustaining and promoting plant growth and therefore peat and coal formation (Johnson et al 1996). The Pietermaritzburg Formation marks the onset of the Ecca Group and consists of soft blue shales. The contact between the Pietermaritzburg Formation and the overlying Vryheid Formation is gradational and no coal occurs within the shales. The majority of the economically extracted coal is found within the Vryheid Formation which consists of a succession of 5 sedimentary sequences (Hancox and Götz, 2014). The Vryheid Formation ranges in thickness between 70 and 500m and contains several coal seams which correlate to the courser-grained upper sections of the various sequences. The Vryheid Formation hosts the Witbank Coalfield, among others, and coal seams within this group can be traced laterally across the entire Vryheid Formation. The Volksrust Formation overlies the Vryheid Formation and consists of dark grey-green siltstones and mudstones. Coal occurs interbedded with these mudstones in areas.

The Beaufort Group, which occurs above the Ecca Group, consists of the Lower Adelaide and Upper Tarkastad Subgroups and is characterised by alternating fine-grained lithofeldspathic sandstone and mudstone. Coal formation in the Beaufort Group is restricted to the Adelaide Subgroup (Hancox and Götz, 2014). The Stormberg Group comprises the Molteno, Elliot, and Clarens formations and economic coal seams only occur in the Bamboesberg Member of the Molteno Formation. This member is characterised by 5 to 50m thick laterally extensive sandstones, capped by thin lenticular siltstones and mudstones. Coal seams are observed in the upper sequences of this member.

The Drakensberg Group forms the top of the Karoo Supergroup and consists of up to 1.4km thick basaltic lavas. Numerous dykes and sills acted as feeders, bringing the magma through the sedimentary sequences to the surface and having immense impacts on the coalfields of South Africa. The extent of coal occurrence within each group is non-uniform and various coalfields have been identified within the larger Karoo basin.

Local Geological Setting

The Mafatiki Colliery is located in the Highveld Coalfield. The various coalfields of South Africa are distinguished based on geographic considerations and variations in the mode of sedimentation, origin, formation, distribution, and quality of the coals. The individual coal seam thickness varies between coal fields as well as within coalfields.

The thickness of the sedimentary rocks of the Karoo Supergroup is highly variable within the Highveld Coalfield. In the northern parts, they are thin, but can reach thicknesses of up to 300 m in the Southern parts near Standerton. This variation occurs due to them being deposited on the highly irregular pre-karoo basement. The basement forms two major valleys, one extending southwards from Leslie (Leandra) to Greylingstand and the other eastwards between Bethal and Standerton to Volksrust.

The Highveld Coalfield's Dwyka Group, which forms the basement of the coal bearing lithologies, is characterized by massive diamictite layers consisting of sub-angular to rounded clasts; conglomerates; occasional siltstones, sandstone interbeds and pebbly mudstones. The Ecca group strata occurs directly above the Dwyka group strata. The Highveld Coal Field, however, lacks the lowermost formation of the Ecca group (the Pietermaritzburg formation). This is also typical of the Witbank Coalfield. The Vryheid formation is thus the first observed formation of the Ecca group. Outcropping of the Vryheid Formation is uncommon and are only observed through borehole data. For the area south-southeast of Secunda, a Vryheid Formation sedimentary sequence with a thickness of 80 to 130 m has been documented. This sequence starts at the top of the Dwyka group and progresses to the "main coal zone." Furthermore, the sedimentary sequence is made up of sandstones, siltstones, and mudstones with sporadic seamlets and plant debris.

The "main coal zone" consists of the No. 3, No. 4L, and No. 4U seams. The thickness of the "main coal zone" varies from 60 m to 100 m. A coarsening upward deltaic sequence with an approximate thickness of 40 m overlies the "main coal zone". The deltaic sequence includes micaceous mudstone and siltstone that grades upward to grey to white medium-grained sandstone. The No. 5 seam concludes the deltaic sequence.

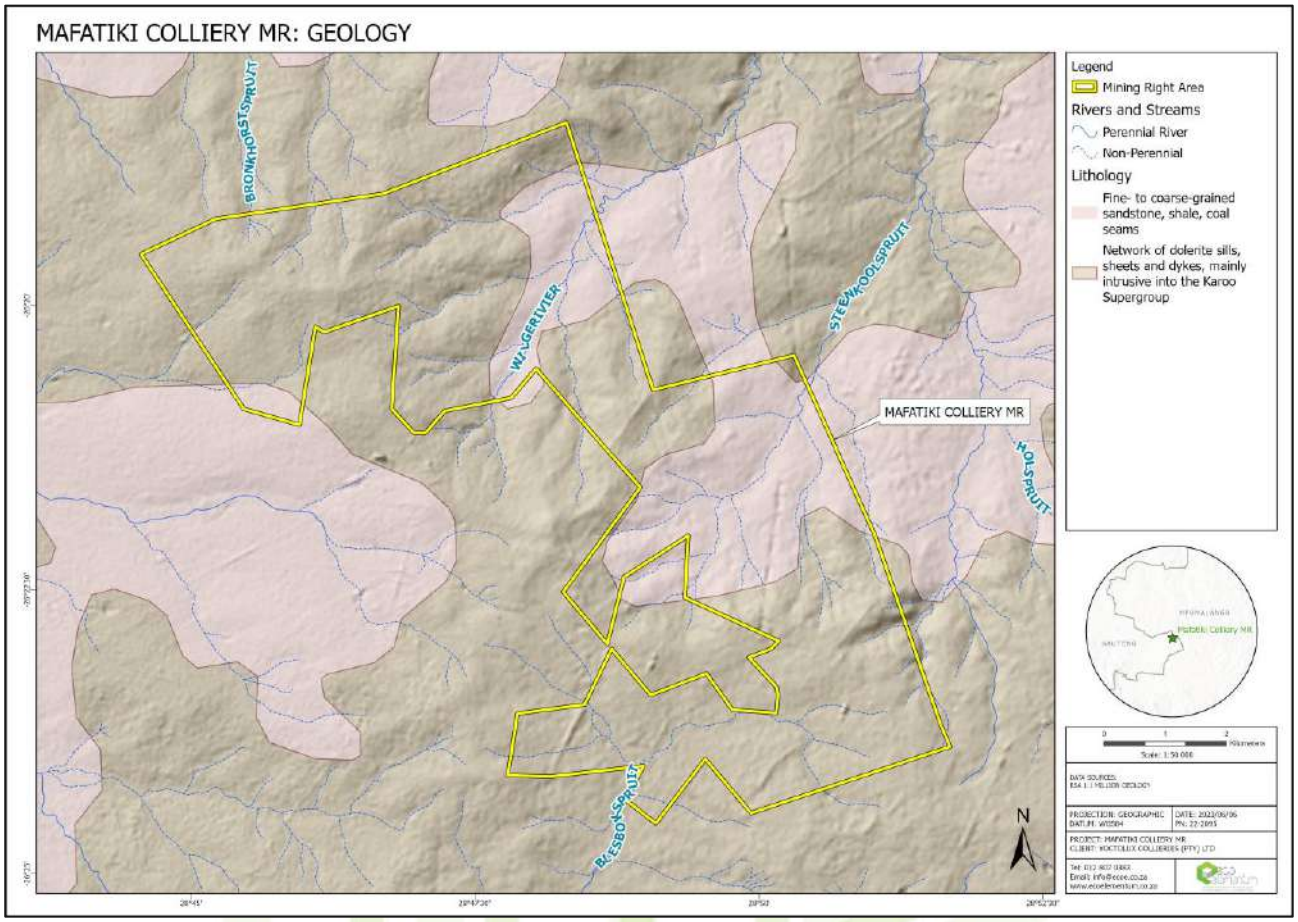


Figure 2-11: Geology map of the area

The Highveld Coal seams occur within the Ecca Group's Vryheid formation and are numbered 1 to 5 with the 5 Seam being the highest in the sequence. The No. 1 Coal Seam is well developed in the eastern Highveld Coalfield, but there are some discontinuities elsewhere. This seam is most common in glacial valleys. The No. 2 Coal seam is well developed along the Coalfield's northern and southwestern margins. The seam occurs at depths of up to 240 meters in the southwest and 30 meters in the northern margins. The thickness of the No.2 seam varies from 4 m in the north to 10 m in the west. The east and south-eastern parts of the Highveld Coalfield have reported No. 2 seam thicknesses of less than a metre. Partings of siltstone and mudstone divide the No. 2 seam into the 2U and 2L seams in places.

The No. 3 Coal seam is typically less than 0.5 m thick, but thicknesses of up to 1 m may occur in the western part of the Secunda reserve area. Partings between the No.3 and No.4 coal seams are sometimes less than 0.5 m thick, as a result, seams 3 and 4 are mined as a single unit. The No. 4 coal seam accounts for the majority of the coal resources in the Highveld Coalfield. The seam begins at a depth of 15 meters in the Kriel area and extends to a depth of 300 meters to the east of Standerton.

A sandstone parting separates the No.4 Coal seam into the No.4 L (Lower) and No.4U (Upper) seams. The sandstone parting is approximately 2 m thick in the north, 3 m thick in the central Highveld Coalfield, and up to 15 m thick in the southern Balfour area. The area south-southeast of Secunda has a parting thickness ranging from 5 to 14 m. The parting is made up of an irregular succession of coarse-grained to gritty sandstones and granulestones, as well as medium- to fine-grained sandstones, siltstones, and mudstones.

The No.4 Seam has an average thickness of 1.87 m in the eastern part of the Coalfield. The south, on the other hand, has a documented thickness of 3.04 m. In the western part of the Coalfield, the No.4U Coal Seam consists of mineable thicknesses. The thickness of the seam ranges from 1 m to 5 m, with an average thickness of 2 m.

The No.5 Coal Seam is found at depths ranging from 15 to 150 meters, with thicknesses ranging from 0.3 to 3.0 meters. A hard siltstone parting with a thickness of 0.4 to 0.6 m may be present along the northern margin of the Coalfield.

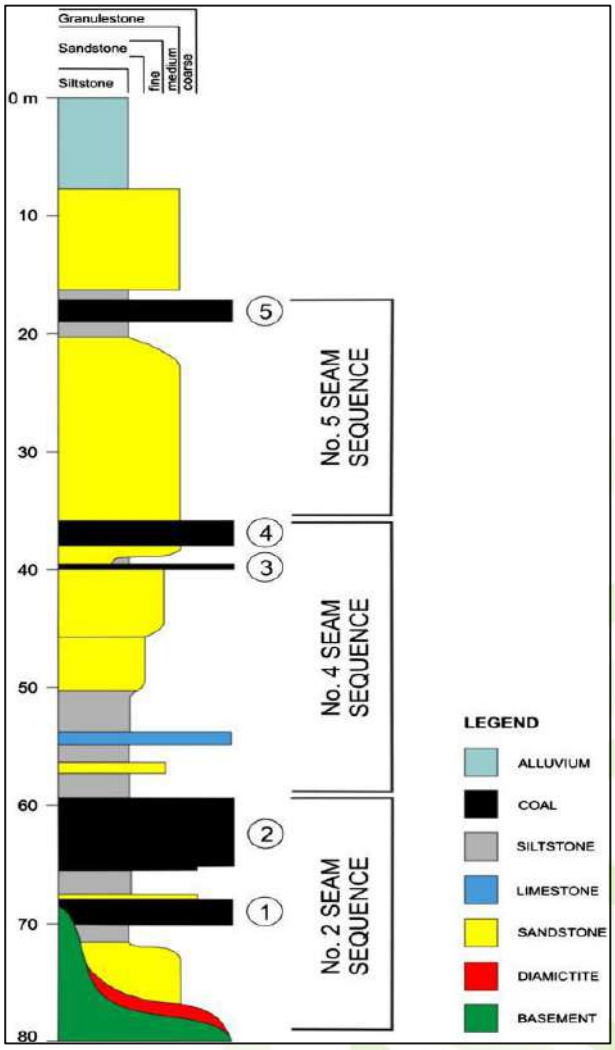


Figure 2-12: Simplified stratigraphic column for the Vryheid Formation (Hancox and Götz, 2014).

The No. 1 Seam appears occasionally in the project area and is usually found near the pre-Karoo basement rocks. A sandstone parting separates the No. 1 and No. 2 Seams. There are some areas where the parting thins out, resulting in the No. 1 and No. 2 seams forming a composite seam. The average thickness of the No.1 Seam is 0.55 m , with a maximum thickness of 6.46 m. The No. 2 Seam is well developed over the Mafatiki Colliery.

Only a portion of the No. 2 Seam is economically viable. This is known as the Seam 2 Select (S2S). The average thickness of the S2S is 2.01 m, with a maximum thickness of 7.3 m. The No.3 Seam is poorly developed over the project area and has an average thickness of 0.06 m and maximum thickness of 1.92 m. The No.4L Seam is well developed throughout the project area and is typically a coaly shale unit. The No.4L Seam floor is primarily composed of carbonaceous shale with occasional sandstone. Furthermore, the average thickness of the No.4L Seam is 3.12 m, with a maximum thickness of 9.87 m. The No.4U Seam, which consists of interbedded coal and shale units, is well developed throughout the project area. The average thickness of the No.4U Seam is 1.64 m, with a maximum thickness of 5.51 m. Finally, the No.5 Seam is typically of high quality and occurs over the majority of the area. The average thickness of a No.5 Seam is 0.74 m, with a maximum of 2.05 m.

TOPOGRAPHY

The study area is characterised by slightly to moderately undulating plains, including some low hills and pan depressions with an altitude 1 520 –1 720 m.

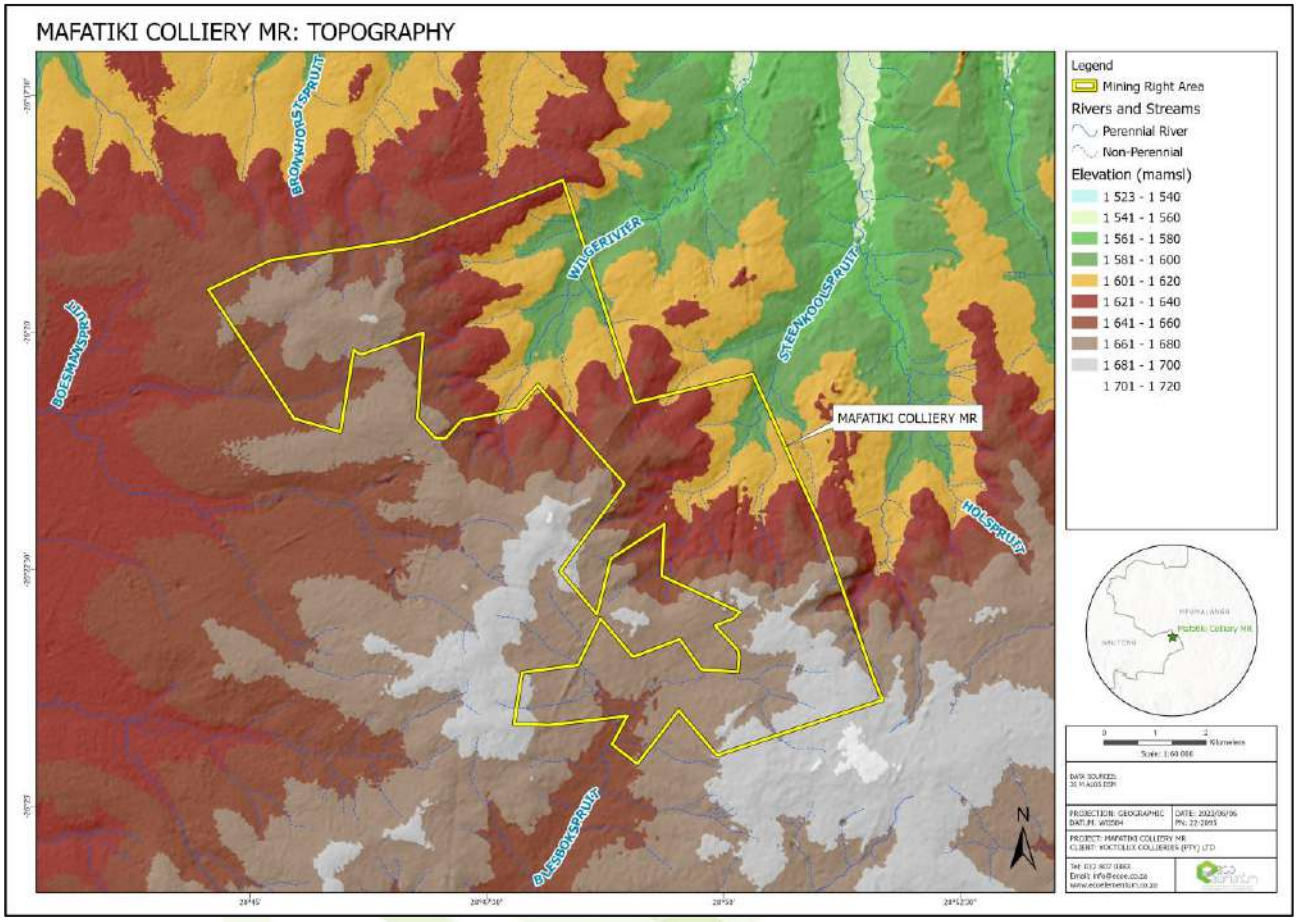


Figure 2-13: Topography of the area

CLIMATE

The study area is situated in a summer-rainfall region with an average annual rainfall of 662 mm with cool-temperate climate and continentality (high extremes between maximum summer and minimum winter temperatures, frequent occurrence of frost, large diurnal thermic difference, especially in autumn and spring) (Mucina and Rutherford, 2006).

The study area displays a mild climate, characterised by warm moist summers and cool dry winters typical of the Highveld climate. The region falls within the summer rainfall region of South Africa, rainfall occurs mainly as thunderstorms from October to March, with a mean annual precipitation of 668mm. This varies from 900mm in the central higher lying areas to 556mm in the lower lying northern and southern areas of the province. Mean annual temperature varies from approximately 19.3°C in the north of the province to 16.0°C in the south. The eastern and central areas, however, experience a lower mean annual temperature of around 15.0°C. There is large variation between summer and winter temperatures, with Gauteng experiencing a daily mean temperature in January and July of 21.2°C and 9.8°C, respectively (Schulze, 1997).

Due to the long clear nights, mild wind and dry air in Gauteng in winter, the occurrence of frost is common in the region. The region experiences on average 30 days of frost per year (Schulze, 1997). Winter atmospheric conditions cause temperature inversions, which have the effect of keeping polluted air close to the surface, so that winter air quality over the Highveld is generally poor.

WETLAND & AQUATIC ECOLOGY

Classification of wetlands

The figure below illustrates the National Freshwater Ecosystem Priority Areas (NFEPA) wetlands and rivers near and on the study area.

A Wetland Assessment will be conducted and included in the EIA.

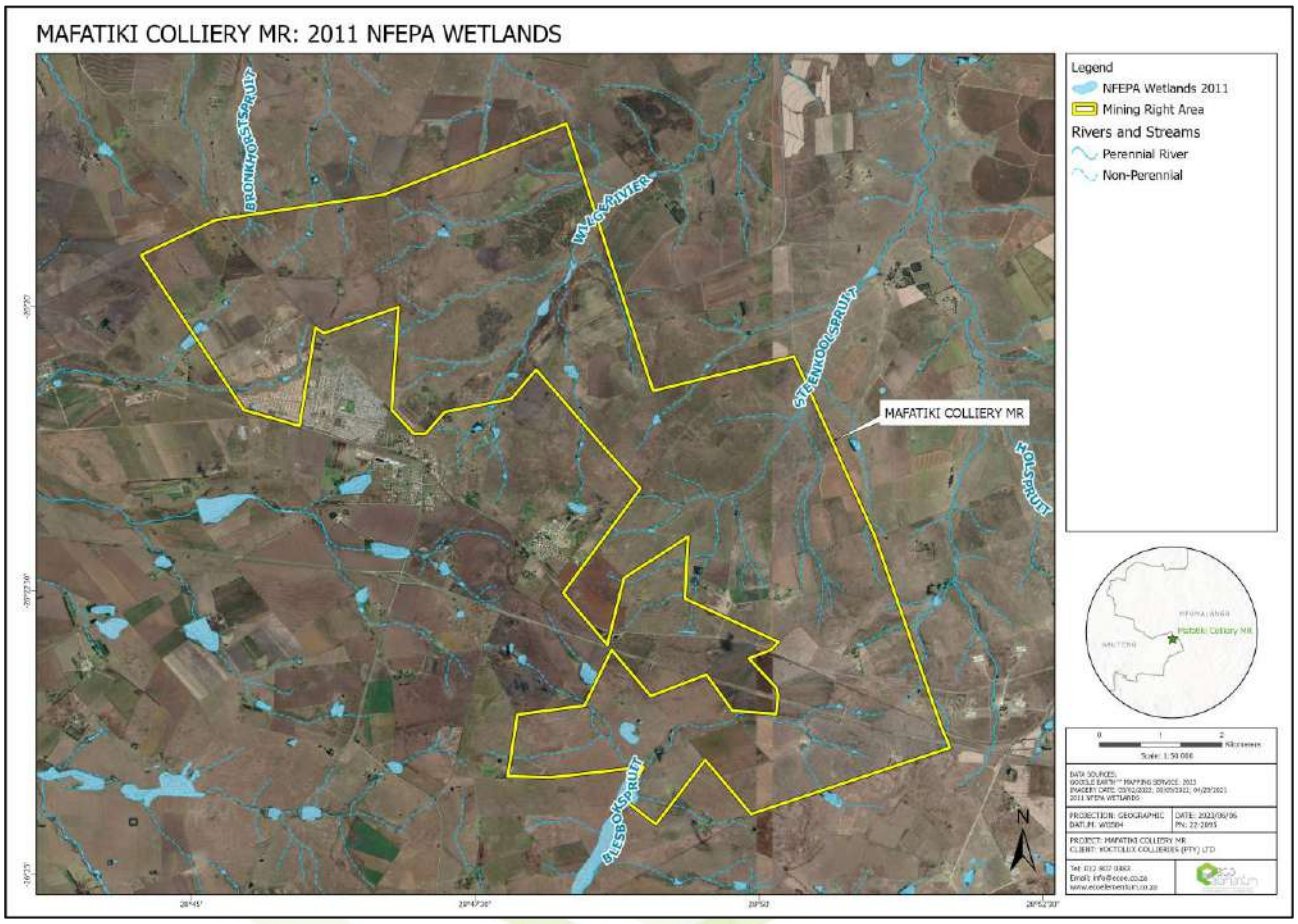


Figure 2-14: NFEPA Wetlands of the area

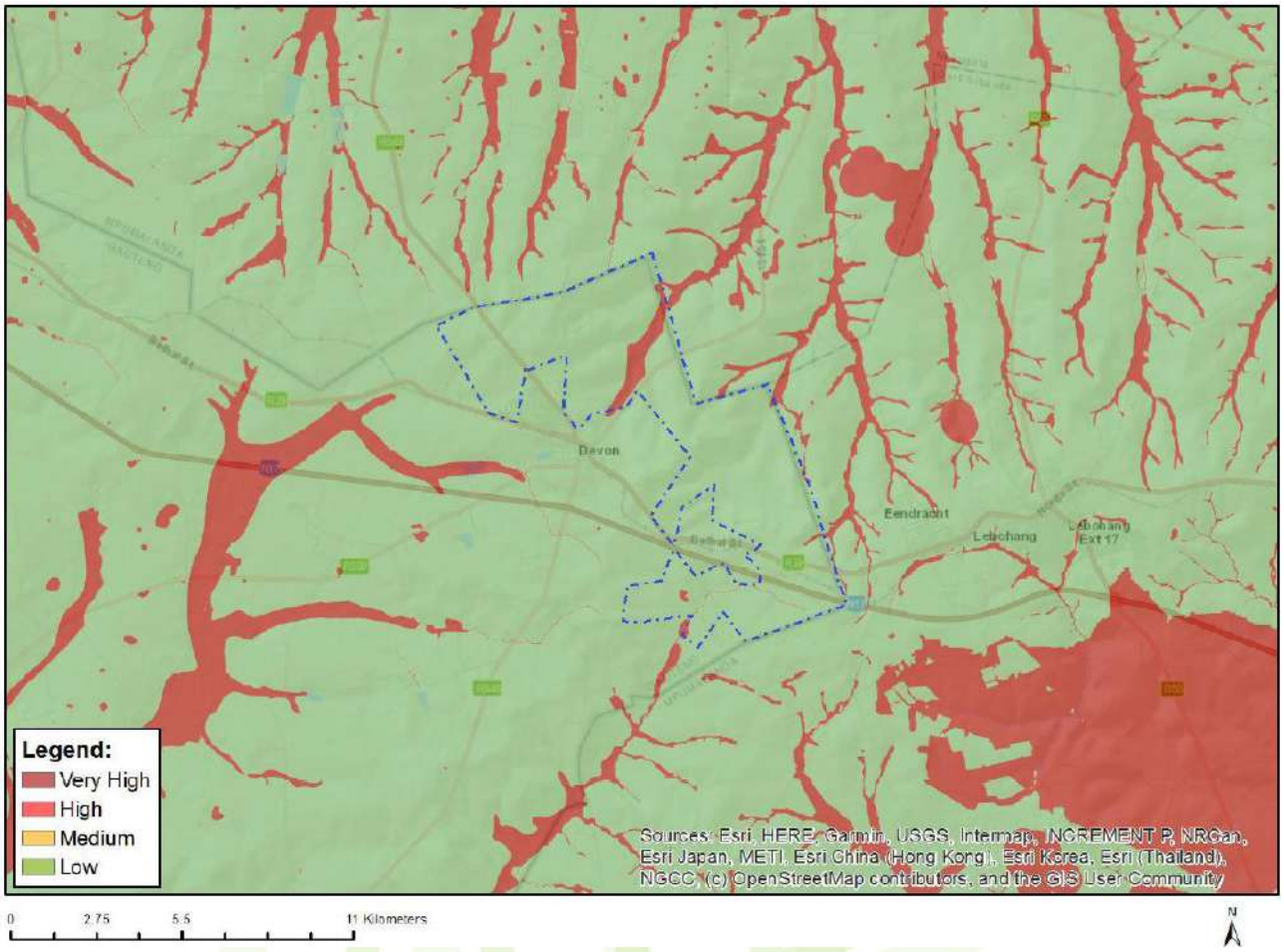


Figure 2-15: Aquatic Biodiversity Sensitivity map of the area (DEA Screening Tool Report)

From the DEA screening tool assessment, it was found that the combined aquatic biodiversity of the study area is very high. Wetland and river features contribute to the very high sensitivity of the study area. The high sensitivity areas are concentrated around these features and the remainder of the study area has a low aquatic sensitivity. The rivers are tributaries of the Wilgerivier and Steenkoolspruit. Aquatic CBA's are present in the study area.

An Aquatic Impact Assessment will be conducted and included in the EIA.

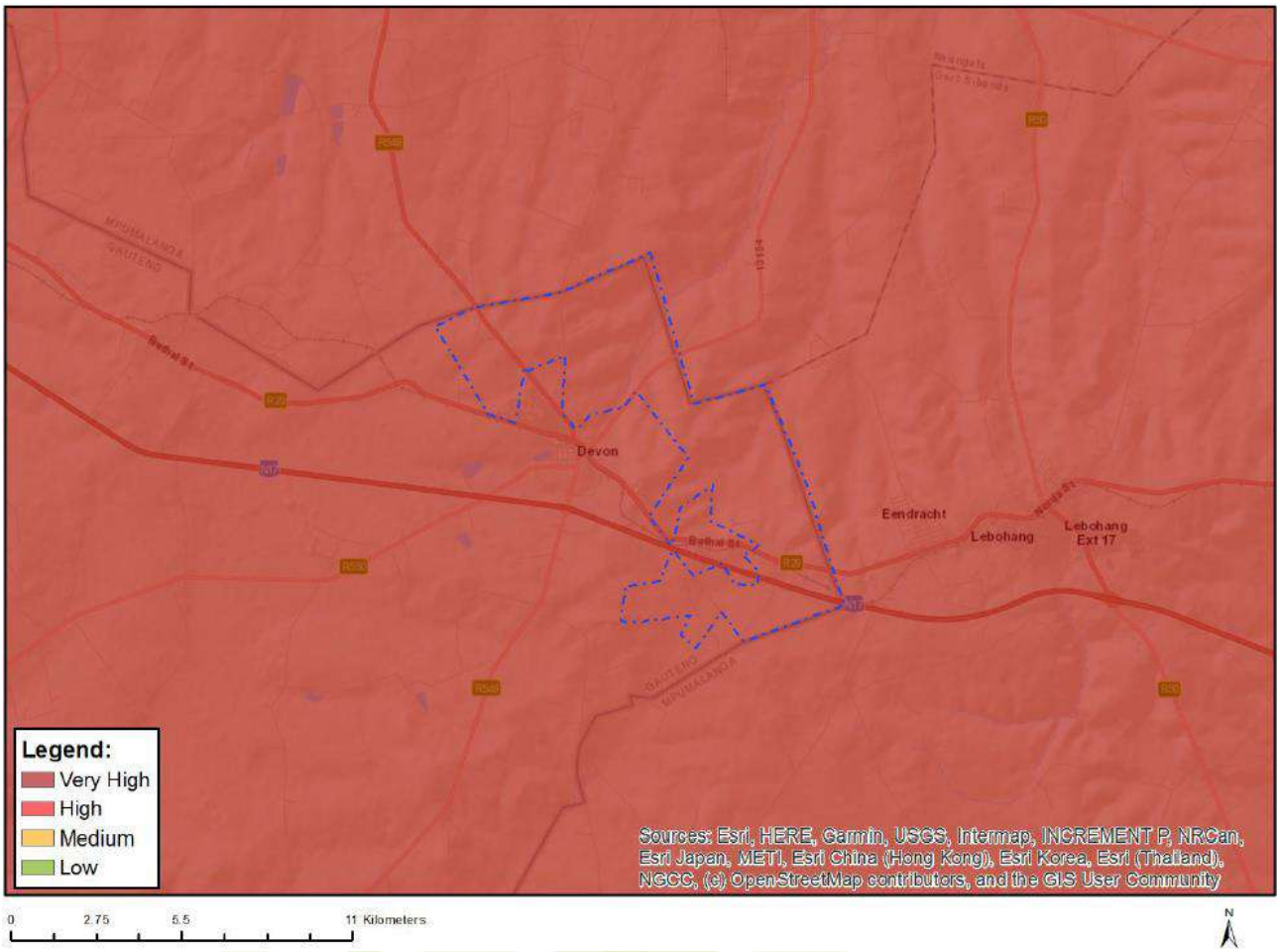


Figure 2-16: Terrestrial Biodiversity Theme Sensitivity map of the area

According to the DEA Screening Tool the Terrestrial Biodiversity has a very high combined sensitivity due to Critical Biodiversity Areas, Ecological support area and Protected Areas Expansion Strategies. This is however a desktop assessment and will be confirmed in field as most of the area is known for historical underground mining disturbance, areas of subsidence and land with disturbed vegetation, with very little natural vegetation left.

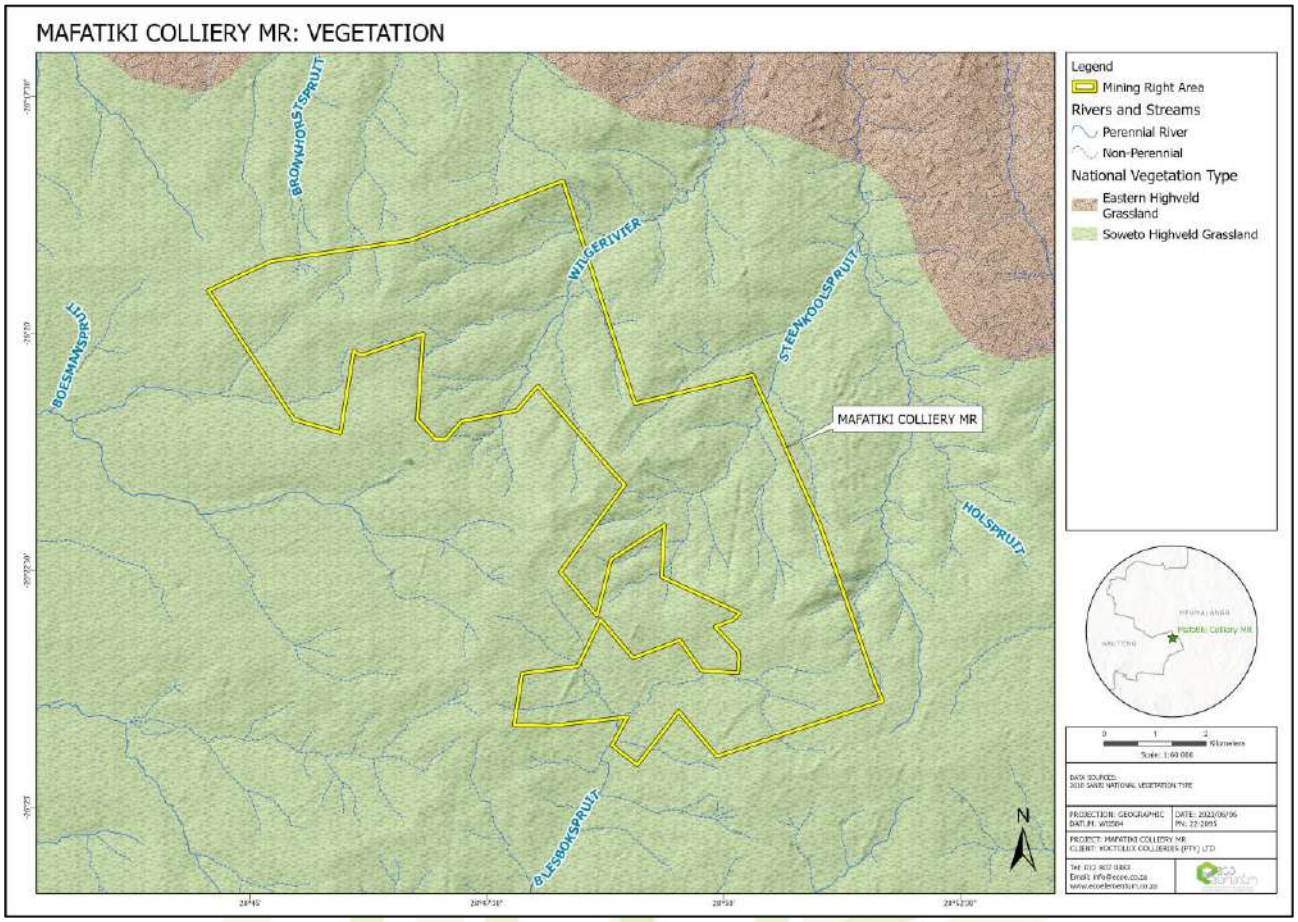


Figure 2-17: Vegetation Type

Soweto Highveld Grassland (Mucina and Rutherford, 2006)

Distribution: Stretches over the Mpumalanga, Gauteng (and to a very small extent also in neighbouring Free State and North-West) Provinces: In a broad band roughly delimited by the N17 road between Ermelo and Johannesburg in the north, Perdekop in the southeast and the Vaal River (border with the Free State) in the south. It extends further westwards along the southern edge of the Johannesburg Dome (including part of Soweto) as far as the vicinity of Randfontein. In southern Gauteng it includes the surrounds of Vanderbijlpark and Vereeniging as well as Sasolburg in the northern Free State. Altitude ranges between 1420 m to 1760 m.

Vegetation & Landscape Features: Gently to moderately undulating landscape on the Highveld plateau supporting short to medium-high, dense, tufted grassland dominated almost entirely by *Themeda triandra* and accompanied by a variety of other grasses such as *Elionurus muticus*, *Eragrostis racemosa*, *Heteropogon contortus* and *Tristachya leucothrix*. In places not disturbed, only scattered small wetlands, narrow stream alluvia, pans and occasional ridges or rocky outcrops interrupt the continuous grassland cover.

Geology and Soils: Shale, sandstone or mudstone of the Madzaringwe Formation (Karoo Supergroup) or the intrusive Karoo Suite dolerites which feature prominently in the area. In the south, the Volksrust Formation (Karoo Supergroup) is found and in the west, the rocks of the older Transvaal, Ventersdorp and Witwatersrand Supergroups are most significant. Soils are deep, reddish on flat plains and are typically Ea, Ba and Bb land types.

Climate: Summer-rainfall region with Mean Annual Precipitation of 662 mm. Cool-temperate climate with thermic continentality (high extremes between maximum summer and minimum winter temperatures, frequent occurrence of frost, large thermic diurnal differences, especially in autumn and spring).

Important Taxa: Graminoids: *Andropogon appendiculatus* (d), *Brachiaria serrata* (d), *Cymbopogon pospischilii* (d), *Cynodon dactylon* (d), *Elionurus muticus* (d), *Eragrostis capensis* (d), *E. chloromelas* (d), *E. curvula* (d), *E. plana* (d), *E. planiculmis* (d), *E. racemosa* (d), *Heteropogon contortus* (d), *Hyparrhenia hirta* (d), *Setaria nigrirostris* (d), *S. sphacelata* (d), *Themeda triandra* (d), *Tristachya leucothrix*

(d), *Andropogon schirensis, Aristida adscensionis, A. bipartita, A. congesta, A. junciformis* subsp. *galpinii, Cymbopogon caesius, Digitaria diagonalis, Diheteropogon amplectens, Eragrostis micrantha, E. superba, Harpochloa falx, Microchloa caffra, Paspalum dilatatum*.

Herbs: *Hermannia depressa* (d), *Acalypha angustata, Berkheya setifera, Dicoma anomala, Euryops gilfillanii, Geigeria aspera* var. *aspera, Graderia subintegra, Haplocarpha scaposa, Helichrysum miconiifolium, H. nudifolium* var. *nudifolium, H. rugulosum, Hibiscus pusillus, Justicia anagalloides, Lippia scaberrima, Rhynchosia effusa, Schistostephium crataegifolium, Selago densiflora, Senecio coronatus, Vernonia oligocephala, Wahlenbergia undulata.*

Geophytic Herbs: *Haemanthus humilis* subsp. *hirsutus, H. montanus. Herbaceous*

Climber: *Rhynchosia totta.*

Low Shrubs: *Anthospermum hispidulum, A. rigidum* subsp. *pumilum, Berkheya annectens*, *Felicia muricata, Ziziphus zeyheriana*.

Conservation: Listed as an endangered ecosystem. Only a handful of patches statutorily conserved (Waldrift, Krugersdorp, Leeuwkuil, Suikerbosrand, Rolfe's Pan Nature Reserves) or privately conserved (Johanna Jacobs, Tweefontein, Gert Jacobs, Nikolaas and Avalon Nature Reserves, Heidelberg Natural Heritage Site). Almost half of the area already transformed by cultivation, urban sprawl, mining and building of road infrastructure. Some areas have been flooded by dams (Grootdraai, Leeukuil, Trichardtsfontein, Vaal, Willem Brummer). Erosion is generally very low (93%).

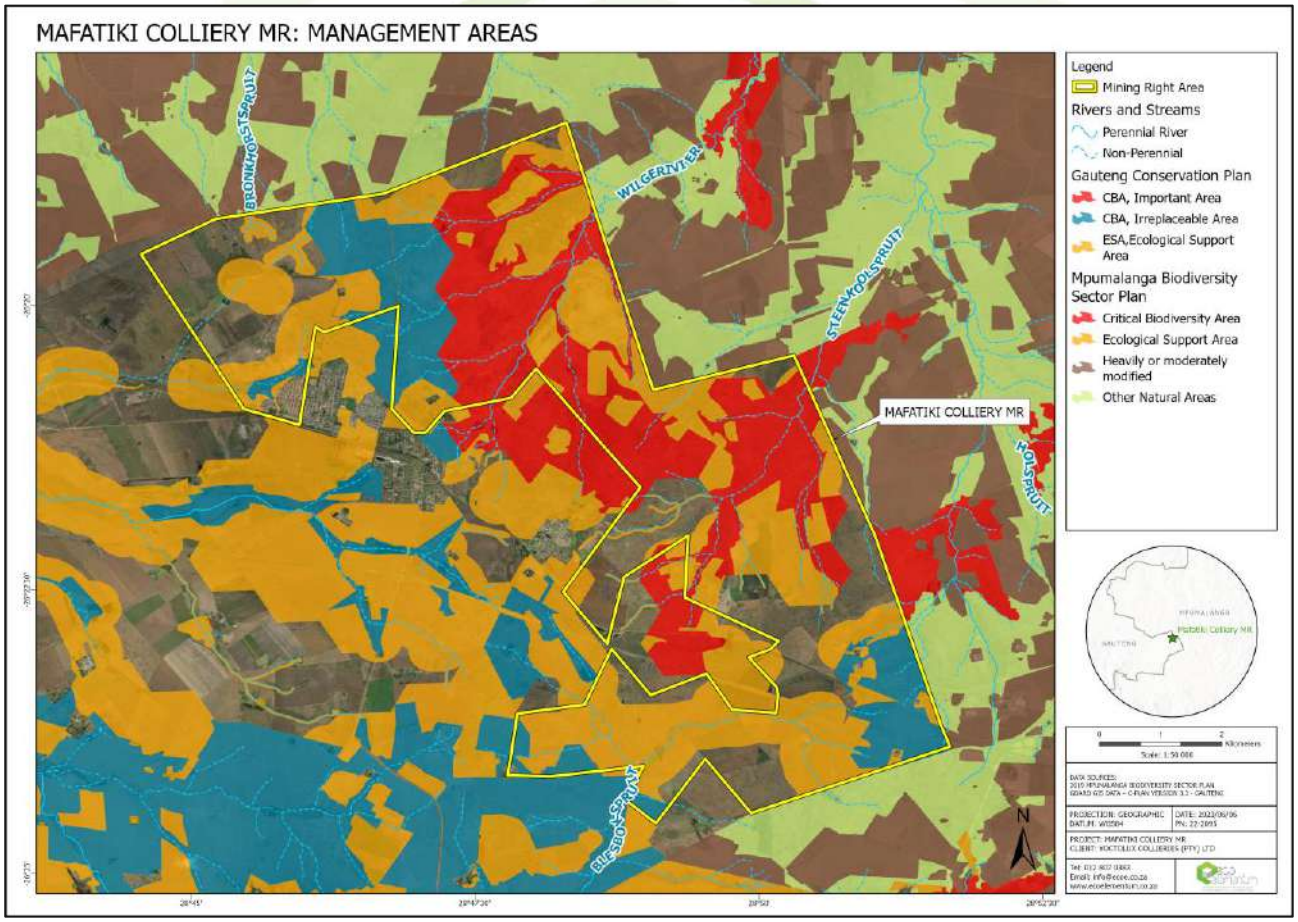


Figure 2-18: Gatueng Conservation Plan & Mpumalanga Biodiversity Sector Plan of the area

The study area is further classified in terms of the Gauteng Conservation Plan & Mpumalanga Biodiversity Sector Plan to range from areas that are heavily modified, to areas categorised as Critical Biodiversity Area.

A Terrestrial Impact Assessment will be conducted and included in the EIA.

HERITAGE AND PALAEONTOLOGY

The following figure show the relative sensitivity of the study area for Archaeological finds and Cultural Heritage.

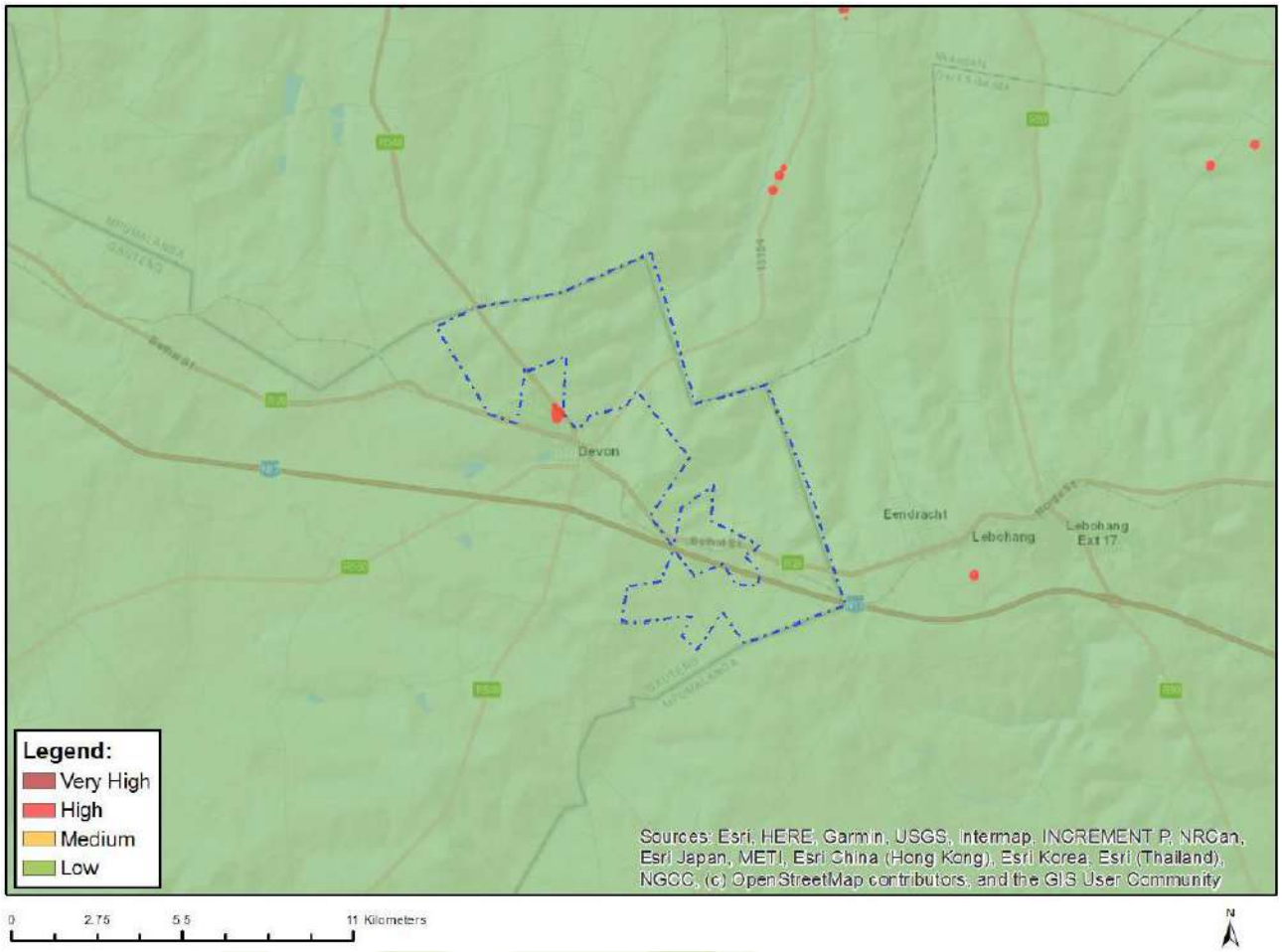


Figure 2-19: Relative Archaeological and Cultural Heritage Theme Sensitivity map of the area

The study area is within 150m of a Grade IIIa Heritage site. This map shows low sensitivity for the overall site, but with high sensitive cultural and heritage areas in close proximity

A Heritage Impact Assessment will be conducted and included in the EIA.

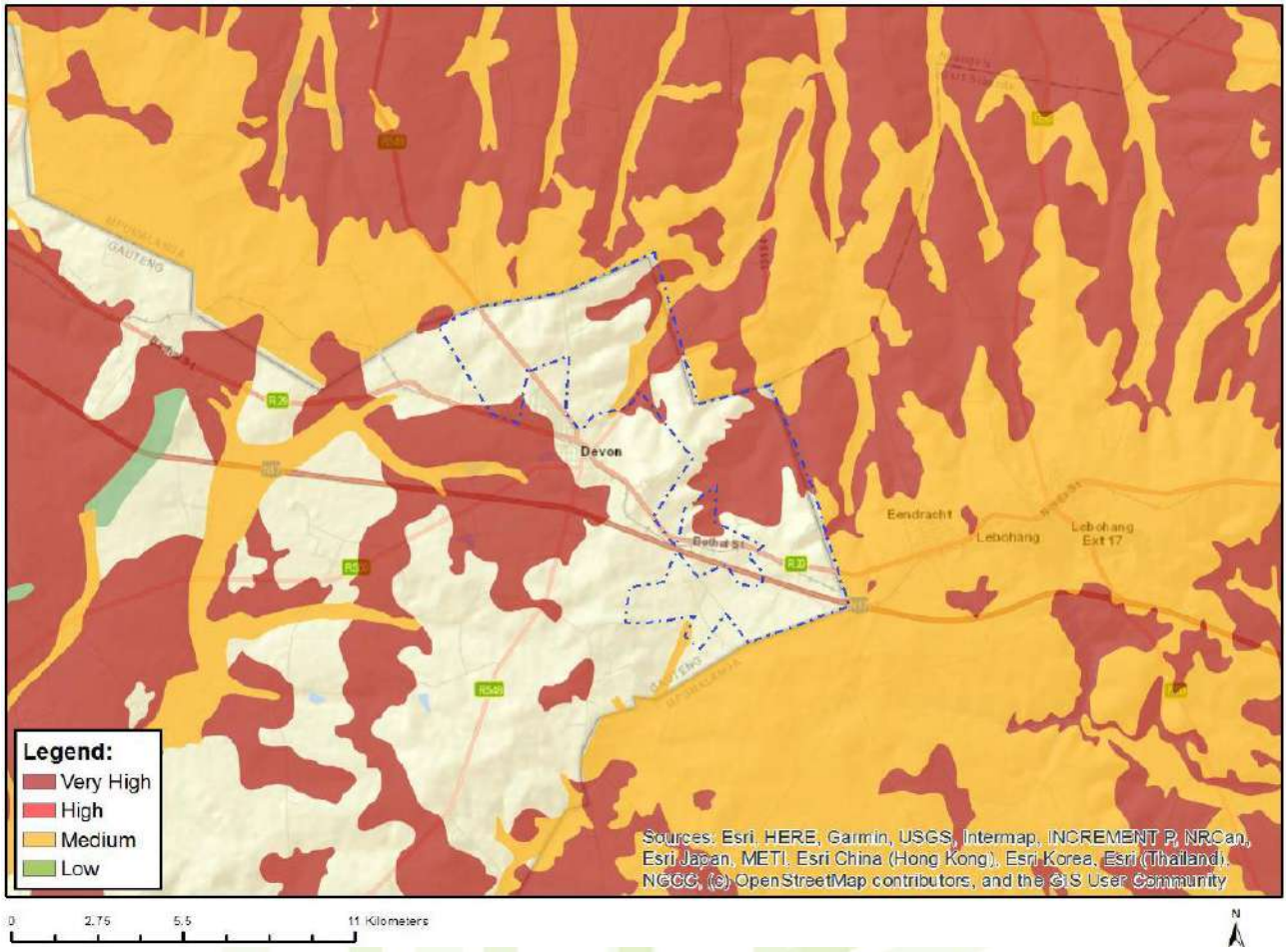


Figure 2-20: Relative Paleontological Theme Sensitivity map of the area

The palaeontological sensitivity of the area under consideration is very high. The site is in the non-fossiliferous dolerite and the very highly sensitive shales of the Vryheid Formation. The Vryheid Formation lies on the uneven topography of pre-Karoo or Dwyka Group rocks in the northern and northwestern margins but lies directly on the Pietermaritzburg Formation in the central and eastern part. The lithofacies show a number of upward-coarsening cycles, some very thick, and they are essentially deltaic in origin. There are also delta-front deposits, evidence of delta switching, and fluvial deposits with associated meandering rivers, braided streams, back swamps or interfluves and abandoned channels (Cadle et al., 1993; Cairncross, 1990; 2001; Johnson et al., 2006). Coal seams originated where peat swamps developed on broad abandoned alluvial plains, and less commonly in the backswamps or interfluves.

Fossil plants of the Glossopteris flora occur in the Vryheid Formation. This flora includes Glossopteris leaves, seeds, fructifications, roots and wood, as well other groups such as the lycopods, sphenophytes, ferns, cordaitaleans and early gymnosperms (Plumstead, 1969; Anderson and Anderson, 1985; Bamford, 2004).

A Palaeontological Impact Assessment will be conducted and included in the EIA.

SURFACE WATER

The study area is separated by a water divide. The study area falls partially within three quaternary catchments. The study area falls within the B20A and B20E quaternary catchments of the Olifants Water Management Area and within the C21A quaternary catchment of the Vaal Water Management Area. The main drainage features of the catchments are the Wilgerivier and Steenkoolspruit which both drains northwards into the Olifants River system and tributaries of the Bleskbokspruit which drains westward into the Vaal River system.

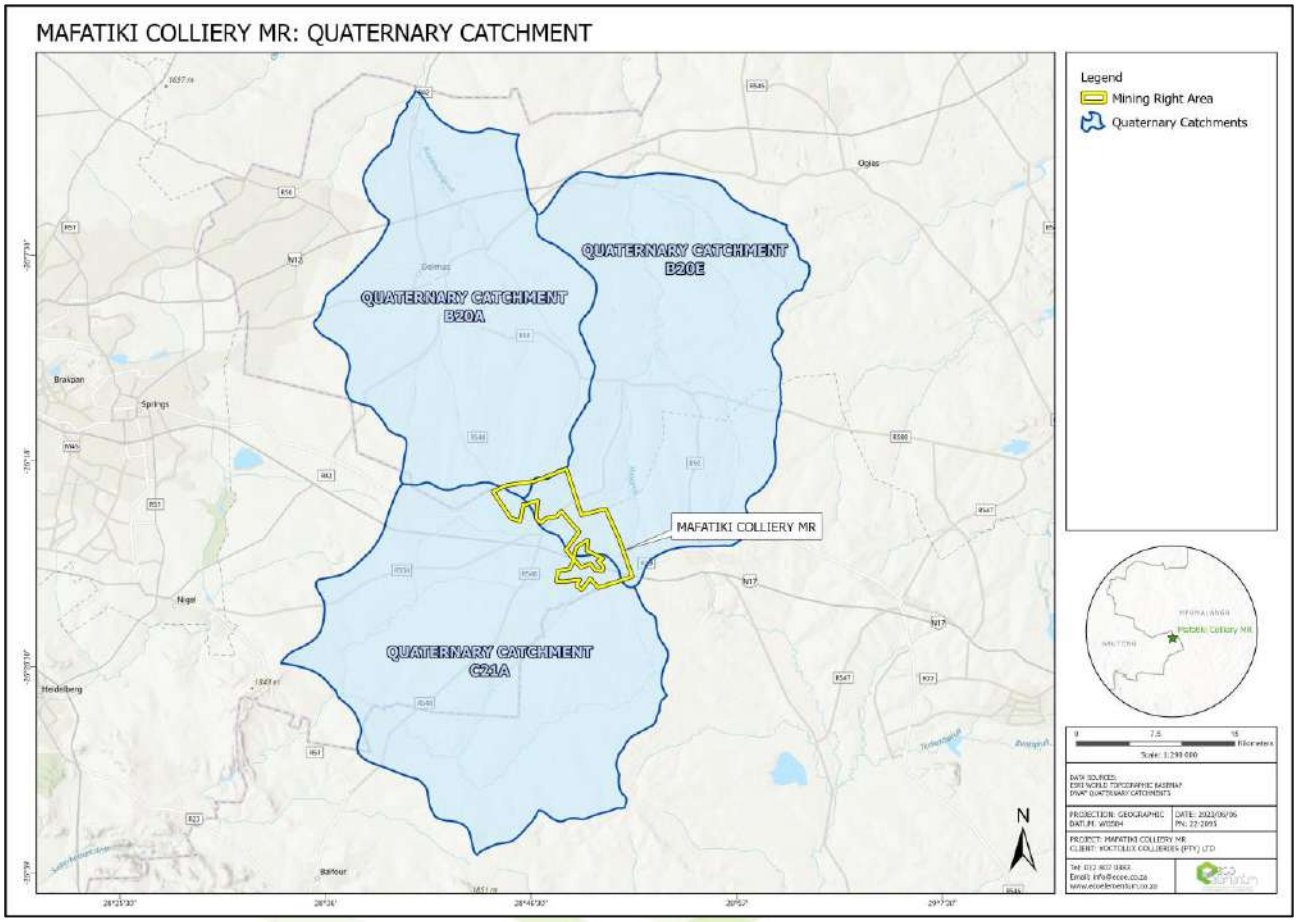


Figure 2-21: Quaternary drainage regions

A detailed Surface Water Impact Assessment will be conducted and included in the EIA.

GROUNDWATER

Groundwater Potential Contaminants

Acid generation is a common response to the coal mining environment. Coal and carbonaceous material contain a mineral known as pyrite, an iron-sulphide mineral, which is the main contributor to acid rock drainage (ARD). After being exposed to oxygen and water the sulphide minerals react to form an acid. Bacteria, which increases with the exposure to water and oxygen often accelerates the acidification process. The reaction can however also occur abiotically.

The general equation of pyrite oxidation is as follows:

$$2FeS_2 + 7O_2 + 2H_2O \rightarrow 2Fe^{2+} + 4SO_4^{2-} + 4H^+$$

Ferrous iron is oxidised to ferric iron:

$$4Fe^{2+} + O_2 + 4H^+ \rightarrow 4Fe^{3+} + 2H_2O$$

As mentioned previously these two reactions can occur abiotically or with the catalisation by micro-organisms. These organisms arise from the oxidation reactions. The ferric cations reduce to ferrous ions:

$$FeS_2 + 14Fe^{3+} + 8H_2O \rightarrow 15Fe^{2+} + 2SO_4^{2-} + 16H^+$$

The release of H+ lowers the pH. At the lower pH the solubility of the ferric ion continuous which increases the acid generation.

Waste Classification

A waste classification should be conducted in accordance with the National Environmental Management: Waste Act (NEM: WA) Regulations (2013). The assessment is undertaken by comparing the samples' leachate concentration (LC) to the leachable concentration threshold (LCT), and the total concentration (TC) to the total concentration thresholds (TCT). The results will indicate the type of waste and the type of liner, if any, required for the potential source.

Generally, the results below are expected for the coal mining environment. Please note that these are only indicative and may differ from site to site.

- Coal material:
  - The coal samples are generally classed as Type 3 waste (hazardous) and according to the NEM: WA guidelines should be disposed of at a Class C landfill site or a site designed with the liner requirements as shown in **Error! Reference source not found.**; and
  - The short-term storage of the coal material on stockpiles and good storm water management should ensure that environmental impacts are kept to a minimum and contained to the stockpile sites. Based on these management protocols the liner illustrated in Figure 2-22 should be sufficient, however the decision lies with the Department of Environmental Affairs.
- Waste rock material:
  - Waste rock are generally also classed as Type 3 waste and should be disposed of at Class C landfill sites or sites designed with liner requirements illustrated in Figure 2-22.

Table 2-4: Waste Classification Criteria

Waste Type	Disposal
0	Not allowed
1	Class A or Hh:HH landfill
2	Class B or GLB+ landfill
3	Class C or GLB- landfill
4	Class D or GLB- landfill

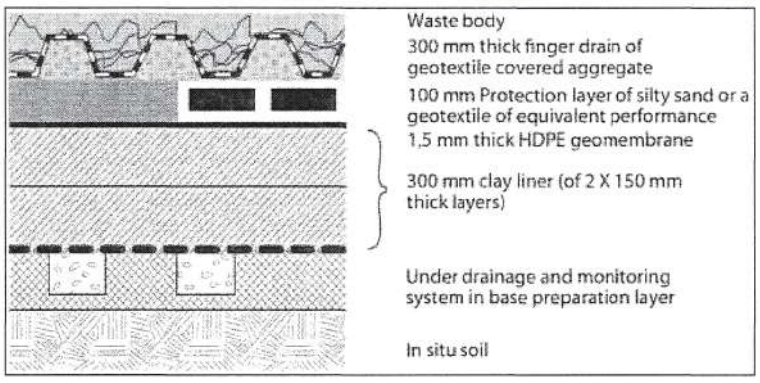


Figure 2-22: Class C landfill site liner requirements

Groundwater Vulnerability

Groundwater vulnerability refers to the likelihood for contamination to reach a certain area/receptor after it has been introduced to the surface. For the study area the vulnerability was estimated from the Aquifer Vulnerability map of South Africa (DWA, 2013) and by the Groundwater Vulnerability Classification System. According to the Aquifer Vulnerability map the area is located in moderate vulnerability rating area.

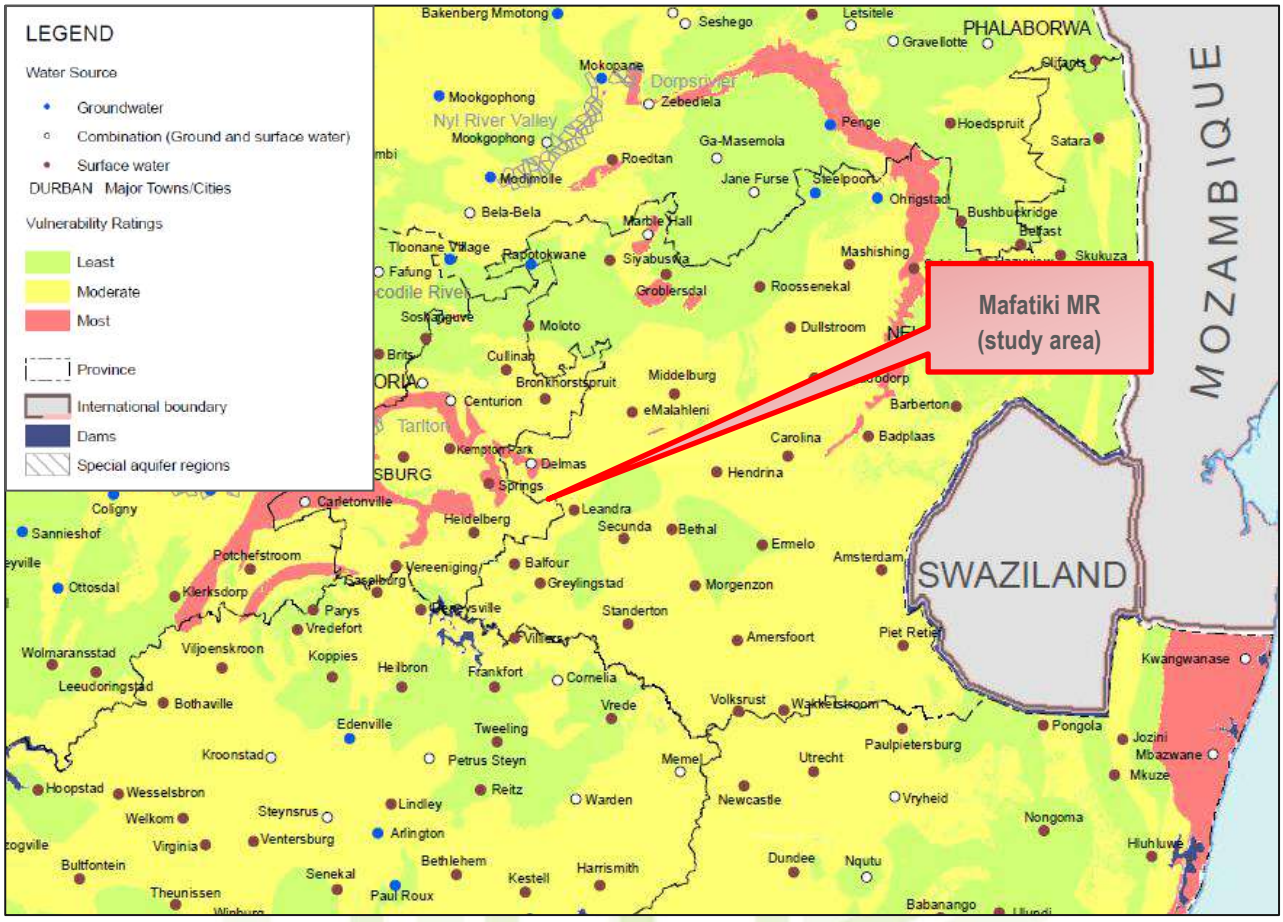


Figure 2-23:Aquifer vulnerability rating of the area (DWA, 2013)

A detailed Groundwater Impact Assessment will be included in the EIA

Blasting and Vibration

Explosives are used to break rock through the shockwaves and gases generated from the explosion. Ground vibration is a natural result from blasting activities. The far field vibrations (those vibrations felt further away from the blast area) are inevitable, but undesirable by-products of blasting operations. Air blast represents an undesirable and unavoidable output of the blasting technique. Air blasts can also be referred to as 'air – overpressure'. The air blast damage and annoyance can be influenced by various different factors such as the blast design itself, the weather, field characteristics and human response (Aloui et al, 2016). An air blast disturbance propagates as a compression wave in the air.

A detailed Blasting and Vibration Impact Assessment will be undertaken for the EIA once more detail about the blasting methods have become available.

Air Quality

The following baseline information was sourced from the ***Baseline Assessment, Problem Analysis and the Air Quality Management Plan for the Highveld Priority Area (2011).***

The Highveld area in South Africa is associated with poor air quality, and elevated concentrations of criteria pollutants occur due to the concentration of industrial and nonindustrial sources (Held et al, 1996; DEAT, 2006). The Minister of Environmental Affairs and Tourism, Martinus van Schalkwyk, therefore, declared the Highveld Priority Area (HPA) on 23 November 2007. The priority area covers 31 106 km^2, including parts of Gauteng and Mpumalanga Provinces, with a single metropolitan municipality, three district municipalities, and nine local municipalities (Figure 2-24).

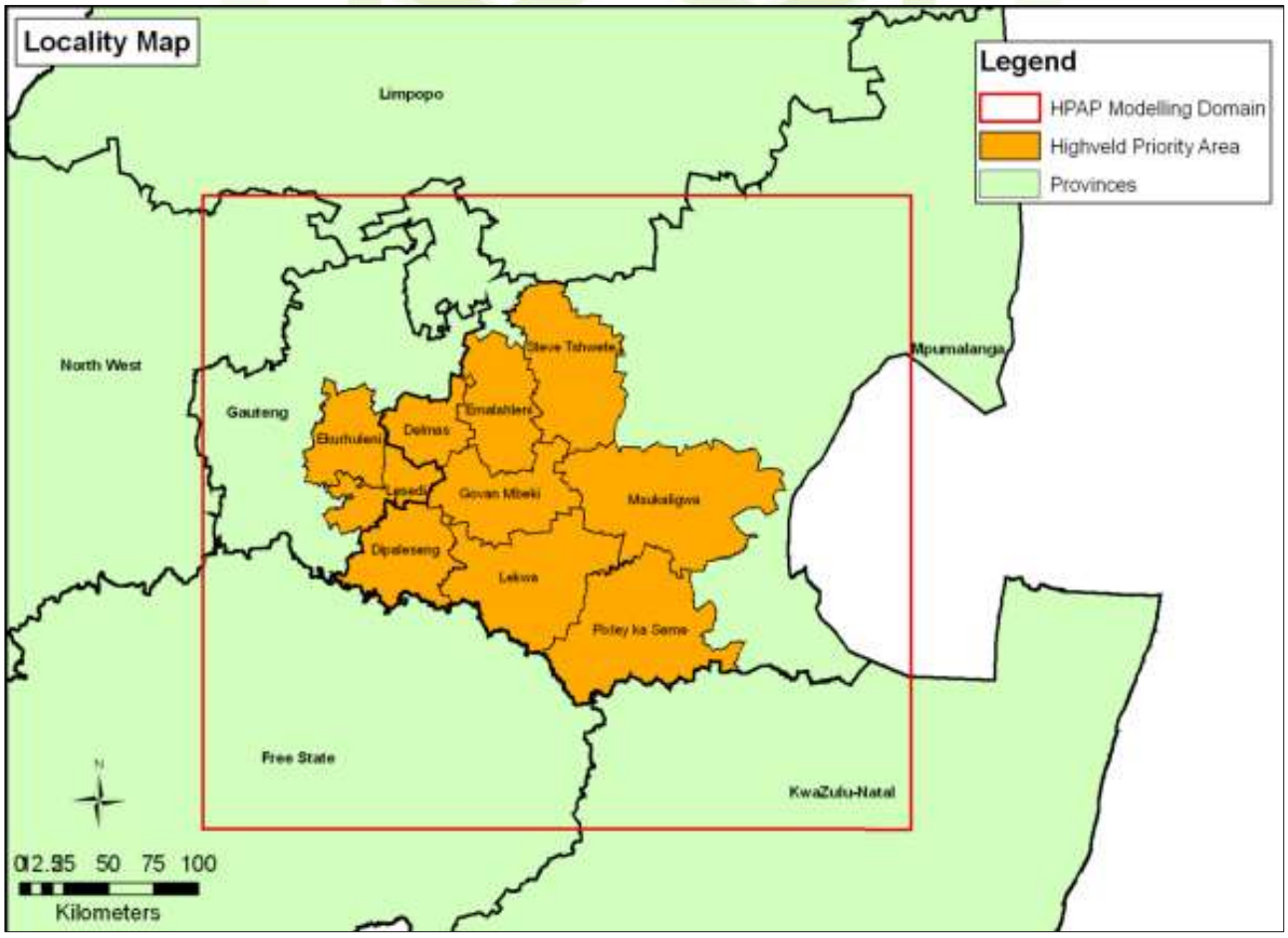


Figure 2-24: Highveld Priority Areas (HPA)

The total estimated annual emissions of fine particulate matter (PM_{10}) on the HPA is 279 630 tons, of which approximately half is attributed to particulate entrainment on opencast mine haul roads. The emission of PM_{10} from the primary metallurgical industry accounts for 17% of the total emission, with 12% of the total from power generation. By contrast, power generation contributes 73% of the total estimated oxides of nitrogen (NO_x) emission of 978 781 tons per annum and 82% of the total estimated sulphur dioxide (SO_2) emission of 1 633 655 tons per annum. The emission inventory for industrial sources was relatively complete and included all industries on the HPA with scheduled processes in terms of the APPA. Industrial sources in total are by far the largest contributor of emissions in the HPA, accounting for 89% of PM_{10}, 90% of NO_x and 99% of SO_2. Major industrial source contributors were grouped into the following categories:

- Power Generation
- Coal Mining
- Primary Metallurgical Operations
- Secondary Metallurgical Operations
- Brick Manufacturers
- Petrochemical Industry
- Ekurhuleni Industrial Sources
- Mpumalanga Industrial Sources

Table 2-5: Total emission of PM_{10}, NO_x and SO_2 from the different source types on the HPA (in tons per annum), and the percentage contribution for each source category

Source Category	PM10 t/a	%	NOx t/a	%	SO2 t/a	%
Ekurhuleni MM Industrial (incl. Kelvin)	8 909	3,00	15 636	2	25 772	2
Mpumalanga Industrial	684	0,00	590	0	5 941	0
Clay Brick Manufacturing	9 708	3,00	-		9 963	1
Power Generation	34 373	12,00	716 719	73	1 337 521	82
Primary Metallurgical	46 805	17,00	4 416	0	39 582	2
Secondary Metallurgical	3 060	1,00	229	0	3 223	0
Petrochemical	8 246	3,00	148 434	15	190 172	12
Mine Haul Roads	135 766	49,00	-		-	-
Motor vehicles	5 402	2,00	83 607	9	10 059	1
Household Fuel Burning	17 239	6,00	5 600	1	11 422	1
Biomass Burning	9 438	3,00	3 550	0	-	-
TOTAL HPA	**279 630**	**99***	**978 781**	**100**	**1 633 655**	**101***

* *Total Percentage does not count to 100% due to rounding of figures.*

Detailed Air Quality Impact assessment will be undertaken for inclusion in the EIA report.

NOISE

Table 2-6 depicts acceptable noise levels within districts according to the SANS 10103 guideline.

Table 2-6: Acceptable rating levels for noise in districts (SANS 10103, 2008)

Type of District	Equivalent continuous rating level ($L_{Reg.T}$) for noise (dBA)					
	Outdoors			Indoors, with open windows		
	Day-night	Day-time	Night-time	Day-night	Day-time	Night-time
	$L_{R,dna}$	$L_{Req,db}$	$L_{Req,nb}$	$L_{R,dna}$	$L_{Req,db}$	$L_{Req,nb}$
RESIDENTIAL DISTRICTS						
a) Rural districts	45	45	35	35	35	25
b) Suburban districts with little road traffic	50	50	40	40	40	30
c) Urban districts	55	55	45	45	45	35
NON-RESIDENTIAL DISTRICTS						
d) Urban districts with						
some workshops, with business premises, and with main roads	60	60	50	50	50	40
e) Central business districts	65	65	55	55	55	45
f) Industrial districts	70	70	60	60	60	50
NOTE 1 If the measurement or calculation time interval is considerably shorter than the reference time intervals, significant deviations from the values given in the table might result.						
NOTE 2 If the spectrum of the sound contains significant low frequency components, or when an unbalanced spectrum towards the low frequencies is suspected, special precautions should be taken and specialist advice should be obtained. In this case the indoor sound levels might significantly differ from the values given in columns 5 to 7.						
NOTE 3 In districts where outdoor $L_{R,dn}$ exceeds 55 dBA, residential buildings (e.g. dormitories, hotel accommodation and residences) should preferably be treated acoustically to obtain indoor $L_{Req,T}$ values in line with those given in table 1.						
NOTE 4 For industrial districts, the $L_{R,dn}$ concept does not necessarily hold. For industries legitimately operating in an industrial district during the entire 24 h day/night cycle, LReq,d = LReq,n =70 dBA can be considered as typical and normal.						
NOTE 5 The values given in columns 2 and 5 in this table are equivalent continuous rating levels and include corrections for tonal character, impulsiveness of the noise and the time of day.						
NOTE 6 The noise from individual noise sources produced, or caused to be produced, by humans within natural quiet spaces such as national parks, wilderness areas and bird sanctuaries, should not exceed a maximum Weighted sound pressure level of 50 dBA at a distance of 15 m from each individual source.						
a) The values given in columns 2 and 5 are equivalent continuous rating levels and include corrections for tonal character and impulsiveness of the noise and the time of day.						
b) The values given in columns 3, 4, 6 and 7 are equivalent continuous rating levels and include corrections for tonal character and impulsiveness.						

The probable community/group response to levels in excess of the acceptable rating levels are presented in Table 2-7, where LReq,T is the equivalent continuous A-weighted sound pressure level, in decibels (dBA), determined over a specific time period. 'A-weighted' is a standard weighting of the audible frequencies designed to reflect the response of the human ear to noise.

Table 2-7: Categories of community/group response (SANS 10103, 2008)

Excess ($\Delta L_{Req,T}$)[a]dBA	Estimated community/group response	
	Category	Description
0 – 10	Little	Sporadic complaints
5 – 15	Medium	Widespread complaints
10 - 20	Strong	Threats of action
>15	Very strong	Vigorous action
NOTE Overlapping ranges for the excess values are given because a spread in the community reaction might be anticipated.		
a $\Delta L_{Req,T}$ should be calculated from the appropriate of the following:		
1) $\Delta L_{Req,T}$ = $L_{Req,T}$ of ambient noise under investigation MINUS LReq,T of the residual noise (determined in the absence of the specific noise under investigation);		
2) $\Delta L_{Req,T}$ = $L_{Req,T}$ of ambient noise under investigation MINUS the maximum rating level for the ambient noise given in table 1;		
3) $\Delta L_{Req,T}$ = $L_{Req,T}$ of ambient noise under investigation MINUS the typical rating level for the applicable district as determined from table 2; or		
4) $\Delta L_{Req,T}$ = Expected increase in $L_{Req,T}$ of ambient noise in an area because of a proposed development under investigation.		

A baseline assessment will be undertaken to determine the current ambient noise level at the nearest noise sensitive receptor to the proposed project.

SOILS

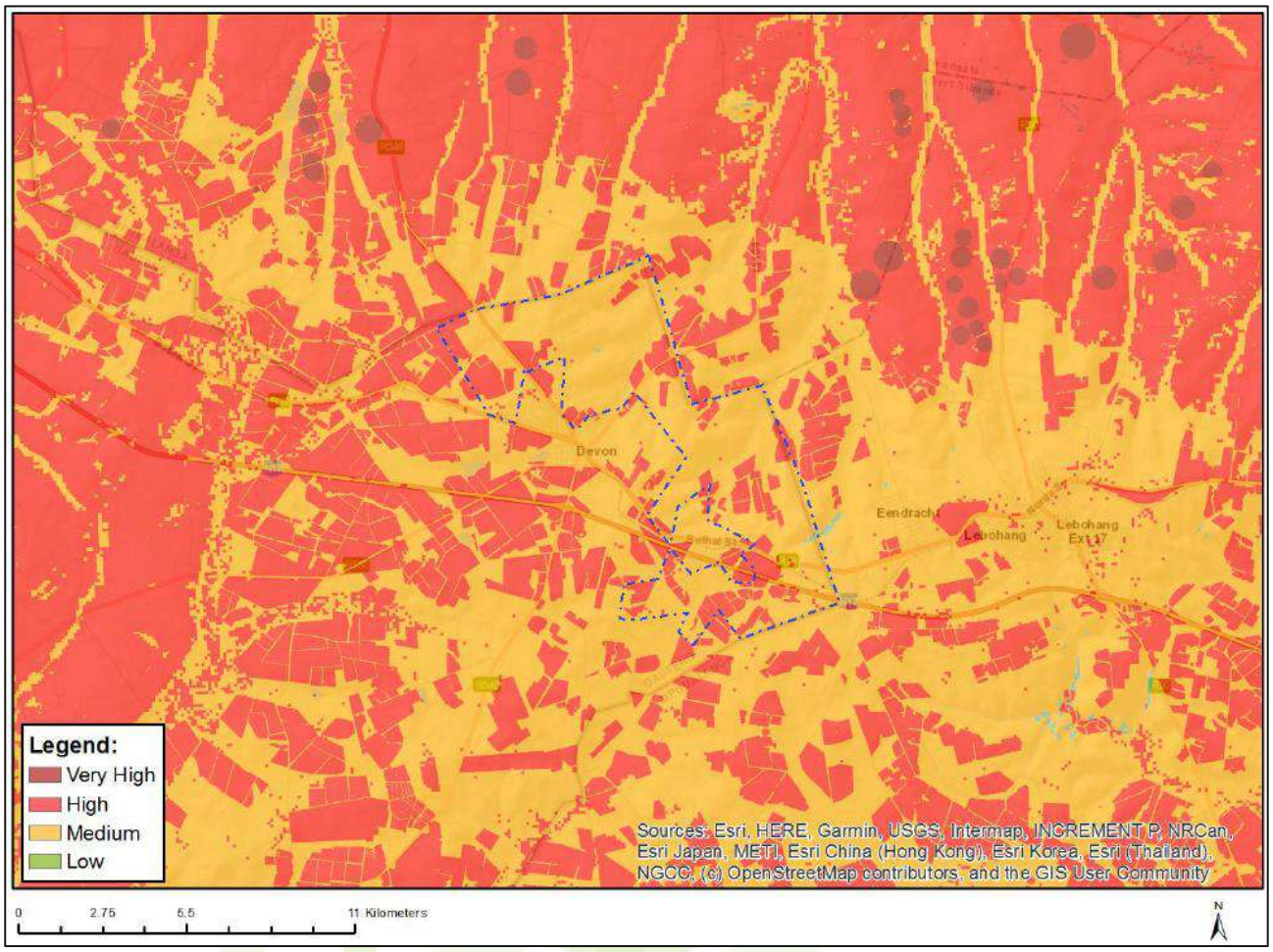


Figure 2-25: Relative Agricultural Theme Sensitivity map of the area

The area is further characterised as having a Medium to High Agricultural sensitivity (Figure 2-25) with reasons explained in Table 2-8.

Table 2-8: Soils and Land Capability 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
High	Old Fields;Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
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

A detailed soils, land use, and land capability assessment will be undertaken for inclusion in the EIA.

SOCIAL ECONOMIC

The proposed Project is located in Lesedi Local Municipality (LLM), within the Sedibeng District Municipality (SDM) in Gauteng Province. The socio-economic characteristics of the population within each of the aforementioned areas are listed below.

The Sedibeng District Municipality is located on the southern edge of Gauteng and consists of three local municipalities, namely Lesedi, Midvaal, and Emfuleni Local Municipalities.

The jurisdictional area of Sedibeng District Municipality covers the entire southern area of Gauteng Province, extending along a 120km axis from east to west. The total extent of the Sedibeng area of jurisdiction is 4630km², of which Emfuleni takes up 1276km² [27,6%], Midvaal takes up 2312km² [49,9%], and Lesedi takes up 1042km² [22,5%]. The area can be described as mostly agricultural/rural, especially in the eastern parts. The main urban areas are concentrated in the western part of the district, consisting of Vereeniging and Vanderbijlpark as well as the Evaton/Sebokeng residential complex to the north of it in Emfuleni. Lesser urban concentrations are found in Meyerton in Midvaal, and in Heidelberg/Ratanda in Lesedi.

As far as its regional context is concerned, Sedibeng is situated away from the hub of economic activity in Gauteng, which is situated between Johannesburg and Pretoria. The district is however connected to this hub by a number of national roads and freeways, as well as rail lines, which ensure excellent accessibility. The Vaal Triangle [Vanderbijlpark, Vereeniging and Sasolburg in the Free State] is associated with the production of steel and fuel [Arcelor Mittal and SASOL], as well as other types of heavy and noxious industrial activity. The rest of Sedibeng's contribution to the region lies primarily within the agricultural sphere, especially the eastern parts of the district where substantial commercial farming operations can be found.

Population and Demographics

The region of Sedibeng is moderately populated and the below mentioned statistics and comparative analysis of this district provide a base on which development within the municipality's area of jurisdiction can be made. The 2007-2011 IDP estimates that the total population in Sedibeng District is at 843 006 as per NSDP (2006). According to DBSA (2007) projections which are based on the Statistics SA Census 2001 population figures, the total population for Sedibeng District Municipality is 908 107 people. According to Statistic SA Community Survey 2006, with its limitations, the total population of Sedibeng 800 819.

Education

Educational achievement is a key development indicator of a population. The majority of the population (ages over twenty) in the local study area as well as district municipality have not completed matric, however, there is a large percentage of learners who complete primary level education.

Employment and Labour

The highest number of employments is concentrated in the manufacturing sector. Arcelor Arcelor Mittal and SASOL are the major employers in the region. According to DBSA (2006) there has been a decrease in unemployment in Sedibeng from 52.3% in 2001 to 50.1% in 2006 while the Statistics SA Community Survey 2007 indicates that the unemployment rate in Sedibeng is 32%. This figure is slightly higher than the Gauteng unemployment rate of 28% for 2006.

The manufacturing sector has been showing an increase of 26.8% in employment. The construction sector increased its employment figures by 47.2% from 2001 to 2006. The Whole Sale and Retail Sector also increased its employment levels with 22.1%. Transport, storage and communication recorded an increase of 2.3%. There has been a total increase in employment of 17.7% and an increase of 12.5% in the labour force from 2001 to 2006.

Rural residential

The rural settlement pattern in the district is characterized by a large number of small holdings/small farms settlements ranging from 1 – 5 ha properties located around the fringes of the urban areas, especially in the western part of the district, in Midvaal and Emfuleni. Agricultural holding areas in Lesedi are limited to the Vischkuil/Endicott area in the northern part abutting the N17 national road, and some settlements on the edges of Nigel northeast of Heidelberg/Ratanda.

Diverse land uses are found on the agricultural holdings, ranging from rural residential, through small scale farming to extensive, informal industrial and commercial activities. A relatively large proportion of the agricultural holdings are vacant. Rural residential areas make up ±4,0% of the total area of the district [±18 582 ha.].

Commercial Agriculture

Commercial agriculture takes up the largest area within the district and makes up ±33% of the total land usage. Agricultural activity in the district is dominated by large-scale commercial farming operations [crop production including maize, grain, sorghum, wheat, soya and dry beans, ground nuts, sunflower seeds and vegetables, and animal production including milk, beef, mutton and lamb, eggs and poultry]. Sedibeng is a very important resource to Gauteng in terms of food production, and this fact should be taken into consideration in the spatial planning of the area. The performance of the agricultural sector is very dependent on climatic conditions and may fluctuate from year to year. The agricultural sector does however present opportunities for downstream economic activities and job creation in terms of further processing of agricultural produce [e.g., Karan Beef, Eskort, all of which are going concerns within Lesedi].

2.h.v.1.b Description of the current land uses.

The current land use for the project area is mixed. Natural grassland is the largest land use followed by commercial annual crop rain-fed drylands and fallow old fields. Agricultural holdings and informal settlement areas are found within borders the project area and residential areas are concentrated in and around the town of Devon.

2.h.v.1.c Description of specific environmental features and infrastructure on the site.

Existing mining operations and infrastructure is located in the mining right area. The proposed mining right area falls within the B20A and B20E quaternary catchments of the Olifants Water Management Area and within the C21A quaternary catchment of the Vaal Water Management Area. The main drainage features of the catchments are the Wilgerivier and Steenkoolspruit which both drains northwards into the Olifants River system and tributaries of the Bleskbokspruit which drains westward into the Vaal River system. A large area of the proposed mining right area is comprised of natural grassland, while other areas are used for commercial agricultural (crops & livestock). In terms of the Gauteng Conservation Plan, Important and Irreplaceable Critical Biodiversity Areas have been identified within the proposed mining right area.

2.h.v.1.d Environmental and current land use map.

(Show all environmental, and current land use features)

See below and Annexure 3.

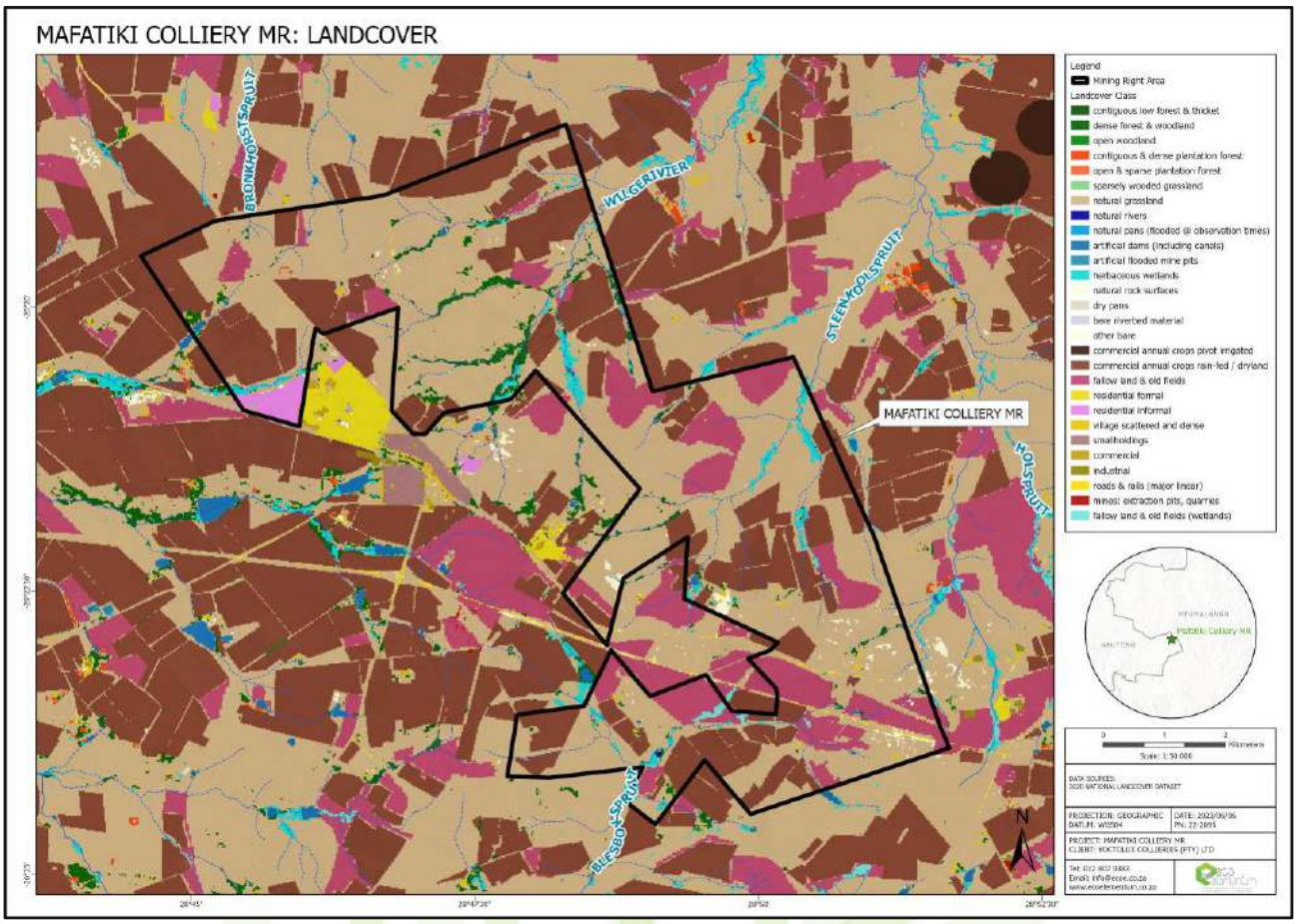


Figure 2-26: Landcover area map of the proposed underground coal mining right operations – Mafatiki Colliery

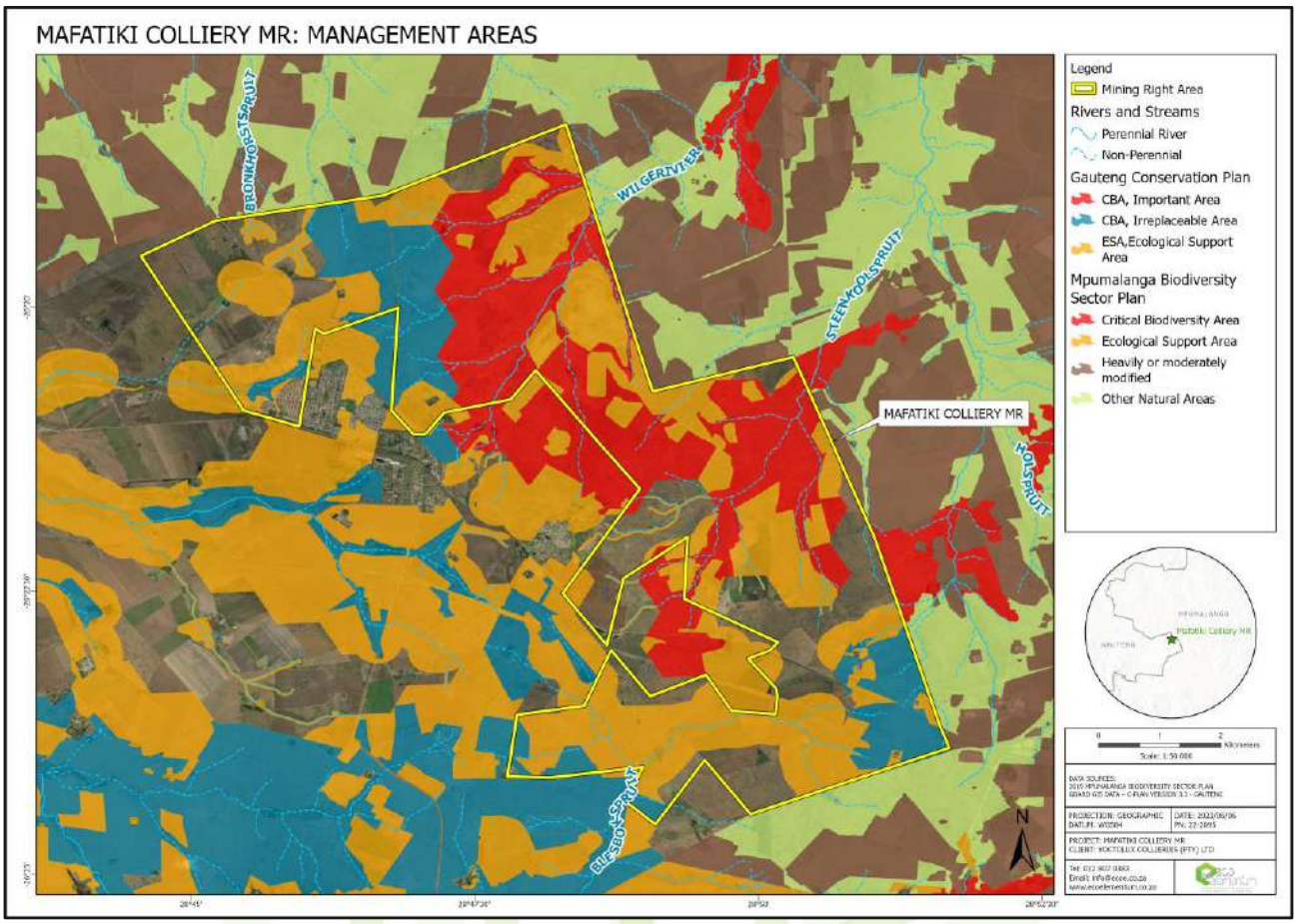


Figure 2-27: Management areas map - Gauteng Conservation Plan & Mpumalanga Biodiversity Sector Plan of the proposed underground coal mining right operations – Mafatiki Colliery

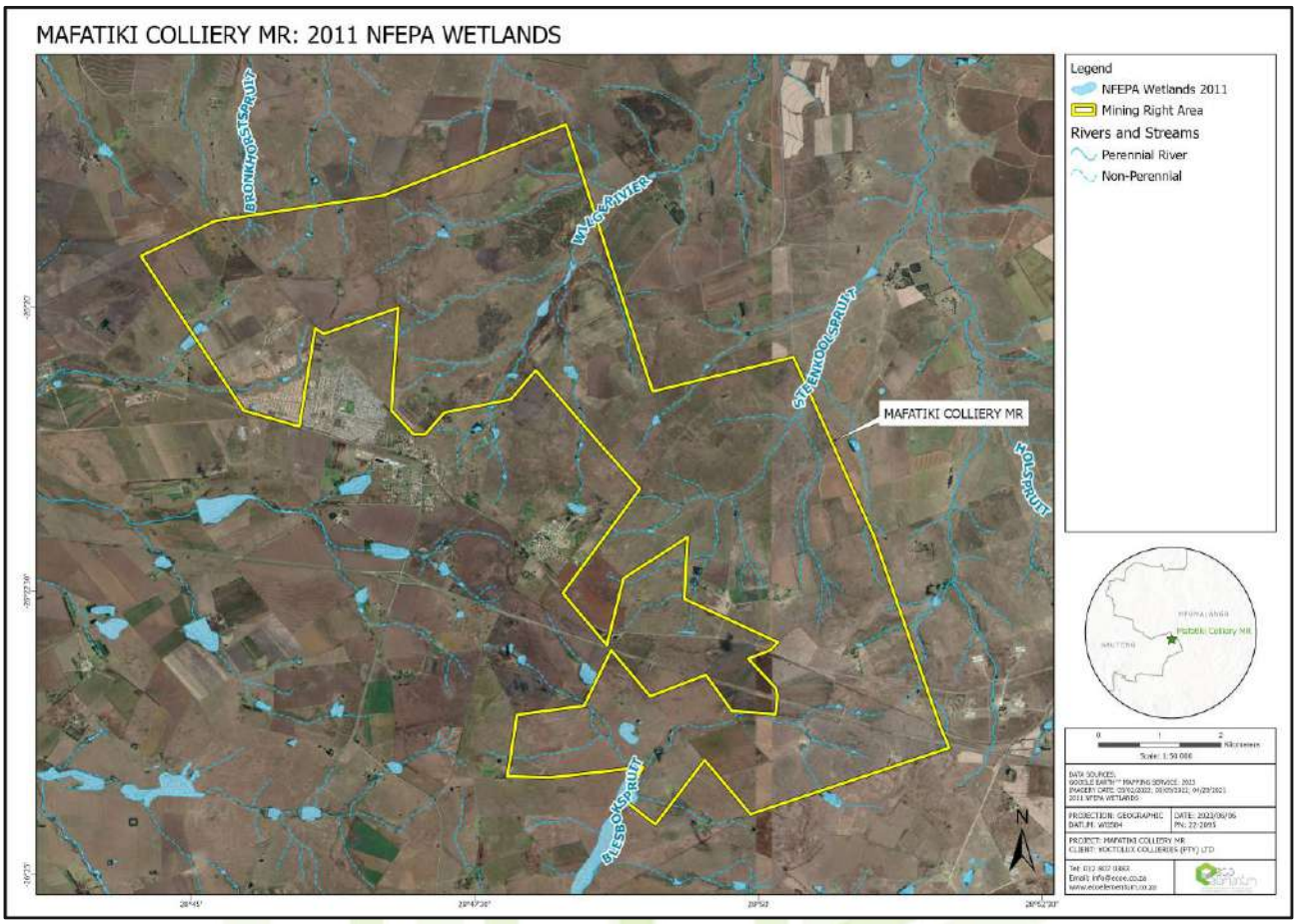


Figure 2-28: NFEPA wetlands and rivers map of the proposed underground coal mining right operations – Mafatiki Colliery

2.h.vi Impacts identified

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of the impacts)

The anticipated impacts associated with the project is as follows:

Table 2-9: List of Preliminary Issues

PRELIMINARY IMPACT TO BE ASSESSED	CONSTRUCTION PHASE	OPERATIONAL PHASE	DECOMMISSIONING PHASE	POSTIVE/ NEGATIVE
POTENTIAL TO ALTER THE TOPOGRAPHY	✓	✓	✓	-
LOSS OF SOIL CHARACTERISTICS - EROSION AND COMPACTION	✓	✓	✓	-
CHANGE IN LAND USE FROM ARABLE TO MINING	✓	✓		-
LOSS OF BIODIVERSITY – VEGETATION CLEARANCE, HABITAT DESTRUCTION AND FAUNAL DISPLACEMENT	✓	✓	✓	-
POTENTIAL FOR ALIEN INVASIVE ESTABLISHMENT	✓	✓	✓	-
REDUCED FLOW TO DOWNSTREAM WATER CATCHMENT		✓		-

PRELIMINARY IMPACT TO BE ASSESSED	CONSTRUCTION PHASE	OPERATIONAL PHASE	DECOMMISSIONING PHASE	POSTIVE/ NEGATIVE
POTENTIAL POLLUTION TO WATER RESOURCES (SURFACE AND GROUNDWATER)	✓	✓	✓	-
DRAWDOWN CONE FROM DEWATERING ACTIVITIES (GROUNDWATER QUANTITY)	✓	✓		-
INCREASED DUST AND EMISSIONS	✓	✓	✓	-
INCREASED NOISE LEVELS	✓	✓	✓	-
VISUAL AESTHETICS AND SENSE OF PLACE WILL BE ALTERED	✓	✓	✓	-
DAMAGE TO PROPERTY/INFRASTRUCTURE FROM BLAST EVENTS	✓	✓		-
POTENTIAL DAMAGE TO HERITAGE SITES (GRAVE AND/OR ARCHAEOLOGICAL ARTEFACTS)	✓			-
INFLUX OF JOB SEEKERS TO THE AREA	✓	✓		-
INCREASED TRAFFIC – COAL HAULAGE		✓		-
EMPLOYMENT OPPORTUNITIES	✓	✓	✓	+
ECONOMIC STIMULATION	✓	✓		+

2.h.vii Methodology used in determining the significance of environmental impacts

(Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined in order to decide the extent to which the initial site layout needs revision).

The following methodology was used to rank these impacts. Clearly defined rating and rankings scales were used to assess the impacts associated with the proposed activities. The impacts identified by each specialist study and through public participation were combined into a single impact rating table for ease of assessment.

Table 2-10: Impact Criteria and Assigned Rating

Intensity (Magnitude)		ASSIGNED QUANTITATIVE SCORE
The intensity of the impact is considered by examining whether the impact is destructive, or benign, whether it has a significant, moderate or insignificant		
(L)OW	The impact alters the affected environment in such a way that the natural processes, or functions are not affected.	**1**
(M)EDIUM	The affected environment is altered, but functions and processes continue, albeit in a modified way.	**3**
(H)IGH	Function, or process of the affected environment is disturbed to the extent where it temporarily, or permanently ceases.	**5**
Duration		
The lifetime of the impact, that is measure in relation to the lifetime of the proposed development.		
(S)HORT TERM	The impact will either disappear with mitigation, or will be mitigated through a natural process in a period shorter than that of the Construction Phase.	**1**

(SM) SHORT - MEDIUM TERM	The impact will be relevant through to the end of a Construction Phase.	**2**
(M)MEDIUM	The impact will last up to the end of the Development Phases, where after it will be entirely negated.	**3**
(L)ONG TERM	The impact will continue, or last for the entire operational lifetime (i.e. exceed 20 years) of the development, but will be mitigated by direct human action, or by natural processes thereafter.	**4**
(P)ERMANENT	This is the only class of impact, which will be non-transitory. Mitigation either by man, or natural process will not occur in such a way or in such a time span that the impact is transient.	**2**
Spatial Scale/Extent		
Classification of the physical and spatial aspect of the impact		
(F)OOTPRINT	The impacted area extends only as far as the activity, such as footprint occurring within the total site area.	**1**
(S)ITE	The impact could affect the whole, or a significant portion of the site.	**2**
(R)EGIONAL	The impact could affect the area including the neighbouring Farms, the transport routes and the adjoining towns.	**3**
(N)ATIONAL	The impact could have an effect that expands throughout the country (South Africa).	**4**
(I)NTERNATIONAL	Where the impact has international ramifications that extend beyond the boundaries of South Africa.	**5**
Probability		
This describes the likelihood of the impact actually occurring. The impact may occur for any length of time during the life cycle of the activity. The classes are rated as follows:		
(I)MPROBABLE	The possibility of the Impact occurring is none, due to the circumstances, or design. The chance of this Impact occurring is zero (0%)	**1**
(P)OSSIBLE	The possibility of the Impact occurring is very low, due either to the circumstances or design. The chance of this Impact occurring is defined as 25% or less	**2**
(L)IKELY	There is a possibility that the impact will occur to the extent that provisions must therefore be made. The chances of Impact occurring is defined as 50%	**3**
(H)IGHLY LIKELY	It is most likely that the Impacts will occur at some stage of the development. Plans must be drawn up before carrying out the activity. The chances of this impact occurring is defined as 75%.	**4**
(D)EFINITE	The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on. The chance of this impact occurring is defined as 100%.	**5**
Weighting Factor		
Subjective score assigned by Impact Assessor to give the relative importance of a particular environmental component based on project knowledge and previous experience. Simply, such a weighting factor is indicative of the importance of		

the impact in terms of the potential effect that it could have on the surrounding environment. Therefore, the aspects considered to have a relatively high value will score a relatively higher weighting than that which is of lower importance	
(L)OW	**1**
LOW- MEDIUM	**2**
MEDIUM (M)	**3**
MEDIUM-HIGH	4
HIGH (H)	5

Mitigation Measures and Mitigation Efficiency

Determination of significance refers to the foreseeable significance of the impact after the successful implementation of the necessary mitigation measures

Mitigation measures were recommended to enhance benefits and minimise negative impacts and address the following:

Mitigation objectives: what level of mitigation must be aimed at: For each identified impact, the specialist must provide mitigation objectives (tolerance limits) which would result in measurable reduction in impact. Where limited knowledge or expertise exists on such tolerance limits, the specialist must make "educated guesses" based on professional experience.

Recommended mitigation measures: For each impact the specialist must recommend practicable mitigation actions that can measurably affect the significance rating. The specialist must also identify management actions, which could enhance the condition of the environment. Where no mitigation is considered feasible, this must be stated and reasons provided.

Effectiveness of mitigation measures: The specialist must provide quantifiable standards (performance criteria) for reviewing or tracking the effectiveness of the proposed mitigation actions, where possible.

Recommended monitoring and evaluation programme: The specialist is required to recommend an appropriate monitoring and review programme, which can track the efficacy of the mitigation objectives. Each environmental impact is to be assessed before and after mitigation measures have been implemented.

The management objectives, design standards, etc., which, if achieved, can eliminate, minimise, or enhance potential impacts or benefits. National standards, or criteria are examples, which can be stated as mitigation objectives.

HIGH	The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option, or entire project proposal unacceptable.	**1.0**
MEDIUM-HIGH	The impact is of major importance, but through the implementation of the correct mitigation measures, the negative impacts will be reduced to acceptable levels.	**0.8**
MEDIUM	Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw.	**0.6**
LOW -MEDIUM	The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels.	**0.4**
LOW	The impact will be mitigated to the point where it is of limited importance.	**0.2**

Table 2-11: Description of Bio-physical Assessment Parameters with its Respective Weighting

Extent	Duration	Intensity	Probability	Weighting Factor (WF)	Significance Rating (SR)	Mitigation Efficiency (ME)	Significance Following Mitigation (SFM)
Footprint 1	Short term 1	Low 1	Probable 1	Low 1	Low 0-19	High 0,2	Low 0-19
Site 2	Short to medium 2		Possible 2	Low to medium 2	Low to medium 20-39	Medium to high 0,4	Low to medium 20-39
Regional 3	Medium term 3	Medium 3	Likely 3	Medium 3	Medium 40-59	Medium 0,6	Medium 40-59
National 4	Long term 4		Highly Likely 4	Medium to high 4	Medium to high 60-79	Low to medium 0,8	Medium to high 60-79
International 5	Permanent 5	High 5	Definite 5	High 5	High 80-100	Low 1,0	High 80-100

Table 2-12: Significant Rating Scale Without Mitigation

Potential Impacts Without Mitigation Measures (WOM) Following the assignment of the necessary weights to the respective aspects, criteria are summed and multiplied by their assigned weightings, resulting in a value for each impact (prior to the implementation of mitigation measures).		
SIGNIFICANT RATING EQUATION Significant Rating (SR) = (Extent + Intensity + Duration) x Probability		
S=0	**INSIGNIFICANT**	The impact will be mitigated to the point where it is regarded as insubstantial.
SR < 30	**LOW (L)**	The impact will be mitigated to the point where it is of limited importance.
20<SR<39	**LOW- MEDIUM**	The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels;
40> SR < 59	**MEDIUM (M)**	Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw.
60<SR>79	**MEDIUM-HIGH**	The impact is of major importance, but through the implementation of the correct mitigation measures, the negative impacts will be reduced to acceptable levels.
80<SR > 100	**HIGH (H)**	The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option, or entire project proposal unacceptable.

Table 2-13: Significant Rating Scale with Mitigation

Potential Impacts with Mitigation Measures (WM) – In order to gain a comprehensive understanding of the overall significance of the impact, after implementation of the mitigation measures, it will be necessary to re-evaluate the impact.
SIGNIFICANT RATING WITH MITIGATION EQUATION Significance Rating (WM) = Significance Rating (WOM) x Mitigation Efficiency.

Or	WM = WOM x ME	
S=0	**INSIGNIFICANT**	The impact will be mitigated to the point where it is regarded as insubstantial.
SR < 30	**LOW (L)**	The impact will be mitigated to the point where it is of limited importance.
20<SR<39	**LOW- MEDIUM**	The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels;
40> SR < 59	**MEDIUM (M)**	Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw.
60<SR>79	**MEDIUM-HIGH**	The impact is of major importance, but through the implementation of the correct mitigation measures, the negative impacts will be reduced to acceptable levels.
80<SR > 100	**HIGH (H)**	The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option, or entire project proposal unacceptable.

2.h.viii The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected.

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties).

Refer to Table 2-9.

2.h.ix The possible mitigation measures that could be applied and the level of risk.

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/ discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered).

To be updated once the specialist has completed their studies and comment has been received from I&APs during the Draft EIA Phase.

The following is proposed in the interim:

- Design the surface and storm water infrastructure to be within the footprint of the project area.
- Separate clean from dirty water and allow discharge of water to designated areas.
- Vegetate disturbed areas to limit erosion.
- Implement berms, trenches and storm water management measures in accordance with GN 704 Regulations.
- Pollution Control Dams to be designed to cater for the required storage capacity.
- Compacted soil areas in and around the periphery of the wetland will be ripped to break up compacted soil and vegetated with indigenous seed mix.
- Comply with the National Air Quality Standards and Dust Control Regulations.
- Comply with the SANS noise standard.
- Avoid travelling past residences. Speed limit of 40 km/h will be enforced. Liaise with landowner on areas sensitive to noise. Provide a buffer of 100 m from households.
- Prescribe to the DWS Catchment Water Quality Standards where possible.
- Restrict traveling speed of vehicles to reduce vehicle entrainment of dust. Wet gravel roads if dust is found to be excessive.

- No-go areas to be identified. Environmental awareness training of all employees.
- Preference to be given to the use of local employment, contractors and local suppliers.
- Implement measures to protect soils from pollution.
- Reduce the visual impacts of mining activities, i.e. concurrent rehabilitation.
- Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas.
- Utilise existing access roads as far as possible.
- Access roads to follow slope contours where possible. Vegetation to be left in place at the sides of the road to protect the soils.

2.h.x The outcome of the site selection Matrix. Final Site Layout Plan

(Provide a final site layout plan as informed by the process of consultation with interested and affected parties)

To be submitted with the Draft EIA Report once the specialist has given their input.

2.h.xi Motivation where no alternative sites were considered.

The mining right application location is bound to the current location due to the underlying geology, surrounding wetlands and the applicant's existing prospecting rights. The depth of the coal resource only lends itself to underground mining. Any surface area impacts will be restricted to relatively small infrastructure areas where access to the underground will be gained. The greater area has also been impacted by historic underground mining and some sections have already been transformed from its natural state. Therefore, no alternative properties were considered. Sensitive areas will be avoided as far as possible during the infrastructure location selection.

2.h.xii Statement motivating the preferred site.

(Provide a statement motivation the final site layout that is proposed)

The mining right application location is bound to the current location due to the underlying geology, surrounding wetlands and the applicant's existing prospecting rights. The depth of the coal resource only lends itself to underground mining. Any surface area impacts will be restricted to relatively small infrastructure areas where access to the underground will be gained. Once specialist studies have been undertaken the most suitable layout for surface infrastructure will be finalised and presented in the EIA. The greater area has also been impacted by historic underground mining and some sections have already been transformed from its natural state. The coal of the application area, if authorised and subsequently mined, will initially be mainly supplied to the inland thermal markets. Qualities are adequate to achieve a raw product of roughly 4900 Kcal/kg product specification.

2.i PLAN OF STUDY FOR THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

2.i.i Description of alternatives to be considered including the option of not going ahead with the activity.

Refer to Section 2.h.ii.

The placement of the infrastructure will be based on the site sensitivities and status of the wetlands on site. Less sensitive areas will be favoured to more sensitive areas for infrastructure placement.

2.i.ii Description of the aspects to be assessed as part of the environmental impact assessment process

(The EAP must undertake to assess the aspects affected by each individual mining activity whether listed or not, including activities such as blasting, Loading, hauling and transport, and mining activities such as Excavations, stockpiles, discard dumps or dams, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.).

A team of specialist Scientists and Engineers have been appointed to undertake the following specialist studies. These studies will investigate the baseline environment, potential impacts and provide management measures where applicable.

- Social Impact Study.
- Air quality.
- Traffic.
- Aquatic Ecology.
- Storm Water Management Plans.
- Ecological.
- Geo-hydrological.
- Surface water.
- Wetland.
- Heritage, Archaeological, and Palaeontology.
- Blasting and Vibration.
- Soils, land use and land capability.

Table 2-14: Specialist Scope of Work

Specialist Study	Scope of Work
Air quality	**The purpose of this baseline study is to:**
	• Study the available information relevant to the pre and post-development ambient air quality pollution concentrations in the environment;
	• Identify the major existing air emission sources in the environment;
	• Identify the existing sensitive air pollution areas in the environment;
	• Estimate by means of measurements and integration of the results with those of any relevant existing information the present ambient air quality climate;
	• Identify the processes and equipment that will cause the major contribution to the future air quality impact;
	• Consider, evaluate and rate the potential air quality impacts; and
	• Propose relevant management and mitigation measures to lessen the anticipated impacts.
	It is highly recommended that baseline dust monitoring be conducted for at least 3 months prior to the start of the project.

Specialist Study	Scope of Work
Aquatic Ecology	**The assessment will be conducted as part of a three phase approach. The first phase consisted of a rapid desktop assessment. The second phase was conducted in field to gather data. The third phase consisted of an impact assessment and reporting by combining field data and desktop data.**
	1. Rapid desktop assessment:
	• Google Earth satellite imagery
	• Aerial photographs
	• GIS mapping software
	2. Field assessment by identifying the presence of one (at least) or more of the following attributes:
	• Wetland/hydromorphic soils
	• Hydrophytes
	• High water table
	3. Combining desktop data, field data and calculating the Wetland Index of Habitat Integrity (DWA, 2007) by using the following indices:
	• Present Ecological status
	• Ecological Importance and Sensitivity
	• Ecosystem Services supplied by wetland
	The following sections deal with the Wetland Index of Habitat Integrity as performed as part of the third phase of the study approach.
Social Impact Assessment	1) Identification of key stakeholders;
	2) Development of a social profile of the affected community;
	3) Identifying all applicable legislative and regulatory considerations;
	4) Undertaking stakeholder consultation;
	5) Assessment of possible social and economic impacts;
	6) Rating of impacts according to significance (severity, probability, duration, spatial extent and
	7) stakeholder sensitivity;
	8) Making a clear distinction between objective and subjective impacts;
	9) Provision of management guidelines for anticipated impacts; and
Ecological Assessment	**The study will include two phases:**
	10) Desktop study:
	• Review of existing information e.g. EIA, Specialist studies, Mining right, WULA etc.;
	• Analysis of recent Google maps;
	• Literature review of fauna and flora in the area;
	• Review of endangered species known to occur in the area;
	11) Detailed Terrestrial Ecology Report including a wetland delineation and functional assessment.
Geo-hydrological	**The scoping groundwater study will include, amongst others, the following information as required in terms of the MPRDA:**
	• A description of the groundwater environment likely to be affected by the proposed mining activities;

Specialist Study	Scope of Work
	• An assessment of potential impacts on the groundwater environment.
	• A summary of the potential significance of identified impacts;
	• Proposed mitigation and management measures to minimise adverse impacts and to optimise benefits;
	• Planned monitoring and performance assessment of the EMP and Rehabilitation measures of areas disturbed during mining activities.
Surface water	**The assessment will be conducted as part of a three-phase approach. The first phase consisted of a rapid desktop assessment. The second phase was conducted in field to gather data. The third phase consisted of an impact assessment and reporting by combining field data and desktop data.**
	1. Rapid desktop assessment:
	• Google Earth satellite imagery.
	• Aerial photographs
	• GIS mapping software
	2. Field assessment by identifying the presence of one (at least) or more of the following attributes:
	• Wetland/hydromorphic soils.
	• Hydrophytes.
	• High water table.
	3. Combining desktop data, field data and calculating the Wetland Index of Habitat Integrity (DWA, 2007) by using the following indices:
	• Present Ecological status.
	• Ecological Importance and Sensitivity.
	• Ecosystem Services supplied by wetland.
Wetland Impact Assessment	**As above.**
Heritage, Archaeological, and Paleo	**Phase 1 Archaeological Impact Assessments generally involve the identification of sites during a field survey with assessment of their significance, the possible impact development might have and relevant recommendations.**
	All Archaeological Impact Assessment reports should include:
	a. Location of the sites that are found;
	b. Short descriptions of the characteristics of each site;
	c. Short assessments of how important each site is, indicating which should be conserved and which mitigated;
	d. Assessments of the potential impact of the development on the site(s);
	e. In some cases a shovel test, to establish the extent of a site, or collection of material, to identify the associations of the site, may be necessary (a pre-arranged SAHRA permit is required); and
	f. Recommendations for conservation or mitigation.
	This AIA report is intended to inform the client about the legislative protection of heritage resources and their significance and make appropriate recommendations. It is essential to also provide the

Specialist Study	Scope of Work
	heritage authority with sufficient information about the sites to enable the authority to assess with confidence:
	a. Whether or not it has objections to a development;
	b. What the conditions are upon which such development might proceed;
	c. Which sites require permits for mitigation or destruction;
	d. Which sites require mitigation and what this should comprise;
	e. Whether sites must be conserved and what alternatives can be proposed to relocate the development in such a way as to conserve other sites; and
	f. What measures should or could be put in place to protect the sites which should be conserved.
Visual	**The scope of work for this Visual Impact Assessment will include:**
	• Describe the existing visual characteristics of the proposed sites and its environs;
	• Viewshed and viewing distance;
	• Visual Exposure Analysis;
	• Viewer Sensitivity;
	• The overall objective of the Visual Impact Assessment (VIA) is to assess the significance of the visual impacts that will be caused by the mining activities.
Soils, land use and land capability	**The following scope of work is proposed:**
	1. A study of the diagnostic soil horizons, soil forms and soil series for the area, including an assessment of effective profile depth and the classification of soils according to the South African Soil Classification System (Soil Working Group, 1991).
	2. An assessment of the pedohydrological functioning of the area in order to shed light on the water storage capacity of the soils and occurrence of wetland or hydromorphic soils. Characteristics that will be noted include:
	• Fe(II)/Fe(III) layered double hydroxides (green rusts) that is indicative of moderate conditions of reductions and soils that are moist for prolonged periods;
	• The accumulation of ferrihydrate, lepridocrosite, goethite and hematite in vesicular nodules (mottling) owing to the reduction of Fe(III) to Fe(II), under conditions of a fluctuating water table;
	• The occurrence of grey colours, especially where mottling is not present, as a further indication of Fe mobilisation and semi-permanent or permanent conditions of water saturation;
	• The occurrence of bleached soil horizons that indicate lateral drainage of water;
	• The occurrence of uniform red and yellow colouration that is indicative of well drained areas;
	• Signs of Mn mobilisation and/or precipitation as indicating a fluctuating water table;
	• The occurrence of smectite clays that lead to swelling and shrinking characteristics in soil and that is conducive to water flow in the dry state but not in the wet state.
	• Texture of the soil horizons as a means to assess the water holding capacity, saturated water content and saturated hydraulic conductivity,
	• Textural changes and other aspects in the soil profile that will influence saturated and unsaturated flow of water.
	• Occurrence of layers, such as the rocks, ferricrete and/or calcrete, which impede water flow.
	• Occurrence of concretions, stones or pebbles in the soil horizons and the effect on water holding capacity, saturated water content and saturated hydraulic conductivity.

Specialist Study	Scope of Work
	Representative soil samples will be collected and subjected to chemical and physical analyses. The following analyses will be conducted:
	• Water soluble cations and anions;
	• pH and EC (electrical conductivity);
	• Exchangeable/weakly complexed fraction of major cationic plant nutrients – calcium (Ca), sodium (Na), magnesium (Mg), potassium (K)
	• Cation exchange capacity;
	• Plant available phosphorus (P), nitrogen content;
	• Organic carbon content;
	• Soil particle size distribution (texture including clay and silt content); and
	• Soil salinity levels will be calculated.

2.i.iii Description of aspects to be assessed by specialists

Refer to previous section 2.i.ii, Table 2-14.

2.i.iv Proposed method of assessing the environmental aspects including the proposed method of assessing alternatives

Refer to previous section 2.i.ii, Table 2-14.

2.i.v The proposed method of assessing duration significance

Refer to previous section 2.i.ii, Table 2-14.

2.i.vi The stages at which the competent authority will be consulted

- Application Stage (application form submitted on SAMRAD 04 May 2023).
- Copy of the Draft Scoping Report to be submitted for their records (30 June 2023).
- Submission of the Final Scoping Report for review and comment (04 August 2023).
- Copy of the Draft EIA Report to be submitted for their records (TBC).
- Copy of the Final EIA Report to be submitted for review and decision making (TBC).

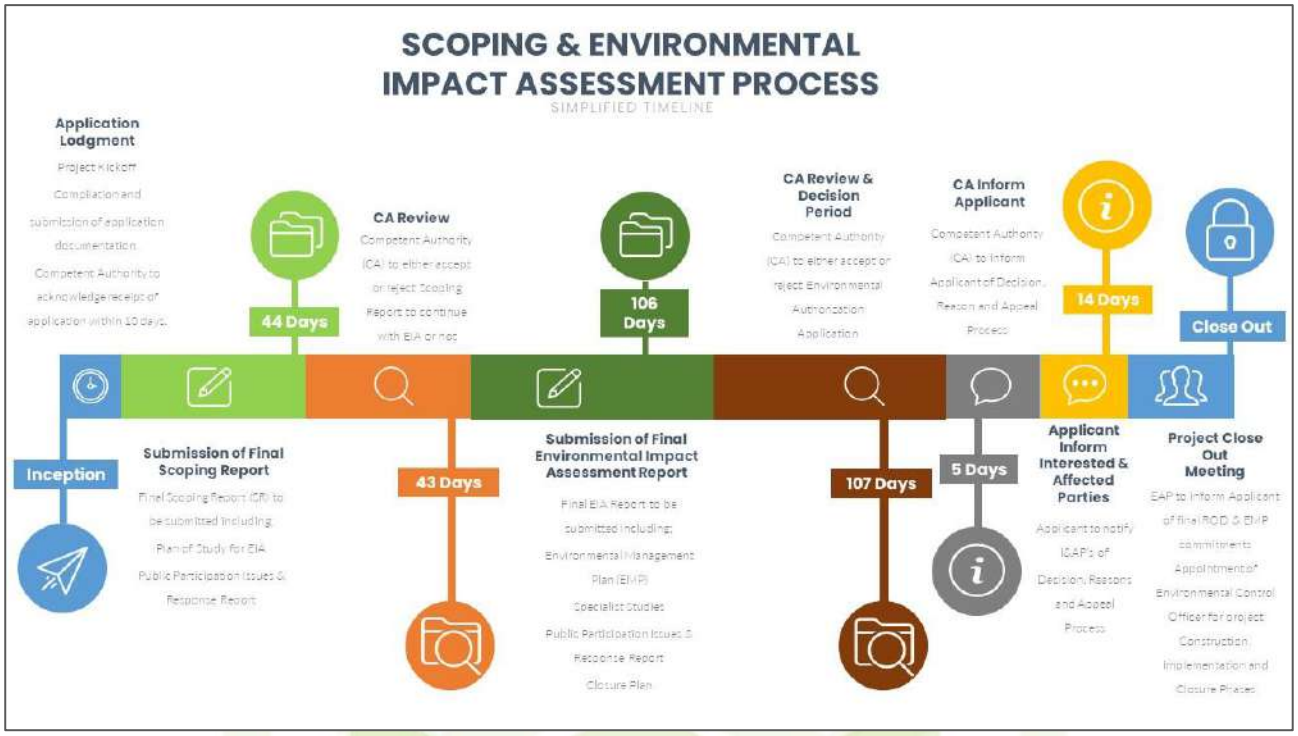


Figure 2-29: S&EIR Process

2.i.vii Particulars of the public participation process with regard to the Impact Assessment process that will be conducted

2.i.vii.1 Steps to be taken to notify interested and affected parties.

(These steps must include the steps that will be taken to ensure consultation with the affected parties identified in (h) (ii) herein).

Section 41 of NEMA GN 982 Regulations (specifically Chapter 6) set out the Legal and Regulatory Requirement for Public Participation. The Public Participation Process (PPP) aims to involve the authorities and I&APs in the project process, and determines their needs, expectations and perceptions which in turn ensures a complete and comprehensive environmental study. An open and transparent process will/has been followed at all times and is based on reciprocal dissemination of information. The following was undertaken during the PPP:

a) Identification of Interested and Affected Parties (IAPs);
b) Notification of IAPs regarding the proposed project via newspaper adverts (in the Ridge Times); the placing of site notices at conspicuous places, the sending of notices to affected parties via email and SMS (in the form of Background Information Documents) to adjacent landowners.
c) A public information day (open day) with IAPs held during the EIA phase;
d) Gathering comments, issues and concerns from IAPs;
e) Responding to IAP comments, issues and concerns;
f) Compilation and submission of results of consultation report to the DMRE;
g) Providing IAPs with the opportunity to review and comment on the Draft Scoping and EIA Reports; and
h) Further personal consultation with affected landowners.

2.i.vii.2 Details of the engagement process to be followed.

(Describe the process to be undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings and records of such consultation will be required in the EIA at a later stage).

All persons registered as I&APs and organs of state identified through the scoping phase PPP will be sent invites to attend the Scoping and EIA Phase PPP meeting. The meeting will address specialist findings, focusing on sensitive issues, and provide information on the impact probability and significance. Proposed mitigation measures will also be discussed. The meeting will be recorded and minuted, and the minutes distributed to all attendees and I&APs for comment.

I&APs were and will be notified of the availability of the Scoping Report and EIA and EMP reports and associated Appendices for public review and comment. Electronic copies can be viewed and the timeframe (30 calendar days, which will be extended if significant public holidays occur within this period as per NEMA EIA regulations) for comment. All comments received from the review phase will be incorporated into the issues and response table and incorporated into the Final PPP Report and Final EIA and EMPr for submission to authorities. During the EIA and EMPr phase, if the need is identified to have one-on-one micro consultations, then these will be organised with the relevant I&AP. Upon receipt of an Environmental Authorisation, all registered I&APs will be notified of decision and the appeal process they can follow under NEMA.

2.i.vii.3 Description of the information to be provided to Interested and Affected Parties.

(Information to be provided must include the initial site plan and sufficient detail of the intended operation and the typical impacts of each activity, to enable them to assess what impact the activities will have on them or on the use of their land).

I&APs will have access to any of the project information as per the NEMA and PAIA. They will also be given ample opportunity to comment and provide input on the relevant pieces of information during the S&EIR process.

2.i.viii Description of the tasks that will be undertaken during the Environmental Impact Assessment process

- Public Review of the Draft Scoping Report (30 days);
- Public Engagement and gathering of issues and comments;
- Finalising of the Scoping Report and submission to the DMRE for consideration;
- Undertaking of the specialist studies and risk assessment phase;
- Drafting of the EIA Report, EMPr and IWULA;
- Public Review of the Draft EIA Report and EMPr (30 days) including the IWULA;
- Public Engagement and gathering of issues and comments; and
- Finalisation of the EIA Report and EMPr, submission to the DMRE for decision making.

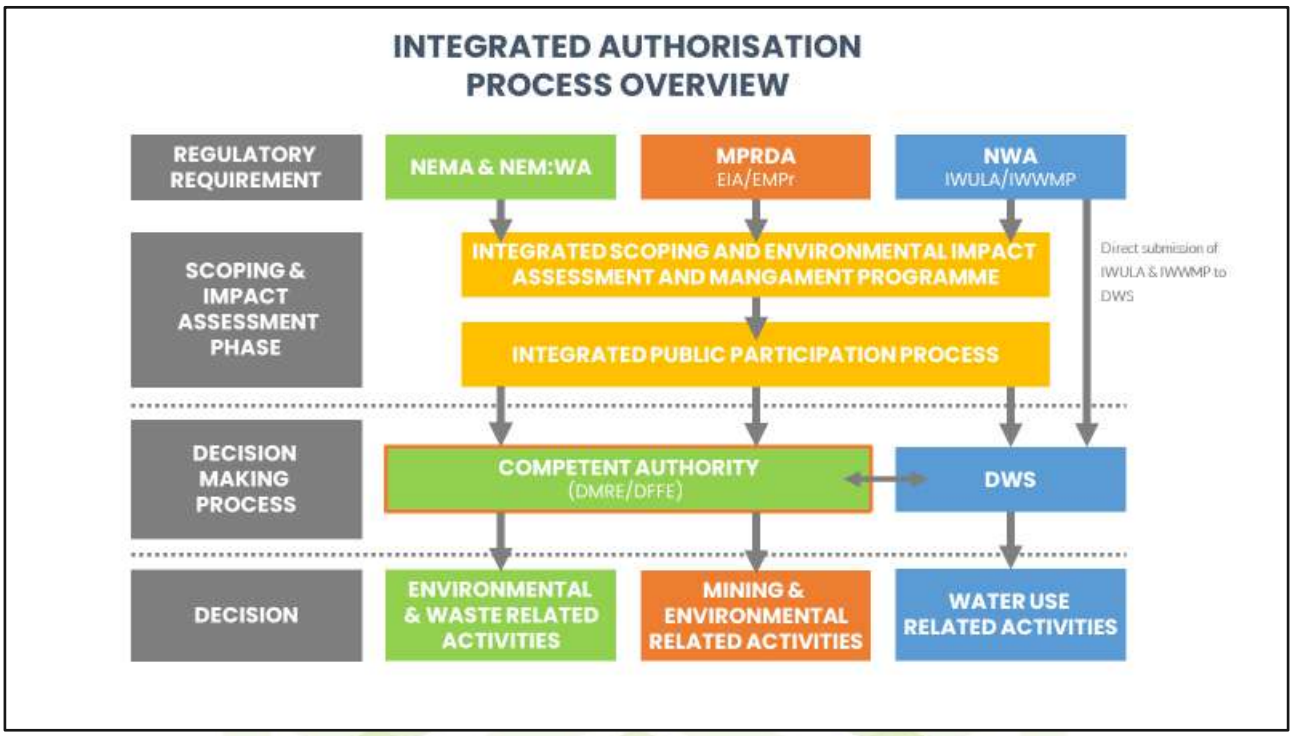


Figure 2-30: Intergrated Authorisation Process Overview

2.i.ix Measures to avoid, reverse, mitigate, or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

- Design the surface and storm water infrastructure to be within the footprint of the project area.
- The water from the underground voids must be pumped out in order to facilitate and ensure safe and effective mining.
- The water from the underground voids must be contained in the PCDs because it is considered polluted. Dirty (polluted) water can therefore not be discharged into the environment, nor be used as potable or irrigation water. As a result, it can only be used on the dirty water areas of the mine, for dust suppression. The area has windy dry seasons, and the mine will require dust suppression on site.
- The stockpiling of potentially acid-generating material (interburden material and RoM coal) is only a temporary measure. This material will be stockpiled on a compacted surface, with adequate surrounding drainage systems that will contain any polluted water arising from these stockpiles. This dirty water will be directed to the PCDs. There is no other option for the handling of this material other than stockpiling temporarily. RoM coal will be loaded and transported after it has been crushed and screened.
- Separate clean from dirty water and allow discharge of clean water to designated clean water areas.
- Vegetate disturbed areas to limit erosion.
- Implement berms, trenches and storm water management measures in accordance with GN 704 Regulations.
- Pollution Control Dams to be designed to cater for the required storage capacity.
- Comply with the National Air Quality Standards and Dust Control Regulations.
- Comply with the SANS noise standard.
- Avoid travelling past residences. Speed limit of 40 km/h will be enforced. Liaise with landowner(s) on areas sensitive to noise. Provide a buffer of 100 m from households.
- Prescribe to the DWS Catchment Water Quality Standards.
- Restrict traveling speed of vehicles to reduce vehicle entrainment of dust. Wet gravel roads if dust is found to be excessive.
- No-go areas to be identified. Environmental awareness training of all employees.
- Preference to be given to the use of local employment, contractors and local suppliers.
- Implement measures to protect soils from pollution.
- Reduce the visual impacts of mining activities.
- Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas.
- Utilise existing access roads as far as possible.

- Access roads to follow slope contours where possible. Vegetation to be left in place at the sides of the road to protect the soils.

2.j OTHER INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

Compliance with the provisions of sections 24(4)(a) and (b) read with section 24 (3) (a) and (7) of the National Environmental Management Act (Act 107 of 1998) the EIA report must include the:

2.j.i Impact on the socio-economic conditions of any directly affected person.

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as Appendix 2.19.1 and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

Section to be populated once the public participation process of the Draft EIA Phase commences.

2.j.ii Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act (NHRA).

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as Appendix 2.19.2 and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

This will be included in the EIA once the Heritage / Archaeological Impact Assessment is concluded. The content thereof will be uploaded on the SAHRIS website for a statutory comment in terms of Section 38(8) of the NHRA once received.

2.k OTHER MATTERS REQUIRED IN TERMS OF SECTIONS 24(4)(A) AND (B) OF THE ACT.

(The EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as Appendix 4).

The site location is limited to the Mining Right Area, which is constrained by the location of other mining houses / operations and residential areas. The resource location and the presence of a watercourse on the site further restrict the infrastructure layout. Therefore, no alternative sites were considered.

2.I UNDERTAKING REGARDING CORRECTNESS OF INFORMATION

I _____herewith undertake that the information provided in the foregoing report is correct, and that the comments and inputs from stakeholders and Interested and Affected parties has been correctly recorded in the report.

_____

Signature of the EAP

_____

DATE

2.m UNDERTAKING REGARDING LEVEL OF AGREEMENT

I _____herewith undertake that the information provided in the foregoing report is correct, and that the level of agreement with Interested and Affected Parties and stakeholders has been correctly recorded and reported herein.

_____

Signature of the EAP

_____

DATE:

ANNEXURES

ANNEXURE 1: EAP CV

ANNEXURE 2: CONCEPTUAL SITE LAYOUT & MAPS

ANNEXURE 3: SCREENING TOOL REPORT

ANNEXURE 4: PUBLIC PARTICIPATION

Environmental Assessment Practitioners Association of South Africa

Registration No. 2021/4135

Herewith certifies that

Johanna Adriana Panaino

is registered as an

Environmental Assessment Practitioner

Registered in accordance with the prescribed criteria of Regulation 15. (1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Effective: 01 March 2023

Expires: 29 February 2024

Chairperson

Registrar

SAQA
SOUTH AFRICAN QUALIFICATIONS AUTHORITY

DIVISIONAL HEAD: ENVIRONMENTAL AUTHORISATIONS

Riana Panaino

ABOUT

With more than 14 years' experience in the environmental consulting industry she has a firm understanding of Environmental Management. She can adapt to a wide range of working environments, has a strong problem-solving ability and work towards team and client satisfaction. Riana has a passion for Environmental Authorisation Processes (Basic Assessments, Environmental Impact Assessments, Monitoring, Environmental Management Plans, Waste Licence Applications, Closure Application and Integrated Water Use License Applications) in terms of the South African legislative regime.

CAREER HISTORY

Environmental Consultant and Divisional Head
Eco Elementum (Pty) Ltd
Pretoria
April 2019 – Present
Role: Environmental Impact Assessments, Water Use Licenses, Waste Applications, Rectification Applications, Stakeholder Engagement, Project Mangement, Specialist Management, Divisional Managment.

Senior Environmental Consultant
GCS
Rivonia
March 2012 – November 2013 and June 2014 – March 2019
Role: Project Management, management and coordination of specialists, compilation of Environmental Impact Assessments, Environmental Waste Licence application. Public Participation, Environmental Management Programs.

Senior Environmental Scientist
Jones and Wagener
Pretoria
December 2013 – May 2014
Role: Project Management, management and coordination of specialists, compilation of Environmental Impact Assessments, Public Participation, Environmental Management Programs.

Wetland Consultant
Golder Associates Africa
Midrand
March 2008 – February 2012
Role: Wetland Delineation, characterisation, PES- EIS- Functional Assessment, Impact identification and determination.

QUALIFICATIONS

BSc Hons (Biodiversity & Conservation)
University of Johannesburg
2007

BSc (Botany and Zoology)
University of Johannesburg
2004 - 2006

Senior Certificate Matric
Hoërskool Westernaria
2003

EXPERTISE AND SKILLS

Skills include, but are not limited to:

- Specialist Co-ordination.
- Project Management.
- Moniting and Compliance.
- Compilation of Environmental Management Plans.

Skills include, but are not limited to:

- Compilation of Environmental Impact Assessment.
- Government Department Liaison.
- Assessment of Wetland Status and Functionality.
- Determination of Wetland Boundaries.

REGISTRATIONS

Professional Registrations

- IAIASA
- South African Council of Natural Science Professionals (SACNASP)

riana@ecoe.co.za | 012 807 0383 | 361 Oberon Ave, Glenfield Office Park, Nika Building, 1st Floor, Faerie Glen, Pretoria, 0081 | www.ecoe.co.za

PROJECT EXPERIENCE

DATE	CLIENT	DESCRIPTION
ENVIRONMENTAL MANAGEMENT AND MONITORING		
2008, 2009, 2010	Matla,Mpumalanga, South Africa	Matla Wetland Monitoring and Management Plan for Matla coal mine. Responsibilities included: weekly site visits and reporting of findings during the construction of the Matla river diversion and assisted in compilation of the wetland management plan.
BIOLOGICAL SCIENCES		
2009	Eskom DPSS, Freestate/KwaZulu Natal, South Africa	Assisted in the capture of fish for genetic sampling to map distribution patterns between two different catchment.
ENVIRONMENTAL IMPACT ASSESSMENT & MANAGEMENT PLANS AND PROGRAMMES		
2020	Trentra Vlaklaagte Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project
2020	Leeuwfontein Section 102 Amendment Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project
2020	Lakeside Section 102 Amendment Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project
2019	Kleinfontein Holdings(Pty) Ltd S102 EMP Amendment to include new portions and remove a discard dump	EMP Report Compilation and review of specialist reports
2019	Yoctolux Investments (Pty) Ltd Mining Right Section 102 EIA/EMPr and wetland rehabilitation application.	EMP Report Compilation and review of wetland rehabilitation plan
2019	Blesboklaagte 102 Amendment Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project
2019	Beryl Colliery Section 102 Amendment Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project
2019	Wildebeestfontein Colliery Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project
2019	Weltevreden Colliery Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project
2019	South32 Klipspruit Prinshof Extension, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project
2016	Exxaro NBC Project	Project Consultant, coordination, BA and EMP report compilation as well as public consultation of the various aspects on this project.
2016	Exxaro Coal Central Eloff Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project.
2015	Exxaro Belfast Project, Mpumalanga, South Africa	Environmental Control Officer
2015	Exxaro Matla Project, Mpumalanga, South Africa	Project Consultant, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project.
2015	Exxaro UCG Project, Limpopo, South Africa	Project Management, coordination and public consultation of the various aspects on this project.
2014	Quantum Crushing and Screening, KwaZulu-Natal, South Africa	Project Management, coordination and BA and EMP report compilation as well as public consultation of the various aspects on this project.
2013	Glencore Rietvly – Northwest, South Africa	Project Management, coordination and BA and EMP report compilation as well as public consultation of the various aspects on this project.
2012	Jacomynspan, Northern Cape, South Africa	Project Management, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project.
2012	Bighorn Substation, Northwest, South Africa	Project assistance, coordination and report compilation as well as public consultation of the various aspects on this project.
2012	Otjozondu, Namibia	Environmental Impact Assessment Report Compilation.
2012	Leeuwpan, Mpumalanga, South Africa	Project Management, coordination and EIA and EMP report compilation as well as public consultation of the various aspects on this project.
2008	Lonmin Akanani, Limpopo, South Africa	Project assistance, coordination and report compilation of the various studies done on this project.

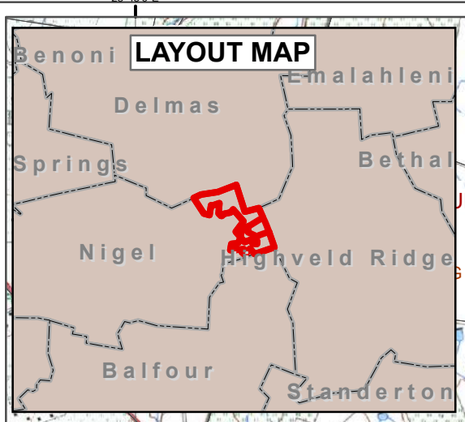
PROJECT EXPERIENCE

ENVIRONMENTAL MANAGEMENT AND MONITORING		
DATE	**CLIENT**	**DESCRIPTION**
	ECOLOGY	
2012	Schoongezicht, Mpumalanga South Africa	Ecological studies with responsibilities that included wetland input for the IWULA. Wetland delineation, classification and characterisation were done on the wetlands found during this study.
2012	Mooiplaats, Mpumalanga South Africa	Ecological studies with responsibilities that included wetland input for the IWULA. Wetland delineation, classification and characterisation were done on the wetlands found during this study.
2011	Kromdraai Pipeline, Mpumalanga, South Africa	Ecological studies with responsibilities that included wetland input for the project EIA. Wetland delineation, classification and characterisation were done on the wetlands found during this study.
2010	New Vaal Life Expansion, Free State, South Africa	Ecological studies with responsibilities that included wetland input for the project EIA. Wetland delineation, classification and characterisation were done on the wetlands found during this study.

YOCTOLUX COLLIERIES (PTY) LTD

MINING RIGHT APPLICATION

Portions 2, 3, 4, 5 and a portion of the remaining extent of Portion 6 of the farm Leeuwkop 299 IR, and Portions 1, 2, 3, 4, 6, 7, 8, 11, 23, 25, 27, and a portion of Portion 14, and the remaining extent of Portions 5, 12 and Portions 21 and 22 of the farm Winterhoek 314 IR, and Portions 17, 18, 56 and the remaining extent of Portion 23 of the farm Nooitgedacht 294 IR, and Portions 7, 8, 18, 19, 25, 26, 31, 33 and 39 of the farm Palmietfontein 316 IR



Co-ordinates Desimal Degree				Co-ordinates WG 29			
A	28.80508 E	-26.30650 S		A	19464.05 Y	2910806.49 X	
B	28.81780 E	-26.34571 S		B	18187.74 Y	2915148.84 X	
C	28.83844 E	-26.34067 S		C	16128.09 Y	2914587.70 X	
D	28.85033 E	-26.36703 S		D	14937.76 Y	2917506.79 X	
E	28.86135 E	-26.39802 S		E	13834.22 Y	2920939.07 X	
F	28.83215 E	-26.40775 S		F	16746.34 Y	2922020.56 X	
G	28.82542 E	-26.39981 S		G	17418.98 Y	2921141.75 X	
H	28.81819 E	-26.40925 S		H	18138.89 Y	2922188.65 X	
J	28.81375 E	-26.40581 S		J	18582.41 Y	2921808.15 X	
K	28.81642 E	-26.40084 S		K	18316.81 Y	2921257.11 X	
L	28.80265 E	-26.40241 S		L	19690.45 Y	2921433.09 X	
M	28.79648 E	-26.40221 S		M	20306.10 Y	2921411.89 X	
N	28.79791 E	-26.39316 S		N	20164.99 Y	2920408.98 X	
P	28.80776 E	-26.39184 S		P	19182.35 Y	2920261.22 X	
Q	28.81172 E	-26.38368 S		Q	18788.53 Y	2919356.56 X	
R	28.81744 E	-26.39042 S		R	18216.67 Y	2920102.49 X	
S	28.82560 E	-26.38729 S		S	17402.90 Y	2919754.58 X	
T	28.82941 E	-26.39261 S		T	17021.93 Y	2920343.50 X	
U	28.83584 E	-26.39307 S		U	16380.26 Y	2920393.63 X	
V	28.83589 E	-26.38926 S		V	16375.81 Y	2919971.50 X	
W	28.83179 E	-26.38492 S		W	16785.55 Y	2919491.18 X	
X	28.83504 E	-26.38368 S		X	16461.41 Y	2919353.37 X	
Y	28.83619 E	-26.38252 S		Y	16346.82 Y	2919224.70 X	
Z	28.82240 E	-26.37613 S		Z	17723.92 Y	2918518.55 X	
A1	28.82294 E	-26.36701 S		A1	17671.41 Y	2917508.04 X	
A2	28.81354 E	-26.37313 S		A2	18608.60 Y	2918187.42 X	
A3	28.81109 E	-26.38294 S		A3	18851.52 Y	2919274.66 X	
A4	28.80462 E	-26.37531 S		A4	19498.45 Y	2918430.27 X	
A5	28.81596 E	-26.35996 S		A5	18369.17 Y	2916727.91 X	
A6	28.80065 E	-26.34262 S		A6	19900.24 Y	2914809.02 X	
A7	28.79698 E	-26.34689 S		A7	20265.86 Y	2915282.68 X	
A8	28.78724 E	-26.34881 S		A8	21237.78 Y	2915496.97 X	
A9	28.78440 E	-26.35202 S		A9	21520.67 Y	2915853.09 X	
A10	28.78269 E	-26.35200 S		A10	21691.36 Y	2915851.16 X	
A11	28.77943 E	-26.34849 S		A11	22017.43 Y	2915462.82 X	
A12	28.78046 E	-26.33342 S		A12	21917.46 Y	2913792.99 X	
A13	28.76949 E	-26.33727 S		A13	23011.87 Y	2914221.45 X	
A14	28.76825 E	-26.33644 S		A14	23135.83 Y	2914129.71 X	
A15	28.76590 E	-26.35086 S		A15	23367.54 Y	2915727.78 X	
A16	28.75773 E	-26.34851 S		A16	24183.55 Y	2915468.92 X	
A17	28.74265 E	-26.32582 S		A17	25693.86 Y	2912957.92 X	
A18	28.75362 E	-26.32064 S		A18	24599.70 Y	2912381.88 X	
A19	28.77819 E	-26.31696 S		A19	22147.21 Y	2911969.71 X	
A	28.80508 E	-26.30650 S		A	19464.05 Y	2910806.49 X	

Mining Right Area

Cadastral boundaries

Magisterial District

VERKLARING 1:50 000 Map Reference REFERENCE

Internasionale Grens en Baken	International Boundary and Beacon
Provinsiale Grens	Provincial Boundary
Wild- en Natuurreservaat en Staatsbosgrens	Game, Nature Reserve & State Forest Boundary
Standhoudende Rivier	Perennial River
Standhoudende Water	Perennial Water
Nie-standhoudende Rivier	Non-perennial River
Nie-standhoudende Water	Non-perennial Water
Droëloop	Dry Water Course
Droë Pan	Dry Pan
Moeras en Vlei	Marsh and Vlei
Pyplyn (bo die grond)	Pipeline (above ground)
Watertoring; Reservoir; Waterpunt	Water Tower; Reservoir; Water Point
Kusfynerotse	Coastal Rocks
Prominente Klipbank	Prominent Rock Outcrop
Erosie; Sand	Erosion; Sand
Beboste Gebied	Woodland
Bewerkte Land	Cultivated Land
Boord of Wingerd	Orchard or Vineyard
Ontspanningsterrein	Recreation Ground
Rye Bome	Row of Trees

The figure lettered A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R, S, T, U, V, W, X, Y, Z, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A represents an area 4681.0320 hectares, comprising of Portions 2, 3, 4, 5 and a portion of the remaining extent of Portion 6 of the farm Leeuwkop 299 IR, and Portions 1, 2, 3, 4, 6, 7, 8, 11, 23, 25, 27, and a portion of Portion 14, and the remaining extent of Portions 5 and 12 and Portions 21 and 22 of the farm Winterhoek 314 IR, and Portions 17, 18, 56 and the remaining extent of Portion 23 of the farm Nooitgedacht 294 IR, and Portions 7, 8, 18, 19, 25, 26, 31, 33 and 39 of the farm Palmietfontein 316 IR, Magisterial District of Nigel, Province of Gauteng, in respect of which Yoctolux Collieries (Pty) Ltd has applied for a Mining Right in terms of Section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), subject to Regulation 17.6 of the Mine Health and Safety Act, 1996 (Act 29 of 1996), excluding areas within the horizontal distance of 100 metres of any river, wetlands, public road, railway, cemetery, residential area or public area, or land reserved by Government

C. Mc Gee - Compiled and Drawn — Date

Yoctolux Collieries (Pty) Ltd — Date

Department of Mineral Resources & Energy.
Regional Manager
Gauteng — Date

LOCALITY PLAN COMPILED IN ACCORDANCE WITH REGULATION 42 OF THE MINING TITLES REGISTRATION ACT, 1967 (ACT 16 OF 1967)

1:50000 map: 2628BC, 2628BD
Map Co-ordinate System: Decimal Degree
Spheroid and Datum: WGS84/WGS84

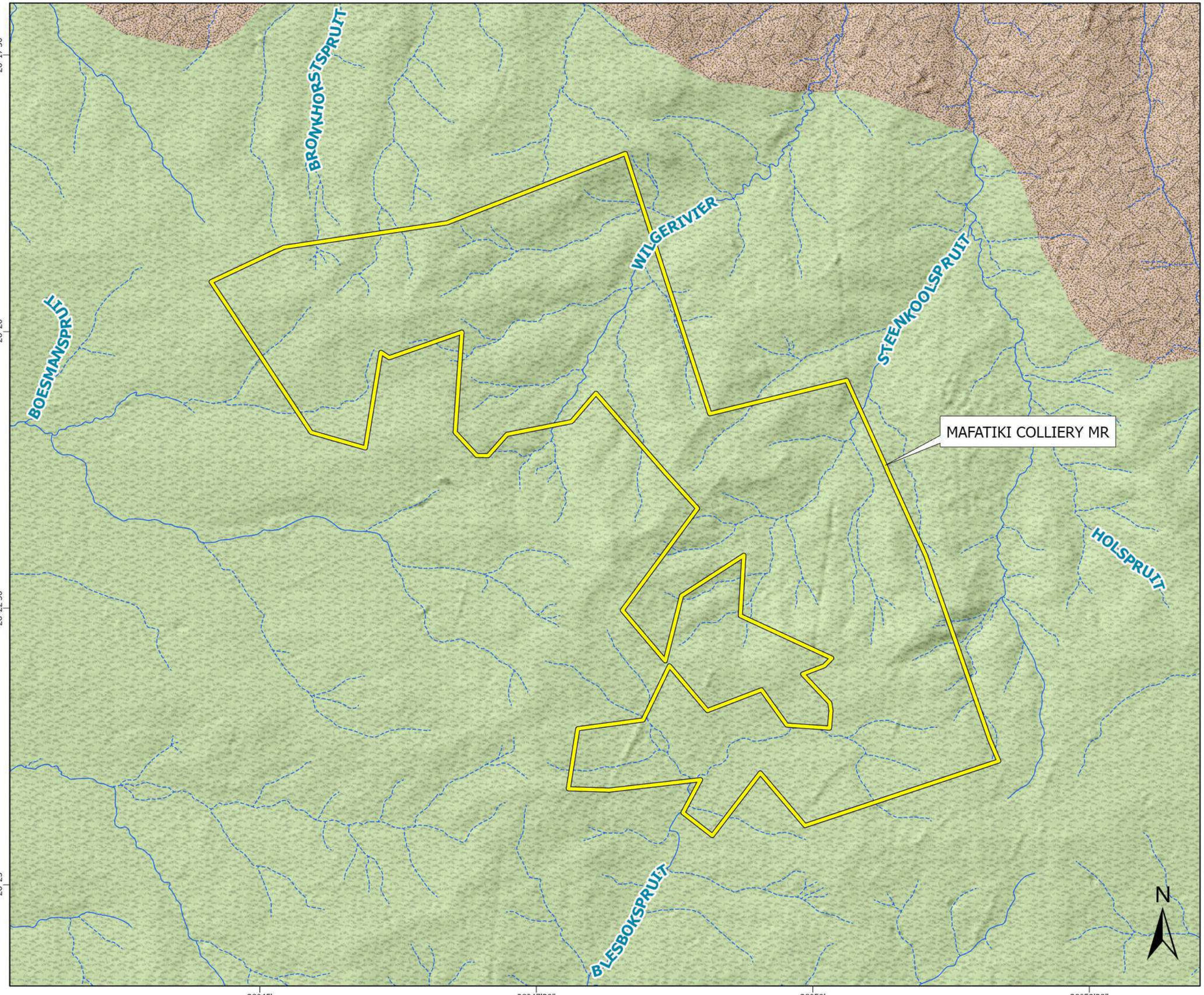
Please take note that the co-ordinates and area were derived from a GIS and registered Surveyor General Diagrams and were not physically surveyed and are therefore an indication of the diagrams

N W E S
1:50,000

0 0.35 0.7 1.4 2.1 2.8 Kilometers

C. Mc Gee - Prof Geographical Information Science Practitioner - GPr GISc1378
Mobile: 082 940 9898; E-mail: blue.700626@gmail.com
Map Ref nr. 23-025

MAFATIKI COLLIERY MR: VEGETATION



Legend

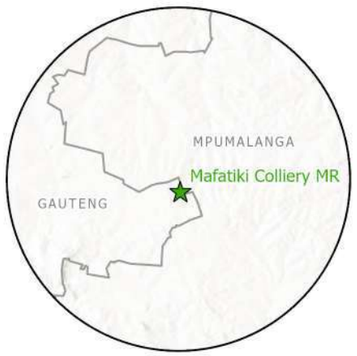
- Mining Right Area

Rivers and Streams

- Perennial River
- Non-Perennial

National Vegetation Type

- Eastern Highveld Grassland
- Soweto Highveld Grassland



0 1 2 Kilometers

Scale: 1:60 000

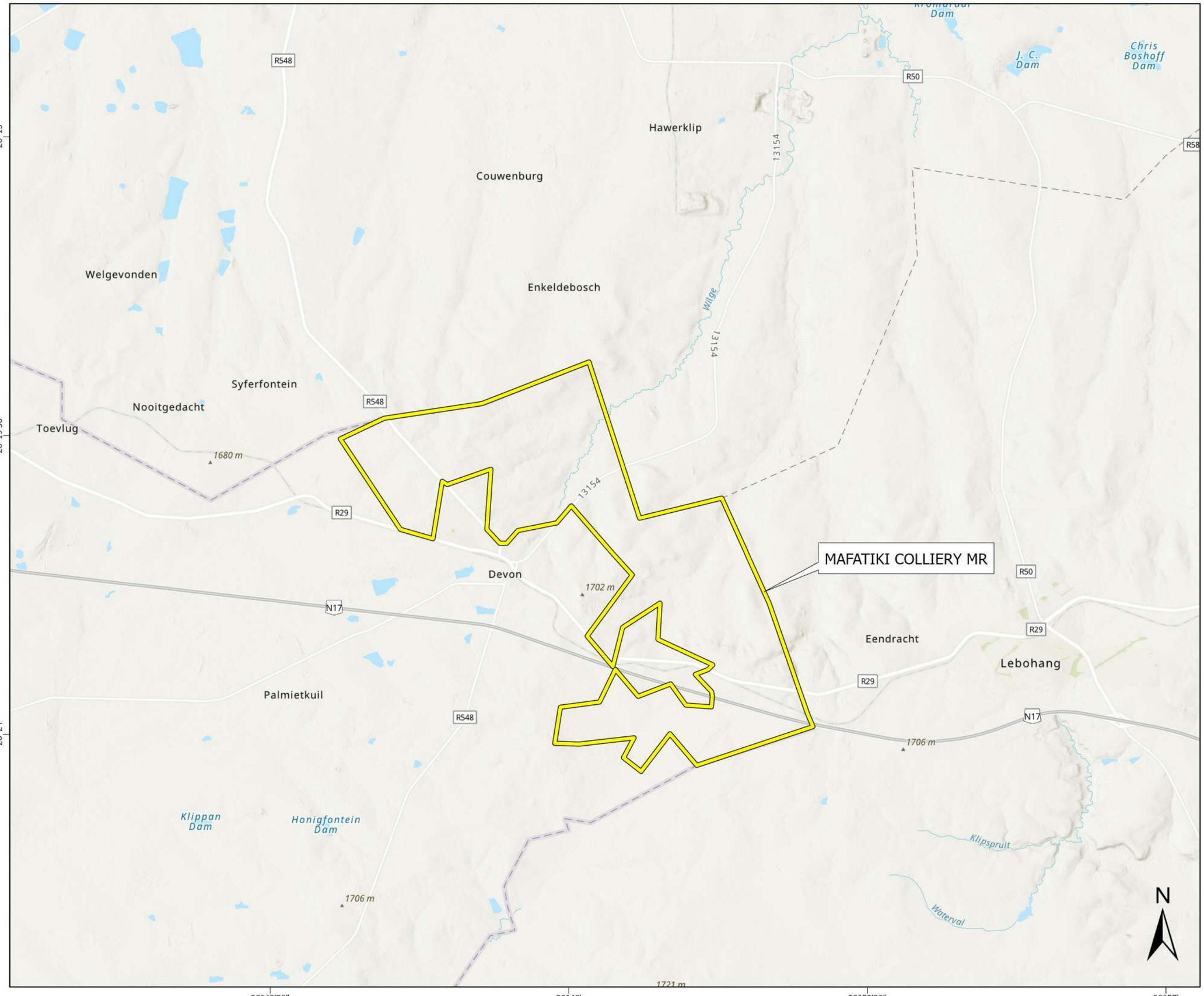
DATA SOURCES:
2018 SANBI NATIONAL VEGETATION TYPE

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

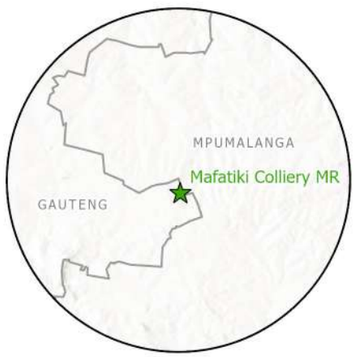
Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: LOCALITY MAP



Legend

Mining Right Area



0 2 4 Kilometers

Scale: 1:100 000

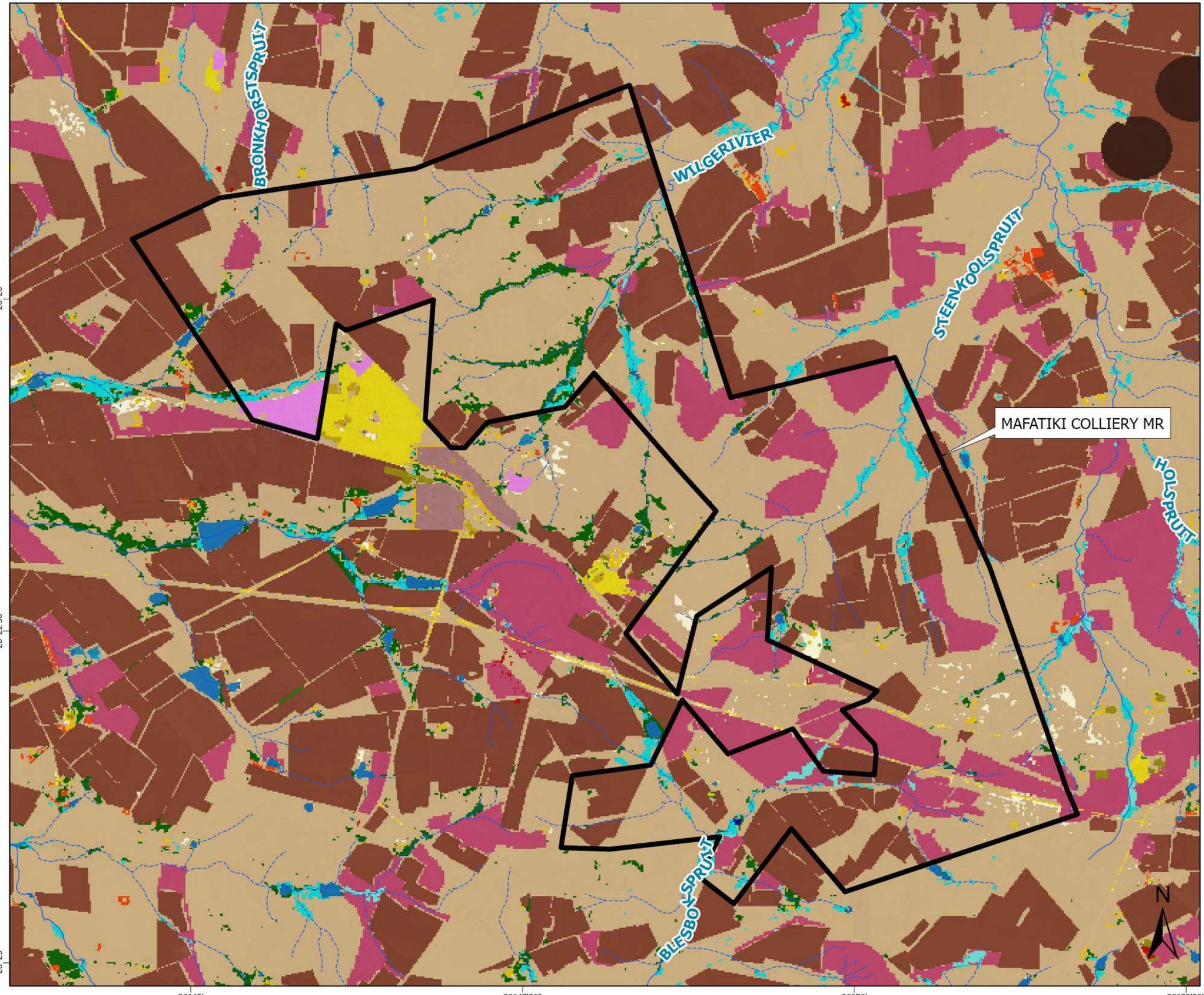
DATA SOURCES:
ESRI WORLD TOPOGRAPHIC BASEMAP

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: LANDCOVER



Legend

- Mining Right Area

Landcover Class

- contiguous low forest & thicket
- dense forest & woodland
- open woodland
- contiguous & dense plantation forest
- open & sparse plantation forest
- sparsely wooded grassland
- natural grassland
- natural rivers
- natural pans (flooded @ observation times)
- artificial dams (including canals)
- artificial flooded mine pits
- herbaceous wetlands
- natural rock surfaces
- dry pans
- bare riverbed material
- other bare
- commercial annual crops pivot irrigated
- commercial annual crops rain-fed / dryland
- fallow land & old fields
- residential formal
- residential informal
- village scattered and dense
- smallholdings
- commercial
- industrial
- roads & rails (major linear)
- mines: extraction pits, quarries
- fallow land & old fields (wetlands)

0 1 2 Kilometers

Scale: 1:50 000

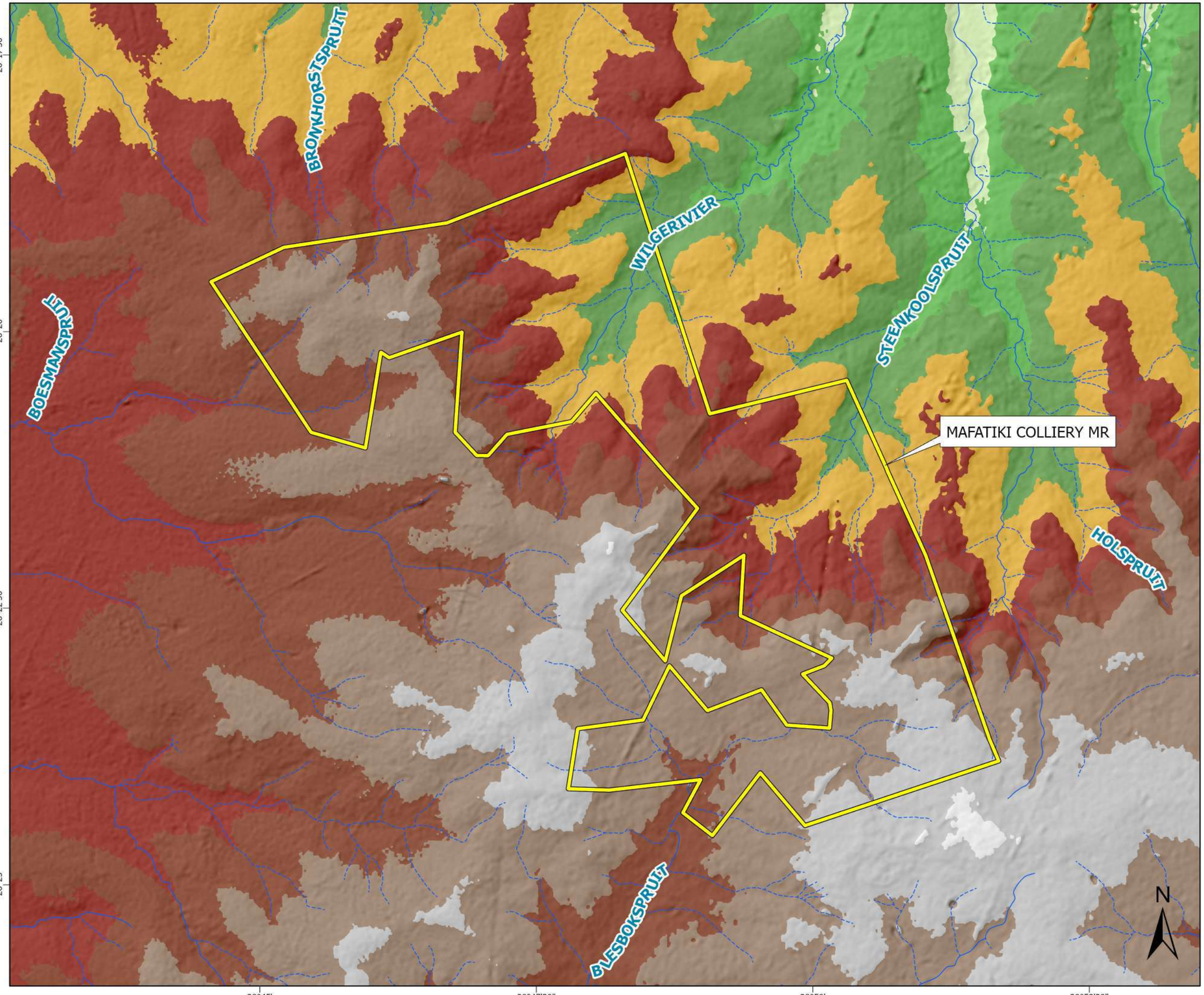
DATA SOURCES:
2020 NATIONAL LANDCOVER DATASET

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: TOPOGRAPHY



Legend

- Mining Right Area

Rivers and Streams

- Perennial River
- Non-Perennial

Elevation (mamsl)

- 1 523 - 1 540
- 1 541 - 1 560
- 1 561 - 1 580
- 1 581 - 1 600
- 1 601 - 1 620
- 1 621 - 1 640
- 1 641 - 1 660
- 1 661 - 1 680
- 1 681 - 1 700
- 1 701 - 1 720

0 1 2 Kilometers

Scale: 1:60 000

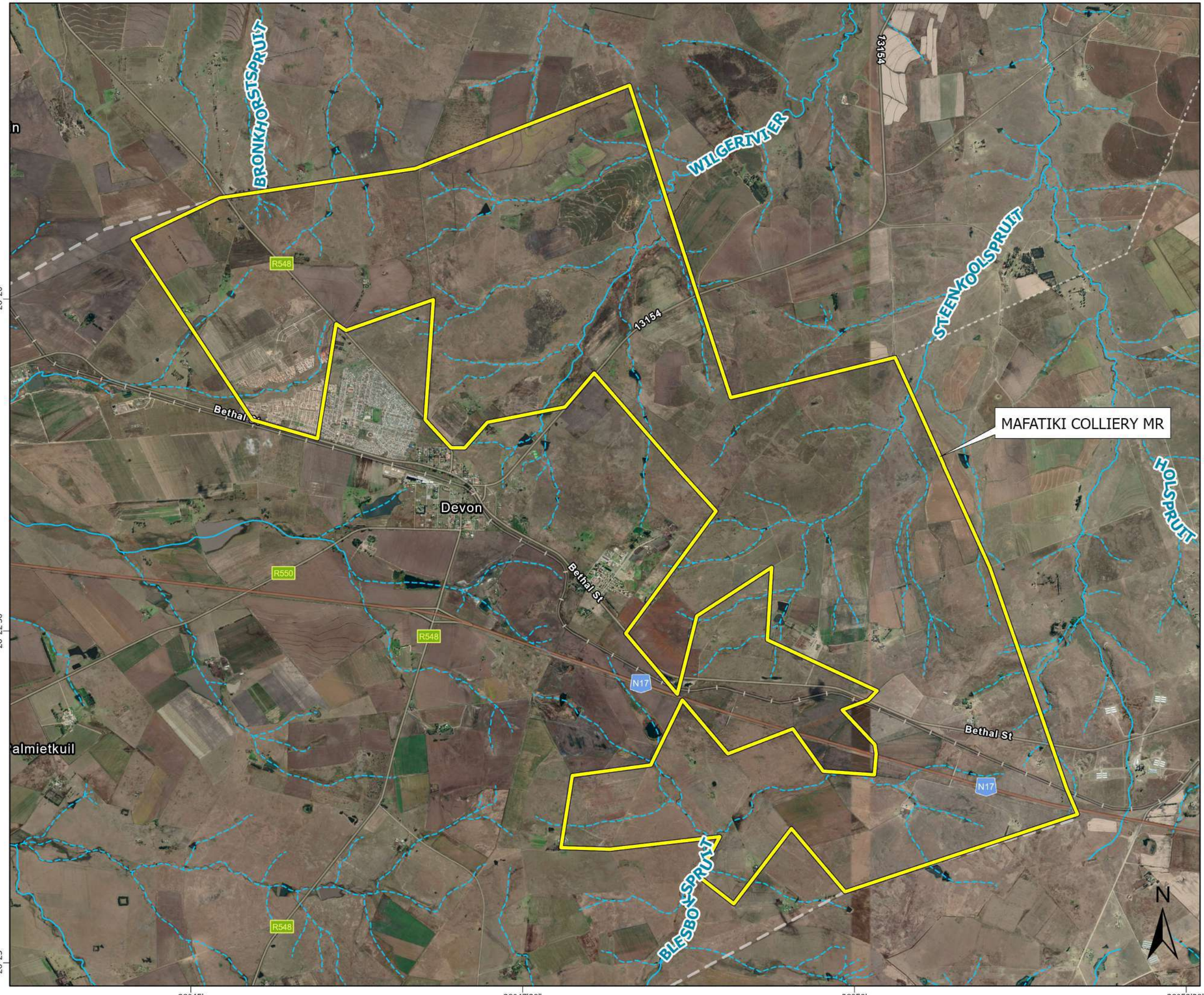
DATA SOURCES:
30 M ALOS DSM

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: AERIAL MAP



Legend

- Mining Right Area

Rivers and Streams

- Perennial River
- Non-Perennial

0 1 2 Kilometers

Scale: 1:50 000

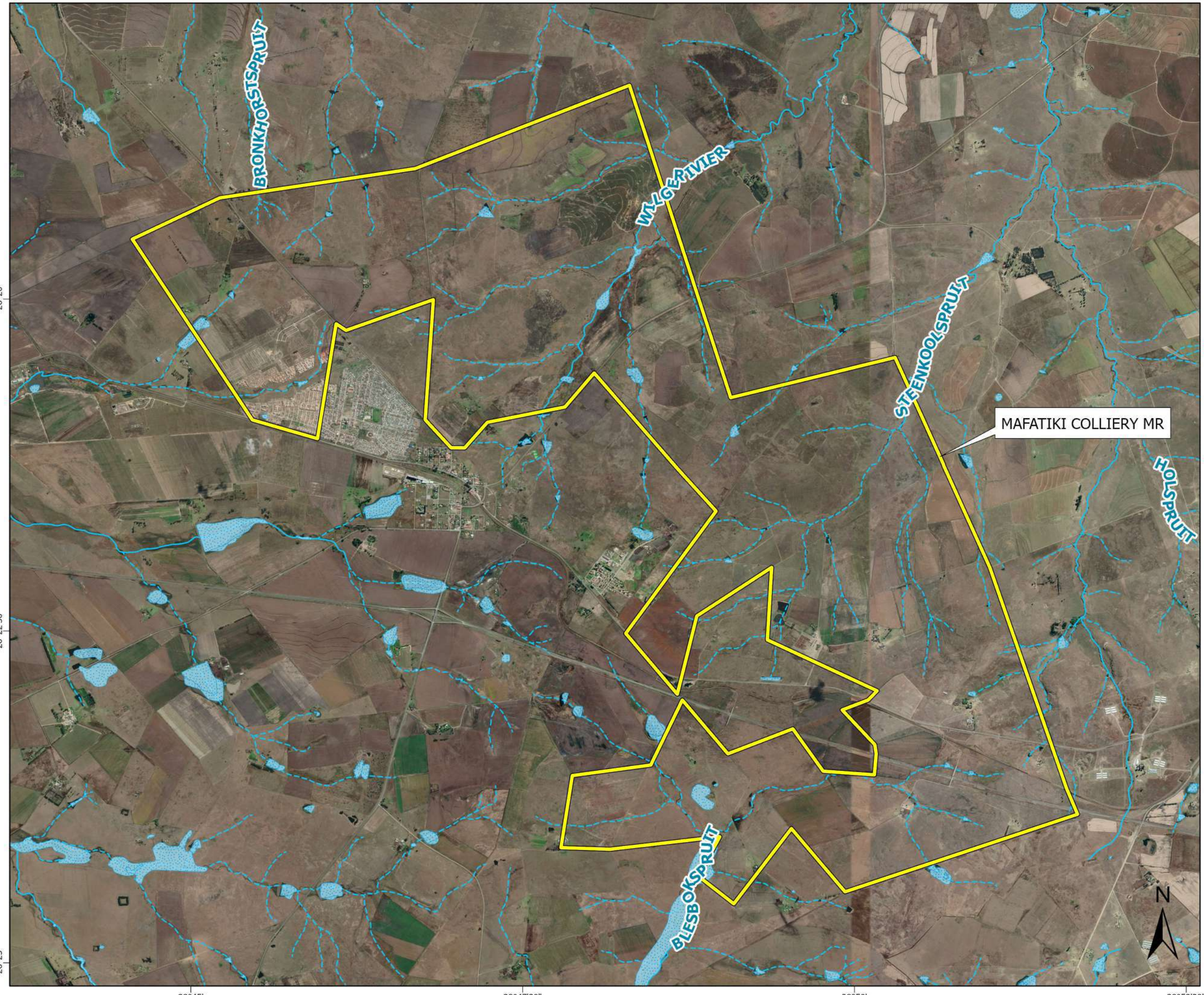
DATA SOURCES:
GOOGLE EARTH™ MAPPING SERVICE: 2023
IMAGERY DATE: 05/02/2022; 05/09/2022; 04/29/2021

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: 2011 NFEPA WETLANDS

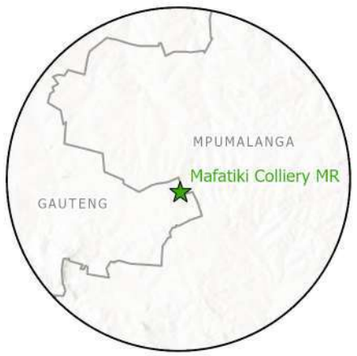


Legend

- NFEPA Wetlands 2011
- Mining Right Area

Rivers and Streams

- Perennial River
- Non-Perennial



0 1 2 Kilometers

Scale: 1:50 000

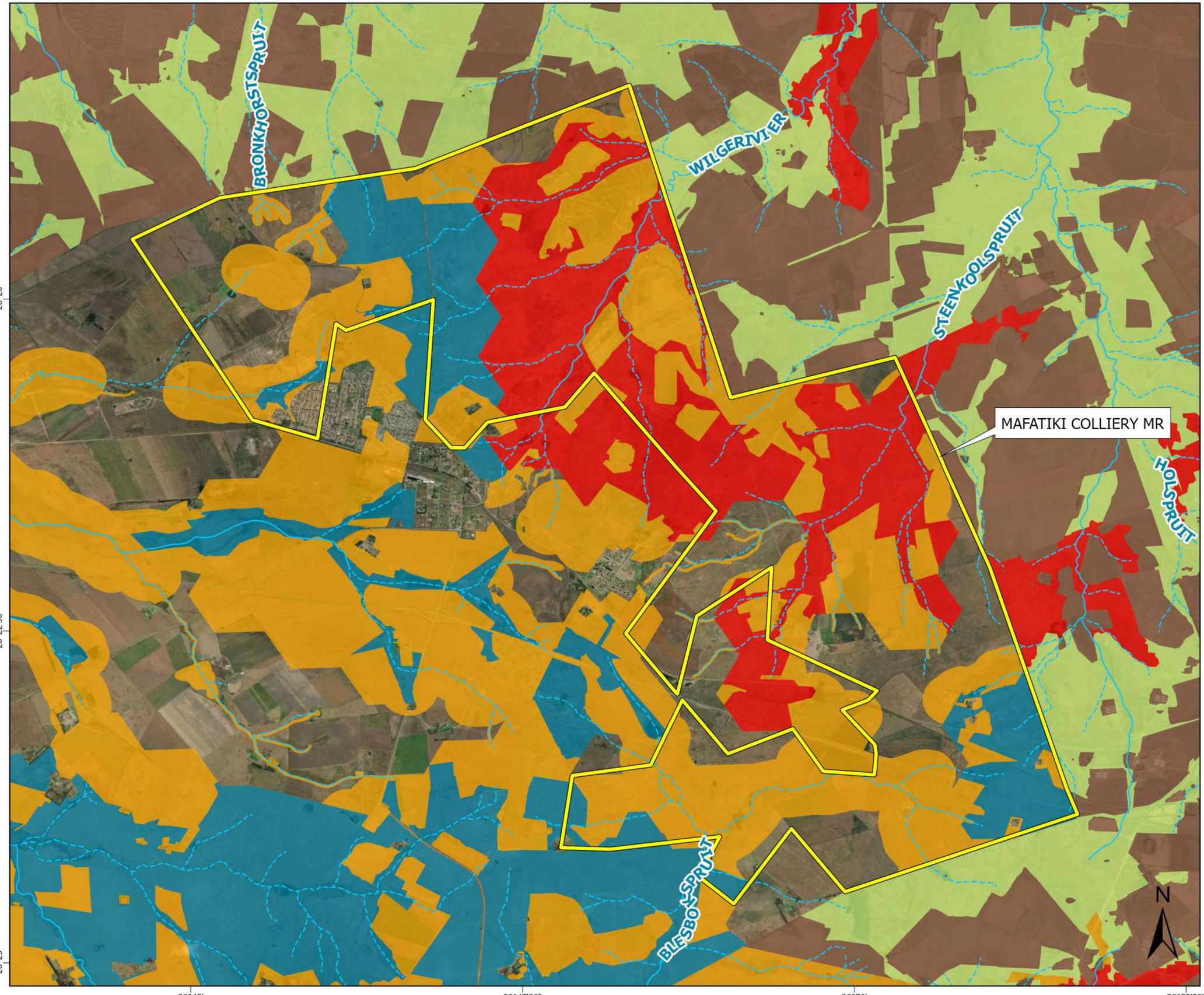
DATA SOURCES:
GOOGLE EARTH™ MAPPING SERVICE: 2023
IMAGERY DATE: 05/02/2022; 05/09/2022; 04/29/2021
2011 NFEPA WETLANDS

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: MANAGEMENT AREAS



Legend

- Mining Right Area

Rivers and Streams

- Perennial River
- Non-Perennial

Gauteng Conservation Plan

- CBA, Important Area
- CBA, Irreplaceable Area
- ESA,Ecological Support Area

Mpumalanga Biodiversity Sector Plan

- Critical Biodiversity Area
- Ecological Support Area
- Heavily or moderately modified
- Other Natural Areas

0 1 2 Kilometers

Scale: 1:50 000

DATA SOURCES:
2019 MPUMALANGA BIODIVERSITY SECTOR PLAN
GDARD GIS DATA – C-PLAN VERSION 3.3 - GAUTENG

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
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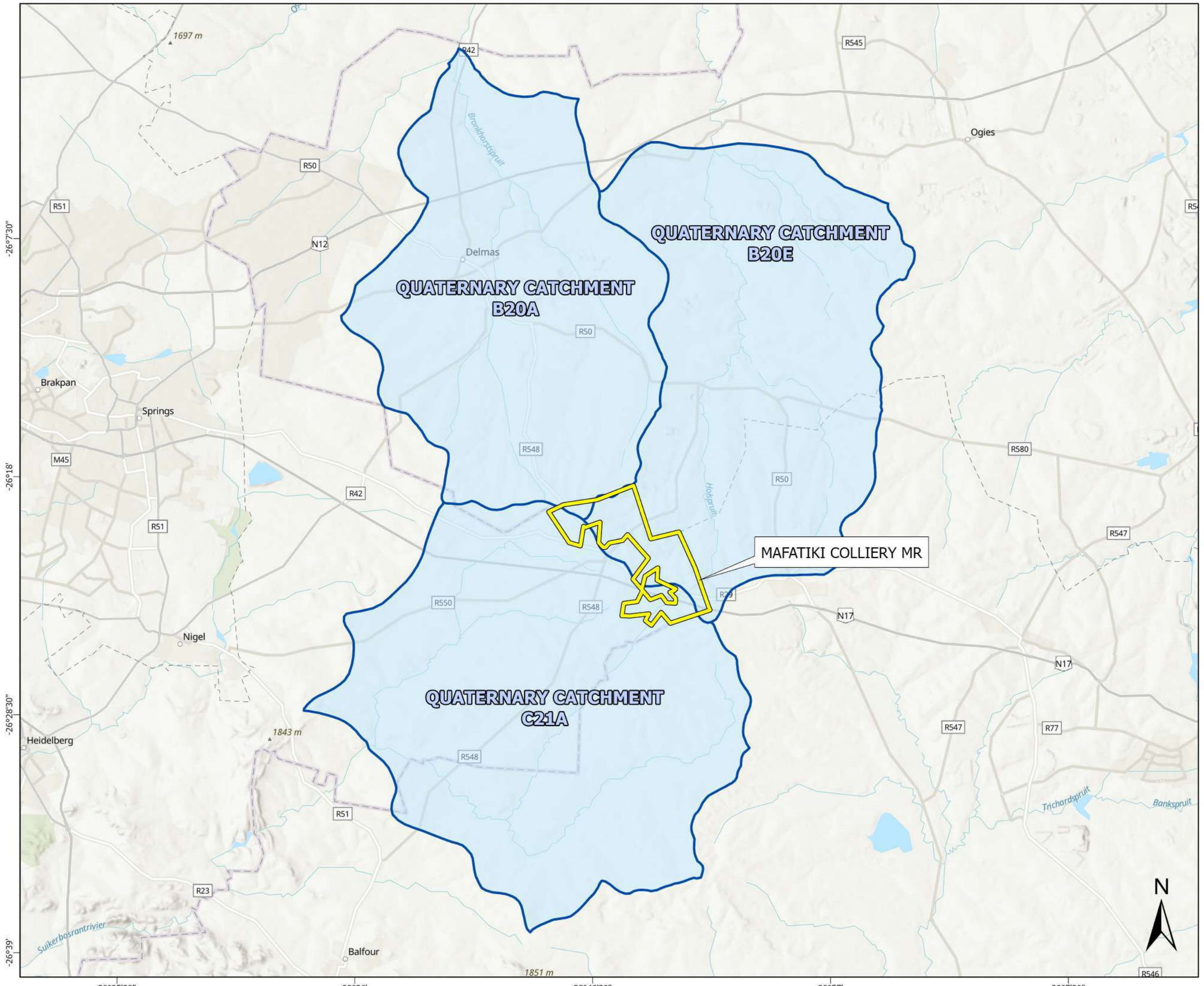
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: QUATERNARY CATCHMENT



Legend

- Mining Right Area
- Quaternary Catchments

0 7.5 15 Kilometers

Scale: 1:290 000

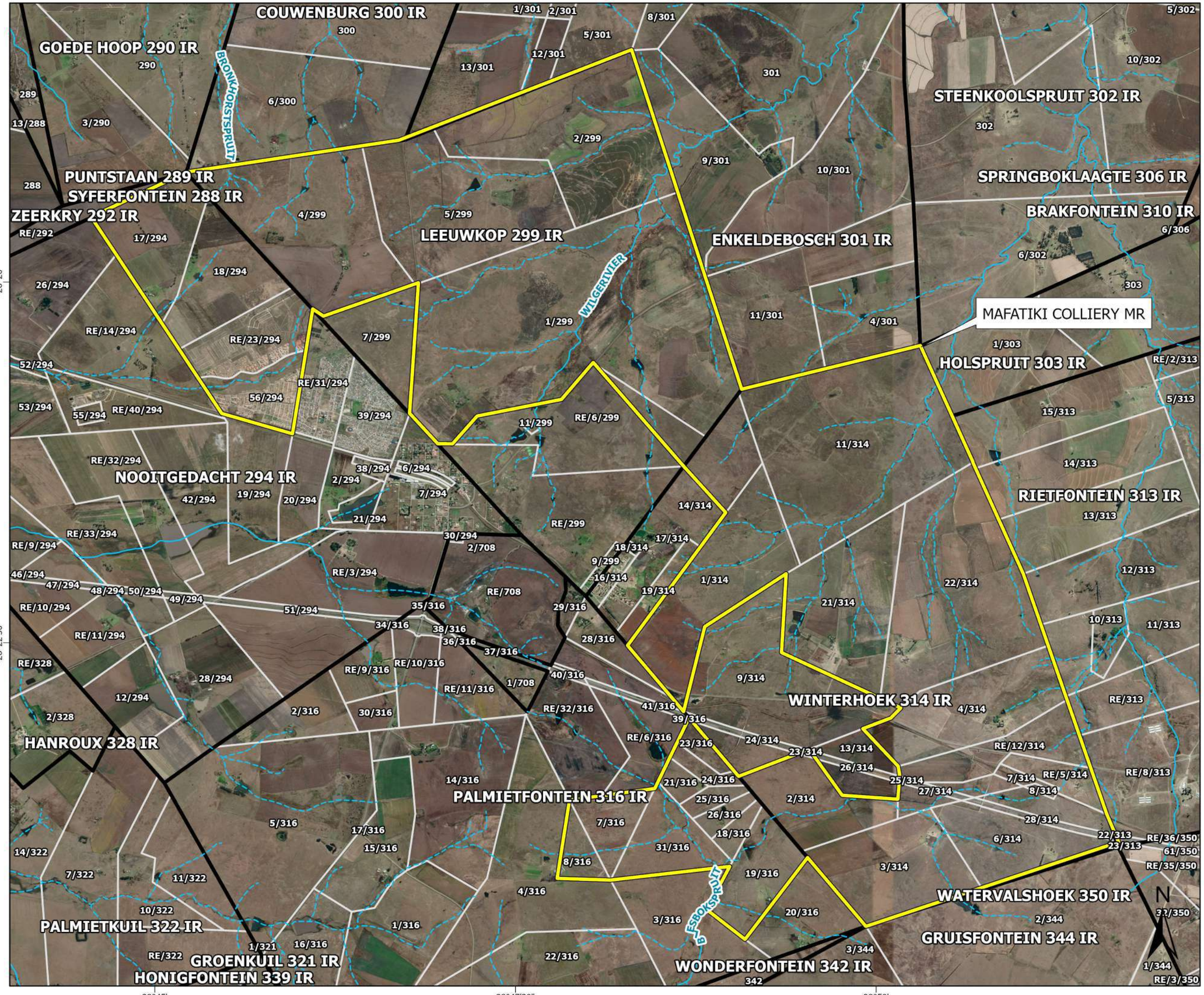
DATA SOURCES:
ESRI WORLD TOPOGRAPHIC BASEMAP
DWAF QUATERNARY CATCHMENTS

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: CADASTRAL MAP



Legend

- Mining Right Area
- Farm Portions
- Parent Farm

Rivers and Streams

- Perennial River
- Non-Perennial

0 1 2 Kilometers

Scale: 1:46 000

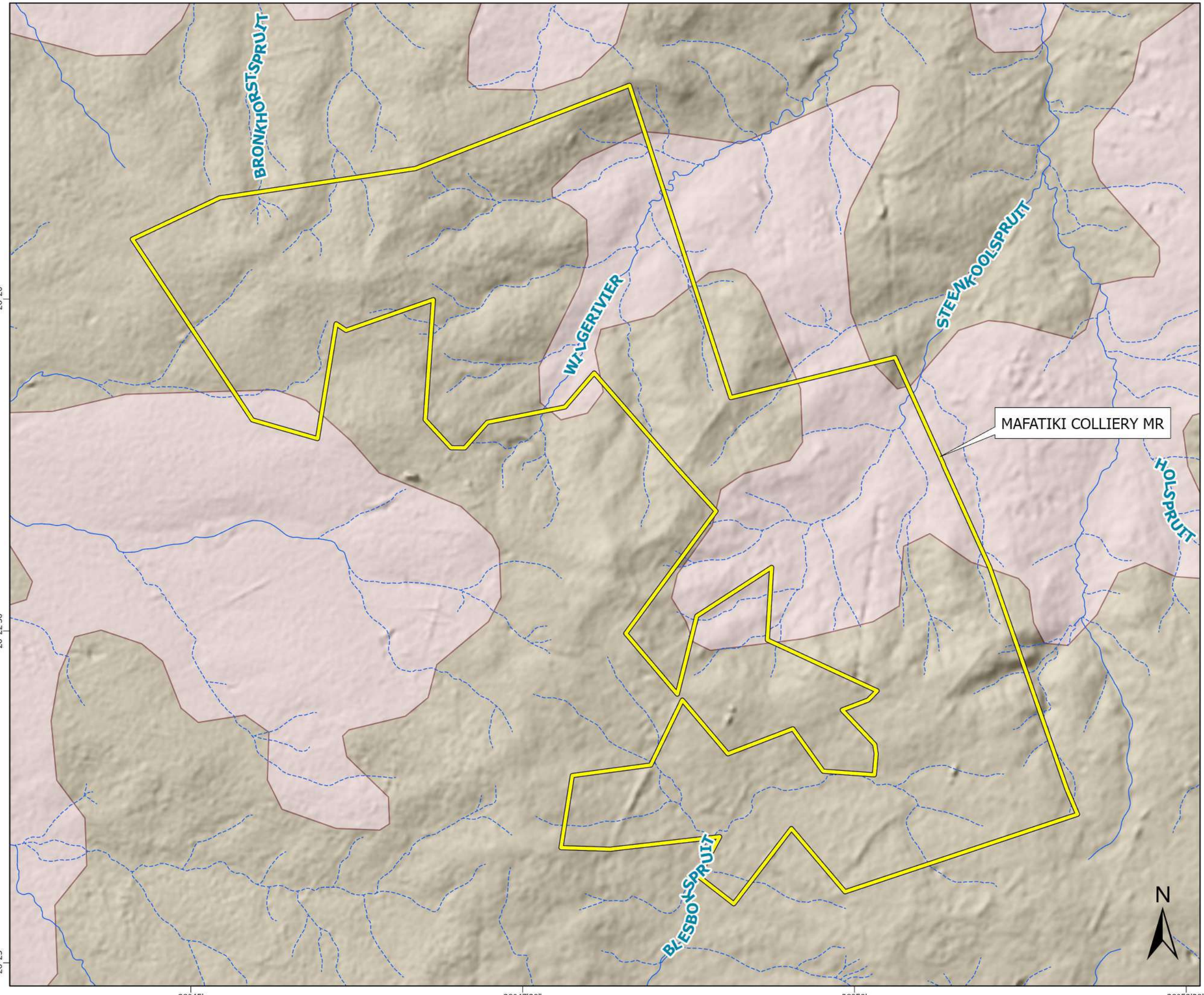
DATA SOURCES:
GOOGLE EARTH™ MAPPING SERVICE: 2023
IMAGERY DATE: 05/02/2022; 05/09/2022; 04/29/2021
2023 CHIEF SURVEYOR GENERAL CADASTRAL DATA

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

MAFATIKI COLLIERY MR: GEOLOGY



Legend

Mining Right Area

Rivers and Streams

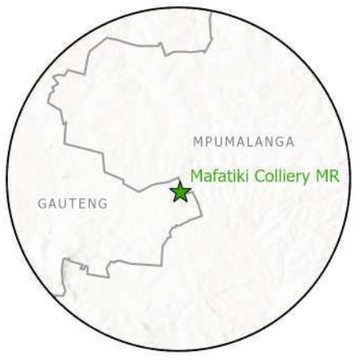
Perennial River

Non-Perennial

Lithology

Fine- to coarse-grained sandstone, shale, coal seams

Network of dolerite sills, sheets and dykes, mainly intrusive into the Karoo Supergroup



0 1 2 Kilometers

Scale: 1:50 000

DATA SOURCES:
RSA 1:1 MILLION GEOLOGY

PROJECTION: GEOGRAPHIC DATUM: WGS84	DATE: 2023/06/06 PN: 22-2095

PROJECT: MAFATIKI COLLIERY MR
CLIENT: YOCTOLUX COLLIERIES (PTY) LTD

Tel: 012 807 0383
Email: info@ecoe.co.za
www.ecoelementum.co.za

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

EIA Reference number: 22-2095

Project name: Mafatiki Leandra MR

Project title: Mafatiki Leandra MR

Date screening report generated: 03/05/2023 15:23:17

Applicant: Yoctolux Collieries (Pty) Ltd

Compiler: Eco Elementum (Pty) Ltd

Compiler signature:

.....

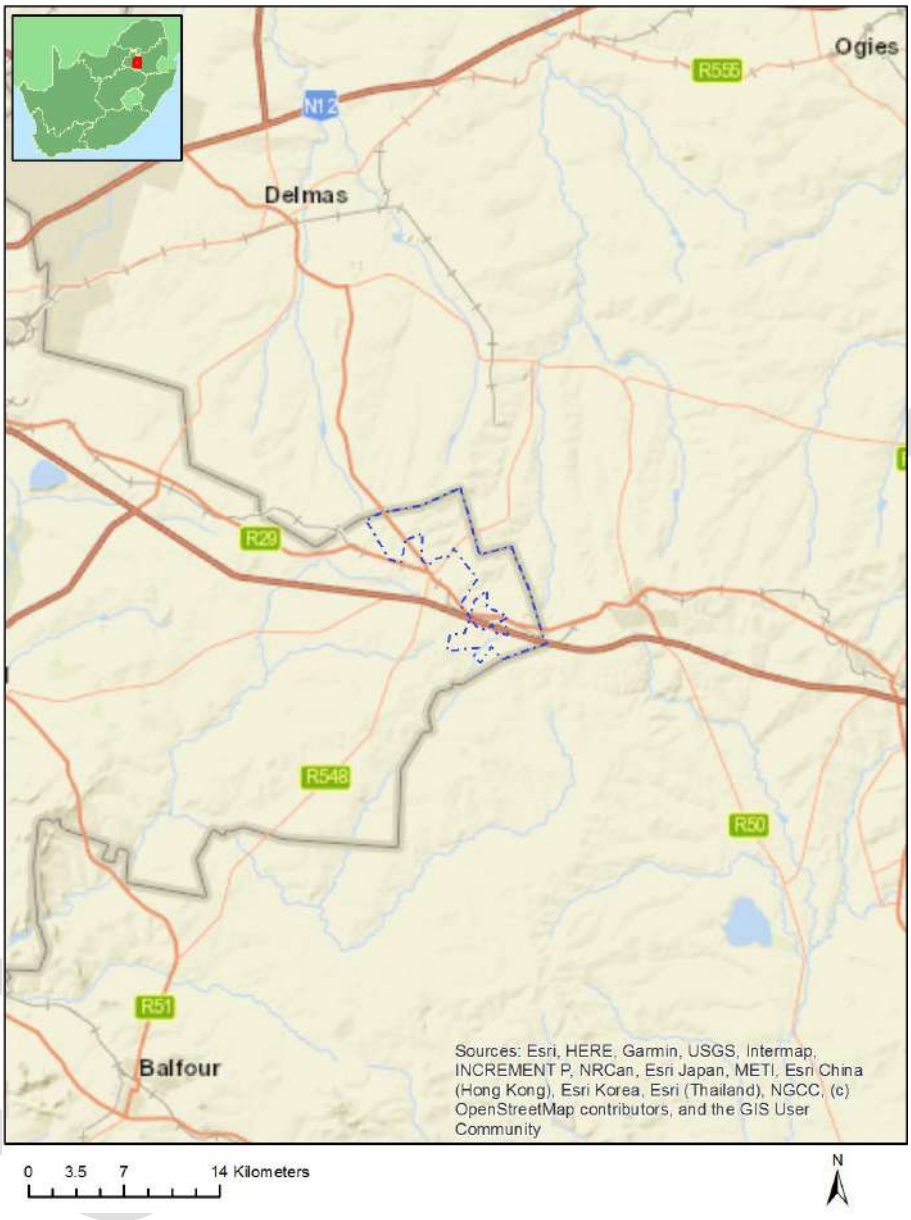
Application Category: Mining|Mining Right

Table of Contents

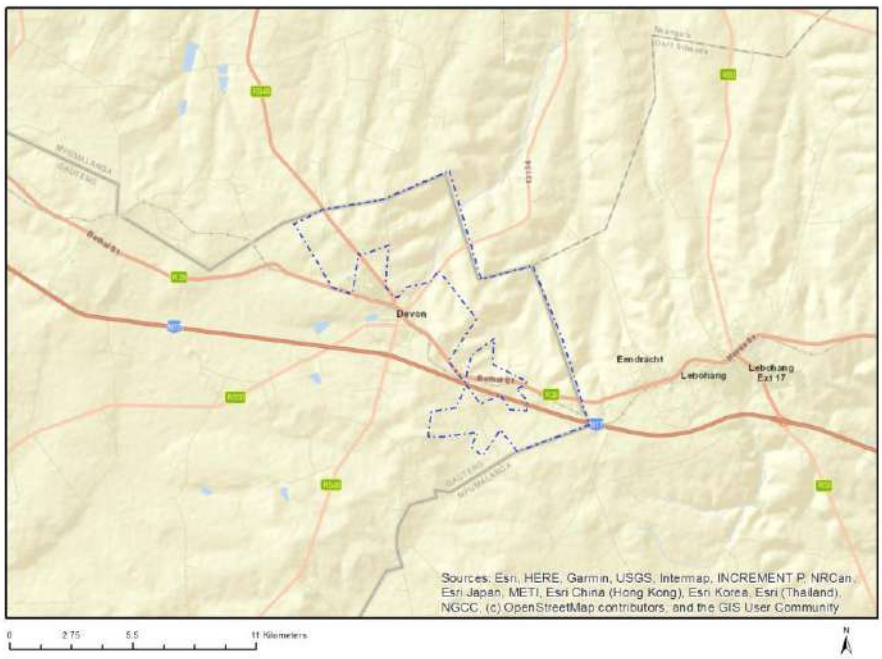
Proposed Project Location

Orientation map 1: General location

General Orientation: Mafatiki Leandra MR



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	IMPUMELELO	2327	0	26°20'52.7S	28°45'35.29E	Erven
2	IMPUMELELO	2336	0	26°20'53.18S	28°45'39.17E	Erven
3	IMPUMELELO	2315	0	26°20'54.32S	28°45'40.75E	Erven
4	IMPUMELELO	2331	0	26°20'52.55S	28°45'36.89E	Erven
5	IMPUMELELO	2334	0	26°20'52.95S	28°45'38.26E	Erven
6	IMPUMELELO	2352	0	26°20'48.34S	28°45'31.24E	Erven
7	IMPUMELELO	2355	0	26°20'49.62S	28°45'31.1E	Erven
8	IMPUMELELO	2364	0	26°20'48.95S	28°45'30.56E	Erven
9	IMPUMELELO	2369	0	26°20'45.58S	28°45'36.85E	Erven
10	IMPUMELELO	2380	0	26°20'45.07S	28°45'42.67E	Erven
11	IMPUMELELO	2400	0	26°20'46.36S	28°45'39.08E	Erven
12	IMPUMELELO	2416	0	26°20'48.93S	28°45'36.36E	Erven
13	IMPUMELELO	2417	0	26°20'48.45S	28°45'36.35E	Erven
14	IMPUMELELO	2419	0	26°20'49.1S	28°45'42.58E	Erven
15	IMPUMELELO	2424	0	26°20'51.41S	28°45'42.2E	Erven
16	IMPUMELELO	2436	0	26°20'49.02S	28°45'41.89E	Erven
17	IMPUMELELO	2448	0	26°20'53.12S	28°45'42.96E	Erven
18	IMPUMELELO	2462	0	26°20'50.85S	28°45'46.1E	Erven
19	IMPUMELELO	2463	0	26°20'51.28S	28°45'46.06E	Erven
20	IMPUMELELO	2471	0	26°20'50.7S	28°45'45.44E	Erven
21	IMPUMELELO	2473	0	26°20'49.85S	28°45'45.55E	Erven
22	IMPUMELELO	2478	0	26°20'41.07S	28°45'51.05E	Erven
23	IMPUMELELO	2484	0	26°20'39.54S	28°45'54.14E	Erven
24	IMPUMELELO	2492	0	26°20'40.62S	28°46'0.58E	Erven
25	IMPUMELELO	2493	0	26°20'41.12S	28°46'0.51E	Erven
26	IMPUMELELO	2500	0	26°20'44.62S	28°45'59.95E	Erven
27	IMPUMELELO	2502	0	26°20'45.47S	28°45'59.78E	Erven

28	IMPUMELELO	2510	0	26°20'42.33S	28°45'59E	Erven
29	IMPUMELELO	2524	0	26°20'46.09S	28°45'57.72E	Erven
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35	IMPUMELELO	2366	0	26°20'47.97S	28°45'30.51E	Erven
36	IMPUMELELO	2368	0	26°20'45.64S	28°45'36.34E	Erven
37	IMPUMELELO	2373	0	26°20'45.27S	28°45'38.86E	Erven
38	IMPUMELELO	2379	0	26°20'45S	28°45'42.08E	Erven
39	IMPUMELELO	2383	0	26°20'45.16S	28°45'44.42E	Erven
40	IMPUMELELO	2388	0	26°20'47.02S	28°45'38.62E	Erven
41	IMPUMELELO	2393	0	26°20'47.37S	28°45'36.1E	Erven
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110	IMPUMELELO	2793	0	26°20'54.68S	28°45'58.28E	Erven
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113	IMPUMELELO	2325	0	26°20'53S	28°45'36.19E	Erven
114	IMPUMELELO	2337	0	26°20'53.3S	28°45'39.59E	Erven
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129	IMPUMELELO	2934	0	26°20'26.12S	28°45'21.79E	Erven
130	IMPUMELELO	2960	0	26°20'22.48S	28°45'28.51E	Erven
131	IMPUMELELO	2964	0	26°20'23.38S	28°45'26.81E	Erven
132	IMPUMELELO	2969	0	26°20'31.95S	28°45'17.82E	Erven
133	IMPUMELELO	2985	0	26°20'33.93S	28°45'17.91E	Erven
134	IMPUMELELO	2987	0	26°20'33.4S	28°45'18.79E	Erven
135	IMPUMELELO	3001	0	26°20'34.18S	28°45'18.68E	Erven
136	IMPUMELELO	3044	0	26°20'30.13S	28°45'21.75E	Erven
137	IMPUMELELO	3068	0	26°20'30.24S	28°45'22.58E	Erven
138	IMPUMELELO	3072	0	26°20'28.64S	28°45'21.55E	Erven
139	IMPUMELELO	3073	0	26°20'28.26S	28°45'21.3E	Erven
140	IMPUMELELO	3075	0	26°20'27.32S	28°45'22E	Erven
141	IMPUMELELO	3102	0	26°20'27.77S	28°45'23.04E	Erven
142	IMPUMELELO	3105	0	26°20'26.47S	28°45'23.55E	Erven
143	IMPUMELELO	3112	0	26°20'29.1S	28°45'25.3E	Erven
144	IMPUMELELO	3132	0	26°20'26.93S	28°45'24.63E	Erven
145	IMPUMELELO	3133	0	26°20'26.55S	28°45'24.37E	Erven
146	IMPUMELELO	2511	0	26°20'42.78S	28°45'58.96E	Erven
147	IMPUMELELO	2521	0	26°20'47.02S	28°45'58.23E	Erven

148	IMPUMELELO	2526	0	26°20'45.25S	28°45'57.85E	Erven
149	IMPUMELELO	2527	0	26°20'44.8S	28°45'57.92E	Erven
150	IMPUMELELO	2533	0	26°20'42.27S	28°45'58.36E	Erven
151	IMPUMELELO	2539	0	26°20'44.24S	28°45'56.86E	Erven
152	IMPUMELELO	2552	0	26°20'44.12S	28°45'56.17E	Erven
153	IMPUMELELO	2554	0	26°20'43.32S	28°45'56.35E	Erven
154	IMPUMELELO	2560	0	26°20'42.73S	28°45'55.24E	Erven
155	IMPUMELELO	2566	0	26°20'45.3S	28°45'54.83E	Erven
156	IMPUMELELO	2576	0	26°20'43.93S	28°45'54.34E	Erven
157	IMPUMELELO	2577	0	26°20'43.48S	28°45'54.41E	Erven
158	IMPUMELELO	2582	0	26°20'41.24S	28°45'53.32E	Erven
159	IMPUMELELO	2587	0	26°20'43.32S	28°45'53.26E	Erven
160	IMPUMELELO	2590	0	26°20'44.59S	28°45'53.06E	Erven
161	IMPUMELELO	2594	0	26°20'46.3S	28°45'52.78E	Erven
162	IMPUMELELO	2599	0	26°20'44.51S	28°45'52.43E	Erven
163	IMPUMELELO	2604	0	26°20'42.4S	28°45'52.75E	Erven
164	IMPUMELELO	2620	0	26°20'44.72S	28°45'50.49E	Erven
165	IMPUMELELO	2622	0	26°20'43.85S	28°45'50.66E	Erven
166	IMPUMELELO	2640	0	26°20'50.64S	28°45'48.27E	Erven
167	IMPUMELELO	2641	0	26°20'51.07S	28°45'48.19E	Erven
168	IMPUMELELO	2648	0	26°20'52.68S	28°45'47.23E	Erven
169	IMPUMELELO	2650	0	26°20'51.85S	28°45'47.4E	Erven
170	IMPUMELELO	2654	0	26°20'50.13S	28°45'47.7E	Erven
171	IMPUMELELO	2665	0	26°20'45.16S	28°45'48.49E	Erven
172	IMPUMELELO	2670	0	26°20'51.29S	28°45'50.13E	Erven
173	IMPUMELELO	2697	0	26°20'54.03S	28°45'51.52E	Erven
174	IMPUMELELO	2703	0	26°20'54.34S	28°45'50.73E	Erven
175	IMPUMELELO	2468	0	26°20'52.05S	28°45'45.2E	Erven
176	IMPUMELELO	2470	0	26°20'51.14S	28°45'45.36E	Erven
177	IMPUMELELO	2480	0	26°20'40.58S	28°45'52.08E	Erven
178	IMPUMELELO	2490	0	26°20'39.64S	28°46'0.77E	Erven
179	IMPUMELELO	2495	0	26°20'42.53S	28°46'0.3E	Erven
180	IMPUMELELO	2506	0	26°20'49.32S	28°45'59.19E	Erven
181	IMPUMELELO	2522	0	26°20'46.94S	28°45'57.61E	Erven
182	IMPUMELELO	2550	0	26°20'45.01S	28°45'56.03E	Erven
183	IMPUMELELO	2551	0	26°20'44.57S	28°45'56.13E	Erven
184	IMPUMELELO	2565	0	26°20'44.85S	28°45'54.91E	Erven
185	IMPUMELELO	2572	0	26°20'45.62S	28°45'54.09E	Erven
186	IMPUMELELO	2575	0	26°20'44.35S	28°45'54.31E	Erven
187	IMPUMELELO	2579	0	26°20'42.65S	28°45'54.55E	Erven
188	IMPUMELELO	2585	0	26°20'42.48S	28°45'53.41E	Erven
189	IMPUMELELO	2595	0	26°20'46.23S	28°45'52.14E	Erven
190	IMPUMELELO	2598	0	26°20'44.95S	28°45'52.36E	Erven
191	IMPUMELELO	2615	0	26°20'45.64S	28°45'51.07E	Erven
192	IMPUMELELO	2617	0	26°20'45.97S	28°45'50.32E	Erven
193	IMPUMELELO	2624	0	26°20'43.01S	28°45'50.78E	Erven
194	IMPUMELELO	2625	0	26°20'42.53S	28°45'50.87E	Erven
195	IMPUMELELO	2626	0	26°20'44.4S	28°45'49.27E	Erven
196	IMPUMELELO	2632	0	26°20'47S	28°45'48.81E	Erven
197	IMPUMELELO	2646	0	26°20'53.27S	28°45'47.85E	Erven
198	IMPUMELELO	2653	0	26°20'50.57S	28°45'47.63E	Erven
199	IMPUMELELO	2658	0	26°20'48.39S	28°45'47.93E	Erven
200	IMPUMELELO	2661	0	26°20'46.94S	28°45'48.19E	Erven
201	IMPUMELELO	2669	0	26°20'50.86S	28°45'50.17E	Erven
202	IMPUMELELO	2672	0	26°20'52.21S	28°45'49.95E	Erven
203	IMPUMELELO	2684	0	26°20'52.57S	28°45'49.25E	Erven
204	IMPUMELELO	2708	0	26°20'51.96S	28°45'51.22E	Erven
205	IMPUMELELO	2721	0	26°20'55.02S	28°45'53.1E	Erven
206	IMPUMELELO	2740	0	26°20'52.89S	28°45'55.46E	Erven
207	IMPUMELELO	2747	0	26°20'56.05S	28°45'54.69E	Erven

208	IMPUMELELO	2762	0	26°20'51.36S	28°45'57.55E	Erven
209	IMPUMELELO	2771	0	26°20'56.11S	28°45'56.81E	Erven
210	IMPUMELELO	2773	0	26°20'57S	28°45'56.59E	Erven
211	IMPUMELELO	2774	0	26°20'56.82S	28°45'55.69E	Erven
212	IMPUMELELO	2784	0	26°20'51.73S	28°45'56.81E	Erven
213	IMPUMELELO	2791	0	26°20'53.8S	28°45'58.39E	Erven
214	IMPUMELELO	2796	0	26°20'56.5S	28°45'58.01E	Erven
215	IMPUMELELO	2800	0	26°20'58.35S	28°45'57.76E	Erven
216	IMPUMELELO	2801	0	26°20'58.81S	28°45'57.64E	Erven
217	IMPUMELELO	2805	0	26°20'57.02S	28°45'52.2E	Erven
218	IMPUMELELO	2808	0	26°20'57.4S	28°45'53.63E	Erven
219	IMPUMELELO	2810	0	26°20'57.68S	28°45'54.62E	Erven
220	IMPUMELELO	2811	0	26°20'57.83S	28°45'55.08E	Erven
221	IMPUMELELO	2830	0	26°20'58.79S	28°45'49.19E	Erven
222	IMPUMELELO	2832	0	26°20'55.37S	28°45'37.57E	Erven
223	IMPUMELELO	2841	0	26°20'49S	28°45'39.45E	Erven
224	IMPUMELELO	2849	0	26°20'49.15S	28°45'57.22E	Erven
225	IMPUMELELO	2855	0	26°20'53.4S	28°45'45.09E	Erven
226	IMPUMELELO	2879	0	26°20'30.87S	28°45'16.64E	Erven
227	IMPUMELELO	2884	0	26°20'30.35S	28°45'15.55E	Erven
228	IMPUMELELO	2893	0	26°20'30.08S	28°45'18.11E	Erven
229	IMPUMELELO	2895	0	26°20'30.76S	28°45'17.87E	Erven
230	IMPUMELELO	2899	0	26°20'29.15S	28°45'16.77E	Erven
231	IMPUMELELO	2902	0	26°20'24.74S	28°45'23.09E	Erven
232	IMPUMELELO	2911	0	26°20'26.71S	28°45'19.45E	Erven
233	IMPUMELELO	2687	0	26°20'51.21S	28°45'49.42E	Erven
234	IMPUMELELO	2688	0	26°20'50.73S	28°45'49.52E	Erven
235	IMPUMELELO	2707	0	26°20'52.48S	28°45'51.13E	Erven
236	IMPUMELELO	2729	0	26°20'53.46S	28°45'52.82E	Erven
237	IMPUMELELO	2742	0	26°20'53.83S	28°45'55.32E	Erven
238	IMPUMELELO	2748	0	26°20'56.48S	28°45'54.51E	Erven
239	IMPUMELELO	2756	0	26°20'53.29S	28°45'54.68E	Erven
240	IMPUMELELO	2763	0	26°20'51.8S	28°45'57.51E	Erven
241	IMPUMELELO	2783	0	26°20'52.13S	28°45'56.74E	Erven
242	IMPUMELELO	2799	0	26°20'57.87S	28°45'57.77E	Erven
243	IMPUMELELO	2802	0	26°20'59.28S	28°45'57.58E	Erven
244	IMPUMELELO	2812	0	26°20'57.97S	28°45'55.57E	Erven
245	IMPUMELELO	2823	0	26°20'57.69S	28°45'52.49E	Erven
246	IMPUMELELO	2833	0	26°20'54.58S	28°45'35.07E	Erven
247	IMPUMELELO	2836	0	26°20'48.01S	28°45'25.73E	Erven
248	IMPUMELELO	2845	0	26°20'44.96S	28°45'46.24E	Erven
249	IMPUMELELO	2856	0	26°20'53.98S	28°45'47.25E	Erven
250	IMPUMELELO	2861	0	26°20'53.18S	28°45'32.04E	Erven
251	IMPUMELELO	2875	0	26°20'29.29S	28°45'15.54E	Erven
252	IMPUMELELO	2883	0	26°20'30.76S	28°45'15.81E	Erven
253	IMPUMELELO	2890	0	26°20'28.86S	28°45'17.32E	Erven
254	IMPUMELELO	2894	0	26°20'30.5S	28°45'18.36E	Erven
255	IMPUMELELO	2903	0	26°20'24.95S	28°45'22.64E	Erven
256	IMPUMELELO	2918	0	26°20'28.75S	28°45'18.55E	Erven
257	IMPUMELELO	2929	0	26°20'27.19S	28°45'19.79E	Erven
258	IMPUMELELO	2944	0	26°20'22.22S	28°45'27.73E	Erven
259	IMPUMELELO	2953	0	26°20'20.89S	28°45'31.35E	Erven
260	IMPUMELELO	2984	0	26°20'32.97S	28°45'17.23E	Erven
261	IMPUMELELO	2319	0	26°20'53.79S	28°45'38.92E	Erven
262	IMPUMELELO	2339	0	26°20'53.57S	28°45'40.5E	Erven
263	IMPUMELELO	2365	0	26°20'48.4S	28°45'30.55E	Erven
264	IMPUMELELO	2367	0	26°20'47.55S	28°45'30.46E	Erven
265	IMPUMELELO	2370	0	26°20'45.52S	28°45'37.35E	Erven
266	IMPUMELELO	2395	0	26°20'46.74S	28°45'36.53E	Erven
267	IMPUMELELO	2409	0	26°20'50.81S	28°45'36.74E	Erven

268	IMPUMELELO	2411	0	26°20'51.08S	28°45'35.92E	Erven
269	IMPUMELELO	2420	0	26°20'49.54S	28°45'42.51E	Erven
270	IMPUMELELO	2429	0	26°20'52.18S	28°45'41.33E	Erven
271	IMPUMELELO	2438	0	26°20'49.3S	28°45'44.38E	Erven
272	IMPUMELELO	2444	0	26°20'51.95S	28°45'43.98E	Erven
273	IMPUMELELO	2449	0	26°20'52.7S	28°45'43.15E	Erven
274	IMPUMELELO	2450	0	26°20'52.26S	28°45'43.27E	Erven
275	IMPUMELELO	2489	0	26°20'38.11S	28°45'56.51E	Erven
276	IMPUMELELO	2494	0	26°20'41.57S	28°46'0.43E	Erven
277	IMPUMELELO	2989	0	26°20'32.93S	28°45'19.74E	Erven
278	IMPUMELELO	2990	0	26°20'32.69S	28°45'20.19E	Erven
279	IMPUMELELO	2991	0	26°20'32.43S	28°45'20.62E	Erven
280	IMPUMELELO	3008	0	26°20'34.12S	28°45'21.15E	Erven
281	IMPUMELELO	3015	0	26°20'34.64S	28°45'21.48E	Erven
282	IMPUMELELO	3026	0	26°20'35.57S	28°45'22.11E	Erven
283	IMPUMELELO	3027	0	26°20'35.32S	28°45'22.55E	Erven
284	IMPUMELELO	3041	0	26°20'28.95S	28°45'20.97E	Erven
285	IMPUMELELO	3050	0	26°20'32.5S	28°45'23.3E	Erven
286	IMPUMELELO	3053	0	26°20'33.65S	28°45'24.12E	Erven
287	IMPUMELELO	3054	0	26°20'34.07S	28°45'24.35E	Erven
288	IMPUMELELO	3056	0	26°20'34.87S	28°45'24.91E	Erven
289	IMPUMELELO	3064	0	26°20'31.8S	28°45'23.63E	Erven
290	IMPUMELELO	3079	0	26°20'28.81S	28°45'23.01E	Erven
291	IMPUMELELO	3081	0	26°20'29.58S	28°45'23.5E	Erven
292	IMPUMELELO	3090	0	26°20'32.27S	28°45'26.02E	Erven
293	IMPUMELELO	3095	0	26°20'30.39S	28°45'24.8E	Erven
294	IMPUMELELO	3107	0	26°20'27.22S	28°45'24.05E	Erven
295	IMPUMELELO	3117	0	26°20'30.97S	28°45'26.54E	Erven
296	IMPUMELELO	3134	0	26°20'26.18S	28°45'24.08E	Erven
297	IMPUMELELO	3135	0	26°20'25.61S	28°45'25.12E	Erven
298	IMPUMELELO	3140	0	26°20'27.51S	28°45'26.35E	Erven
299	IMPUMELELO	3143	0	26°20'28.64S	28°45'27.08E	Erven
300	IMPUMELELO	3146	0	26°20'29.75S	28°45'27.88E	Erven
301	IMPUMELELO	3147	0	26°20'30.13S	28°45'28.1E	Erven
302	IMPUMELELO	3157	0	26°20'27.92S	28°45'27.44E	Erven
303	IMPUMELELO	3158	0	26°20'27.56S	28°45'27.16E	Erven
304	IMPUMELELO	3171	0	26°20'27.07S	28°45'28.15E	Erven
305	IMPUMELELO	3186	0	26°20'27.51S	28°45'29.23E	Erven
306	IMPUMELELO	3197	0	26°20'24.72S	28°45'28.7E	Erven
307	IMPUMELELO	2517	0	26°20'45.31S	28°45'58.54E	Erven
308	IMPUMELELO	2519	0	26°20'46.2S	28°45'58.41E	Erven
309	IMPUMELELO	2525	0	26°20'45.67S	28°45'57.81E	Erven
310	IMPUMELELO	2531	0	26°20'43.12S	28°45'58.22E	Erven
311	IMPUMELELO	2536	0	26°20'42.95S	28°45'57.08E	Erven
312	IMPUMELELO	2546	0	26°20'46.67S	28°45'55.78E	Erven
313	IMPUMELELO	2562	0	26°20'43.58S	28°45'55.12E	Erven
314	IMPUMELELO	2564	0	26°20'44.43S	28°45'54.97E	Erven
315	IMPUMELELO	2567	0	26°20'45.71S	28°45'54.77E	Erven
316	IMPUMELELO	2569	0	26°20'46.58S	28°45'54.63E	Erven
317	IMPUMELELO	2573	0	26°20'45.19S	28°45'54.16E	Erven
318	IMPUMELELO	2596	0	26°20'45.79S	28°45'52.23E	Erven
319	IMPUMELELO	2601	0	26°20'43.69S	28°45'52.54E	Erven
320	IMPUMELELO	2607	0	26°20'42.22S	28°45'51.55E	Erven
321	IMPUMELELO	2608	0	26°20'42.67S	28°45'51.59E	Erven
322	IMPUMELELO	2609	0	26°20'43.11S	28°45'51.48E	Erven
323	IMPUMELELO	2619	0	26°20'45.14S	28°45'50.42E	Erven
324	IMPUMELELO	2621	0	26°20'44.28S	28°45'50.61E	Erven
325	IMPUMELELO	2623	0	26°20'43.44S	28°45'50.74E	Erven
326	IMPUMELELO	2627	0	26°20'44.81S	28°45'49.23E	Erven
327	IMPUMELELO	2636	0	26°20'48.91S	28°45'48.53E	Erven

328	IMPUMELELO	2642	0	26°20'51.48S	28°45'48.11E	Erven
329	IMPUMELELO	2662	0	26°20'46.52S	28°45'48.24E	Erven
330	IMPUMELELO	2673	0	26°20'52.65S	28°45'49.9E	Erven
331	IMPUMELELO	2674	0	26°20'53.11S	28°45'49.82E	Erven
332	IMPUMELELO	2676	0	26°20'54.1S	28°45'49.59E	Erven
333	IMPUMELELO	2678	0	26°20'54.95S	28°45'49.26E	Erven
334	IMPUMELELO	2680	0	26°20'54.31S	28°45'48.79E	Erven
335	IMPUMELELO	2682	0	26°20'53.48S	28°45'49.11E	Erven
336	IMPUMELELO	3213	0	26°20'27.76S	28°45'31.49E	Erven
337	IMPUMELELO	3231	0	26°20'25.35S	28°45'31.29E	Erven
338	IMPUMELELO	3238	0	26°20'27.98S	28°45'33.03E	Erven
339	IMPUMELELO	3242	0	26°20'27.3S	28°45'33.36E	Erven
340	IMPUMELELO	3248	0	26°20'25.06S	28°45'31.83E	Erven
341	IMPUMELELO	3250	0	26°20'24.29S	28°45'31.33E	Erven
342	IMPUMELELO	3251	0	26°20'23.93S	28°45'31.08E	Erven
343	IMPUMELELO	3257	0	26°20'23.06S	28°45'31.89E	Erven
344	IMPUMELELO	3269	0	26°20'27.78S	28°45'35.01E	Erven
345	IMPUMELELO	3289	0	26°20'22.37S	28°45'32.2E	Erven
346	IMPUMELELO	3302	0	26°20'32.22S	28°45'29.68E	Erven
347	IMPUMELELO	3309	0	26°20'33.74S	28°45'26.88E	Erven
348	IMPUMELELO	3364	0	26°20'34.69S	28°45'27.63E	Erven
349	IMPUMELELO	3373	0	26°20'32.5S	28°45'31.73E	Erven
350	IMPUMELELO	3377	0	26°20'31.59S	28°45'33.35E	Erven
351	IMPUMELELO	3380	0	26°20'30.96S	28°45'34.55E	Erven
352	IMPUMELELO	3382	0	26°20'30.52S	28°45'35.36E	Erven
353	IMPUMELELO	3388	0	26°20'29.18S	28°45'37.76E	Erven
354	IMPUMELELO	3400	0	26°20'32.56S	28°45'40.37E	Erven
355	IMPUMELELO	3409	0	26°20'29.98S	28°45'37.67E	Erven
356	IMPUMELELO	3415	0	26°20'31.26S	28°45'35.31E	Erven
357	IMPUMELELO	3420	0	26°20'32.36S	28°45'33.32E	Erven
358	IMPUMELELO	3422	0	26°20'32.8S	28°45'32.49E	Erven
359	IMPUMELELO	3423	0	26°20'32.99S	28°45'32.07E	Erven
360	IMPUMELELO	3429	0	26°20'35.55S	28°45'29.74E	Erven
361	IMPUMELELO	3430	0	26°20'35.77S	28°45'29.31E	Erven
362	IMPUMELELO	3446	0	26°20'34.01S	28°45'33.87E	Erven
363	IMPUMELELO	3454	0	26°20'32.25S	28°45'37.19E	Erven
364	IMPUMELELO	3457	0	26°20'31.53S	28°45'38.39E	Erven
365	IMPUMELELO	3464	0	26°20'32.41S	28°45'35.59E	Erven
366	IMPUMELELO	2320	0	26°20'53.66S	28°45'38.48E	Erven
367	IMPUMELELO	2326	0	26°20'52.87S	28°45'35.73E	Erven
368	IMPUMELELO	2330	0	26°20'52.4S	28°45'36.42E	Erven
369	IMPUMELELO	2350	0	26°20'47.45S	28°45'31.06E	Erven
370	IMPUMELELO	2361	0	26°20'50.25S	28°45'30.12E	Erven
371	IMPUMELELO	2372	0	26°20'45.33S	28°45'38.38E	Erven
372	IMPUMELELO	2375	0	26°20'45.14S	28°45'39.88E	Erven
373	IMPUMELELO	2386	0	26°20'46.9S	28°45'39.65E	Erven
374	IMPUMELELO	2401	0	26°20'46.3S	28°45'39.58E	Erven
375	IMPUMELELO	2406	0	26°20'49.45S	28°45'36.96E	Erven
376	IMPUMELELO	2407	0	26°20'49.87S	28°45'36.89E	Erven
377	IMPUMELELO	2422	0	26°20'50.47S	28°45'42.31E	Erven
378	IMPUMELELO	2427	0	26°20'52.78S	28°45'41.8E	Erven
379	IMPUMELELO	2434	0	26°20'49.94S	28°45'41.8E	Erven
380	IMPUMELELO	2439	0	26°20'49.74S	28°45'44.32E	Erven
381	IMPUMELELO	3467	0	26°20'33.06S	28°45'34.36E	Erven
382	IMPUMELELO	3469	0	26°20'33.54S	28°45'33.54E	Erven
383	IMPUMELELO	3477	0	26°20'37.02S	28°45'30.71E	Erven
384	IMPUMELELO	3480	0	26°20'37.67S	28°45'29.47E	Erven
385	IMPUMELELO	3485	0	26°20'37.71S	28°45'30.64E	Erven
386	IMPUMELELO	3494	0	26°20'35.53S	28°45'34.85E	Erven
387	IMPUMELELO	3509	0	26°20'33.18S	28°45'37.77E	Erven

388	IMPUMELELO	3510	0	26°20'33.41S	28°45'37.39E	Erven
389	IMPUMELELO	3518	0	26°20'35.17S	28°45'34.1E	Erven
390	IMPUMELELO	3520	0	26°20'31.59S	28°45'42.15E	Erven
391	IMPUMELELO	3523	0	26°20'30.45S	28°45'41.34E	Erven
392	IMPUMELELO	3527	0	26°20'28.86S	28°45'40.29E	Erven
393	IMPUMELELO	3535	0	26°20'29.73S	28°45'41.64E	Erven
394	IMPUMELELO	3550	0	26°20'27.06S	28°45'41.84E	Erven
395	IMPUMELELO	3553	0	26°20'26.28S	28°45'43.09E	Erven
396	IMPUMELELO	3570	0	26°20'26.82S	28°45'50.02E	Erven
397	IMPUMELELO	3575	0	26°20'26.35S	28°45'48.94E	Erven
398	IMPUMELELO	3576	0	26°20'25.95S	28°45'48.68E	Erven
399	IMPUMELELO	3582	0	26°20'25.13S	28°45'46.53E	Erven
400	IMPUMELELO	3599	0	26°20'29.69S	28°45'45.48E	Erven
401	IMPUMELELO	3617	0	26°20'26.69S	28°45'47.27E	Erven
402	IMPUMELELO	3643	0	26°20'21.11S	28°45'55.67E	Erven
403	IMPUMELELO	3656	0	26°20'25.15S	28°45'52.62E	Erven
404	IMPUMELELO	3688	0	26°20'21.95S	28°45'52.58E	Erven
405	IMPUMELELO	3710	0	26°20'21.47S	28°45'45.73E	Erven
406	IMPUMELELO	3736	0	26°20'17.5S	28°45'50.39E	Erven
407	IMPUMELELO	3750	0	26°20'18.23S	28°45'50.06E	Erven
408	IMPUMELELO	3761	0	26°20'19.98S	28°45'47.74E	Erven
409	IMPUMELELO	3765	0	26°20'21.46S	28°45'48.76E	Erven
410	IMPUMELELO	3779	0	26°20'19.72S	28°45'49.71E	Erven
411	IMPUMELELO	2348	0	26°20'48.05S	28°45'23.7E	Erven
412	IMPUMELELO	2353	0	26°20'48.73S	28°45'31.28E	Erven
413	IMPUMELELO	2363	0	26°20'49.45S	28°45'30.42E	Erven
414	IMPUMELELO	2374	0	26°20'45.21S	28°45'39.34E	Erven
415	IMPUMELELO	2377	0	26°20'44.98S	28°45'40.92E	Erven
416	IMPUMELELO	2387	0	26°20'46.96S	28°45'39.19E	Erven
417	IMPUMELELO	2391	0	26°20'47.23S	28°45'37.15E	Erven
418	IMPUMELELO	2392	0	26°20'47.28S	28°45'36.64E	Erven
419	IMPUMELELO	2428	0	26°20'52.61S	28°45'41.2E	Erven
420	IMPUMELELO	2432	0	26°20'50.84S	28°45'41.63E	Erven
421	IMPUMELELO	2433	0	26°20'50.39S	28°45'41.71E	Erven
422	IMPUMELELO	2437	0	26°20'48.56S	28°45'42E	Erven
423	IMPUMELELO	2446	0	26°20'52.89S	28°45'43.73E	Erven
424	IMPUMELELO	2451	0	26°20'51.84S	28°45'43.35E	Erven
425	IMPUMELELO	2452	0	26°20'51.42S	28°45'43.44E	Erven
426	IMPUMELELO	2454	0	26°20'50.53S	28°45'43.52E	Erven
427	IMPUMELELO	2465	0	26°20'52.14S	28°45'45.93E	Erven
428	IMPUMELELO	2466	0	26°20'52.67S	28°45'45.83E	Erven
429	IMPUMELELO	2486	0	26°20'38.98S	28°45'55.08E	Erven
430	IMPUMELELO	2488	0	26°20'38.41S	28°45'56.02E	Erven
431	IMPUMELELO	2498	0	26°20'43.78S	28°46'0.14E	Erven
432	IMPUMELELO	2504	0	26°20'46.32S	28°45'59.66E	Erven
433	IMPUMELELO	2505	0	26°20'48.92S	28°45'59.28E	Erven
434	IMPUMELELO	2508	0	26°20'50.14S	28°45'59.06E	Erven
435	IMPUMELELO	2518	0	26°20'45.74S	28°45'58.5E	Erven
436	IMPUMELELO	2530	0	26°20'43.54S	28°45'58.13E	Erven
437	IMPUMELELO	2535	0	26°20'42.54S	28°45'57.16E	Erven
438	IMPUMELELO	2540	0	26°20'44.66S	28°45'56.8E	Erven
439	IMPUMELELO	2556	0	26°20'42.43S	28°45'56.45E	Erven
440	IMPUMELELO	2559	0	26°20'42.33S	28°45'55.3E	Erven
441	IMPUMELELO	2915	0	26°20'27.58S	28°45'17.76E	Erven
442	IMPUMELELO	2921	0	26°20'29.91S	28°45'19.35E	Erven
443	IMPUMELELO	2924	0	26°20'28.78S	28°45'19.4E	Erven
444	IMPUMELELO	2935	0	26°20'25.91S	28°45'22.19E	Erven
445	IMPUMELELO	2942	0	26°20'22.67S	28°45'26.91E	Erven
446	IMPUMELELO	2946	0	26°20'21.76S	28°45'28.58E	Erven
447	IMPUMELELO	2965	0	26°20'23.63S	28°45'26.37E	Erven

448	IMPUMELELO	2992	0	26°20'32.19S	28°45'21.11E	Erven
449	IMPUMELELO	2994	0	26°20'32.41S	28°45'21.83E	Erven
450	IMPUMELELO	3016	0	26°20'34.88S	28°45'21.02E	Erven
451	IMPUMELELO	3019	0	26°20'35.65S	28°45'19.67E	Erven
452	IMPUMELELO	3021	0	26°20'36.83S	28°45'19.82E	Erven
453	IMPUMELELO	3024	0	26°20'36.09S	28°45'21.19E	Erven
454	IMPUMELELO	3025	0	26°20'35.85S	28°45'21.65E	Erven
455	IMPUMELELO	3030	0	26°20'35.37S	28°45'23.81E	Erven
456	IMPUMELELO	3031	0	26°20'35.61S	28°45'23.35E	Erven
457	IMPUMELELO	3032	0	26°20'35.86S	28°45'22.89E	Erven
458	IMPUMELELO	3035	0	26°20'36.6S	28°45'21.56E	Erven
459	IMPUMELELO	3046	0	26°20'30.94S	28°45'22.26E	Erven
460	IMPUMELELO	3052	0	26°20'33.28S	28°45'23.84E	Erven
461	IMPUMELELO	3057	0	26°20'34.57S	28°45'25.44E	Erven
462	IMPUMELELO	3058	0	26°20'34.15S	28°45'25.19E	Erven
463	IMPUMELELO	3078	0	26°20'28.46S	28°45'22.73E	Erven
464	IMPUMELELO	3087	0	26°20'31.82S	28°45'24.97E	Erven
465	IMPUMELELO	3094	0	26°20'30.76S	28°45'25.06E	Erven
466	IMPUMELELO	3100	0	26°20'28.52S	28°45'23.55E	Erven
467	IMPUMELELO	3115	0	26°20'30.24S	28°45'26.06E	Erven
468	IMPUMELELO	3120	0	26°20'31.44S	28°45'27.58E	Erven
469	IMPUMELELO	3121	0	26°20'31.05S	28°45'27.38E	Erven
470	IMPUMELELO	3136	0	26°20'26S	28°45'25.37E	Erven
471	IMPUMELELO	3137	0	26°20'26.39S	28°45'25.6E	Erven
472	IMPUMELELO	3150	0	26°20'30.59S	28°45'29.15E	Erven
473	IMPUMELELO	3162	0	26°20'26.05S	28°45'26.21E	Erven
474	IMPUMELELO	3166	0	26°20'25.17S	28°45'26.93E	Erven
475	IMPUMELELO	3172	0	26°20'27.41S	28°45'28.41E	Erven
476	IMPUMELELO	3182	0	26°20'29S	28°45'30.2E	Erven
477	IMPUMELELO	3188	0	26°20'26.69S	28°45'28.76E	Erven
478	IMPUMELELO	3190	0	26°20'25.96S	28°45'28.22E	Erven
479	IMPUMELELO	3217	0	26°20'26.25S	28°45'30.57E	Erven
480	IMPUMELELO	3221	0	26°20'24.77S	28°45'29.53E	Erven
481	IMPUMELELO	3236	0	26°20'27.24S	28°45'32.53E	Erven
482	IMPUMELELO	3237	0	26°20'27.62S	28°45'32.77E	Erven
483	IMPUMELELO	3286	0	26°20'23.55S	28°45'32.96E	Erven
484	IMPUMELELO	3294	0	26°20'32.75S	28°45'27.29E	Erven
485	IMPUMELELO	3300	0	26°20'31.46S	28°45'29.8E	Erven
486	IMPUMELELO	3304	0	26°20'32.66S	28°45'28.85E	Erven
487	IMPUMELELO	3306	0	26°20'33.11S	28°45'28.07E	Erven
488	IMPUMELELO	3307	0	26°20'33.32S	28°45'27.66E	Erven
489	IMPUMELELO	3324	0	26°20'30.13S	28°45'33.54E	Erven
490	IMPUMELELO	3327	0	26°20'30.77S	28°45'32.35E	Erven
491	IMPUMELELO	3329	0	26°20'31.21S	28°45'31.54E	Erven
492	IMPUMELELO	3335	0	26°20'34.38S	28°45'29.59E	Erven
493	IMPUMELELO	3355	0	26°20'37.38S	28°45'26.57E	Erven
494	IMPUMELELO	3360	0	26°20'35.56S	28°45'26E	Erven
495	IMPUMELELO	3379	0	26°20'31.14S	28°45'34.15E	Erven
496	IMPUMELELO	3389	0	26°20'29.04S	28°45'38.2E	Erven
497	IMPUMELELO	3410	0	26°20'30.17S	28°45'37.29E	Erven
498	IMPUMELELO	3414	0	26°20'31.07S	28°45'35.7E	Erven
499	IMPUMELELO	3436	0	26°20'36.5S	28°45'29.28E	Erven
500	IMPUMELELO	2683	0	26°20'53.01S	28°45'49.16E	Erven
501	IMPUMELELO	2685	0	26°20'52.11S	28°45'49.31E	Erven
502	IMPUMELELO	2699	0	26°20'55.01S	28°45'51.2E	Erven
503	IMPUMELELO	2700	0	26°20'55.44S	28°45'50.97E	Erven
504	IMPUMELELO	2706	0	26°20'52.94S	28°45'51.05E	Erven
505	IMPUMELELO	2710	0	26°20'51.02S	28°45'51.33E	Erven
506	IMPUMELELO	2713	0	26°20'51.3S	28°45'53.8E	Erven
507	IMPUMELELO	2714	0	26°20'51.78S	28°45'53.71E	Erven

508	IMPUMELELO	2719	0	26°20'54S	28°45'53.38E	Erven
509	IMPUMELELO	2725	0	26°20'55.32S	28°45'52.27E	Erven
510	IMPUMELELO	2744	0	26°20'54.73S	28°45'55.16E	Erven
511	IMPUMELELO	2746	0	26°20'55.61S	28°45'54.85E	Erven
512	IMPUMELELO	2754	0	26°20'54.16S	28°45'54.55E	Erven
513	IMPUMELELO	2767	0	26°20'53.52S	28°45'57.25E	Erven
514	IMPUMELELO	2781	0	26°20'53S	28°45'56.61E	Erven
515	IMPUMELELO	2787	0	26°20'51.95S	28°45'58.74E	Erven
516	IMPUMELELO	2795	0	26°20'56.09S	28°45'58.09E	Erven
517	IMPUMELELO	2807	0	26°20'57.28S	28°45'53.17E	Erven
518	IMPUMELELO	2816	0	26°20'58.62S	28°45'55.89E	Erven
519	IMPUMELELO	2819	0	26°20'58.24S	28°45'54.4E	Erven
520	IMPUMELELO	2822	0	26°20'57.84S	28°45'52.96E	Erven
521	IMPUMELELO	2827	0	26°21'0.67S	28°45'55.79E	Erven
522	IMPUMELELO	2828	0	26°20'59.93S	28°45'53.34E	Erven
523	IMPUMELELO	2838	0	26°20'47.98S	28°45'33.63E	Erven
524	IMPUMELELO	2847	0	26°20'40.09S	28°45'58.36E	Erven
525	IMPUMELELO	2853	0	26°20'57.19S	28°45'46.96E	Erven
526	IMPUMELELO	2859	0	26°20'56.68S	28°45'50.12E	Erven
527	IMPUMELELO	2876	0	26°20'29.67S	28°45'15.82E	Erven
528	IMPUMELELO	3782	0	26°20'20.99S	28°45'50.52E	Erven
529	IMPUMELELO	3797	0	26°20'16.42S	28°45'45.81E	Erven
530	IMPUMELELO	3803	0	26°20'15.09S	28°45'48.27E	Erven
531	IMPUMELELO	3806	0	26°20'15.55S	28°45'48.59E	Erven
532	IMPUMELELO	3811	0	26°20'16.74S	28°45'46.5E	Erven
533	IMPUMELELO	3812	0	26°20'16.93S	28°45'46.12E	Erven
534	IMPUMELELO	3814	0	26°20'17.37S	28°45'45.24E	Erven
535	IMPUMELELO	3816	0	26°20'17.96S	28°45'44.56E	Erven
536	IMPUMELELO	3818	0	26°20'18.8S	28°45'44.38E	Erven
537	IMPUMELELO	3827	0	26°20'14.99S	28°45'44.82E	Erven
538	IMPUMELELO	3832	0	26°20'13.87S	28°45'46.86E	Erven
539	IMPUMELELO	3834	0	26°20'13.43S	28°45'47.76E	Erven
540	IMPUMELELO	3854	0	26°20'16.85S	28°45'40.37E	Erven
541	IMPUMELELO	3855	0	26°20'16.44S	28°45'40.42E	Erven
542	IMPUMELELO	3857	0	26°20'15.75S	28°45'40.88E	Erven
543	IMPUMELELO	3862	0	26°20'13.79S	28°45'43.46E	Erven
544	IMPUMELELO	3868	0	26°20'12.46S	28°45'45.96E	Erven
545	IMPUMELELO	3877	0	26°20'13.86S	28°45'44.63E	Erven
546	IMPUMELELO	3898	0	26°20'37.56S	28°45'17.71E	Erven
547	IMPUMELELO	3900	0	26°20'29.54S	28°45'12.37E	Erven
548	IMPUMELELO	3901	0	26°20'25.74S	28°45'16.49E	Erven
549	IMPUMELELO	3902	0	26°20'22.98S	28°45'21.66E	Erven
550	IMPUMELELO	3911	0	26°20'7.94S	28°45'57.71E	Erven
551	IMPUMELELO	2901	0	26°20'28.33S	28°45'16.25E	Erven
552	IMPUMELELO	2906	0	26°20'25.6S	28°45'21.44E	Erven
553	IMPUMELELO	2920	0	26°20'29.47S	28°45'19.08E	Erven
554	IMPUMELELO	2928	0	26°20'27.41S	28°45'19.39E	Erven
555	IMPUMELELO	2932	0	26°20'26.53S	28°45'20.98E	Erven
556	IMPUMELELO	2939	0	26°20'23.37S	28°45'25.67E	Erven
557	IMPUMELELO	2951	0	26°20'20.63S	28°45'30.63E	Erven
558	IMPUMELELO	2958	0	26°20'22.04S	28°45'29.33E	Erven
559	IMPUMELELO	2963	0	26°20'23.19S	28°45'27.25E	Erven
560	IMPUMELELO	2976	0	26°20'31S	28°45'20.89E	Erven
561	IMPUMELELO	2979	0	26°20'31.77S	28°45'19.54E	Erven
562	IMPUMELELO	2993	0	26°20'31.97S	28°45'21.55E	Erven
563	IMPUMELELO	2997	0	26°20'33.22S	28°45'20.48E	Erven
564	IMPUMELELO	2998	0	26°20'33.44S	28°45'20.06E	Erven
565	IMPUMELELO	3038	0	26°20'37.31S	28°45'20.13E	Erven
566	IMPUMELELO	3039	0	26°20'28.13S	28°45'20.47E	Erven
567	IMPUMELELO	3040	0	26°20'28.57S	28°45'20.7E	Erven

568	IMPUMELELO	3043	0	26°20'29.73S	28°45'21.51E	Erven
569	IMPUMELELO	3049	0	26°20'32.12S	28°45'23.06E	Erven
570	IMPUMELELO	3055	0	26°20'34.46S	28°45'24.63E	Erven
571	IMPUMELELO	3061	0	26°20'32.97S	28°45'24.42E	Erven
572	IMPUMELELO	3066	0	26°20'31.01S	28°45'23.11E	Erven
573	IMPUMELELO	3074	0	26°20'27.89S	28°45'20.98E	Erven
574	IMPUMELELO	3097	0	26°20'29.64S	28°45'24.29E	Erven
575	IMPUMELELO	3099	0	26°20'28.89S	28°45'23.8E	Erven
576	IMPUMELELO	3104	0	26°20'27.02S	28°45'22.54E	Erven
577	IMPUMELELO	3108	0	26°20'27.59S	28°45'24.31E	Erven
578	IMPUMELELO	3109	0	26°20'27.99S	28°45'24.54E	Erven
579	IMPUMELELO	3110	0	26°20'28.35S	28°45'24.79E	Erven
580	IMPUMELELO	2563	0	26°20'44.01S	28°45'55.07E	Erven
581	IMPUMELELO	2568	0	26°20'46.12S	28°45'54.7E	Erven
582	IMPUMELELO	2570	0	26°20'46.49S	28°45'53.96E	Erven
583	IMPUMELELO	2584	0	26°20'42.06S	28°45'53.46E	Erven
584	IMPUMELELO	2591	0	26°20'45.03S	28°45'52.98E	Erven
585	IMPUMELELO	2603	0	26°20'42.84S	28°45'52.69E	Erven
586	IMPUMELELO	2610	0	26°20'43.52S	28°45'51.37E	Erven
587	IMPUMELELO	2611	0	26°20'43.96S	28°45'51.32E	Erven
588	IMPUMELELO	2613	0	26°20'44.79S	28°45'51.18E	Erven
589	IMPUMELELO	2618	0	26°20'45.55S	28°45'50.37E	Erven
590	IMPUMELELO	2634	0	26°20'47.96S	28°45'48.7E	Erven
591	IMPUMELELO	2637	0	26°20'49.36S	28°45'48.46E	Erven
592	IMPUMELELO	2643	0	26°20'51.92S	28°45'48.05E	Erven
593	IMPUMELELO	2644	0	26°20'52.34S	28°45'47.98E	Erven
594	IMPUMELELO	2647	0	26°20'53.12S	28°45'47.18E	Erven
595	IMPUMELELO	2651	0	26°20'51.43S	28°45'47.47E	Erven
596	IMPUMELELO	2657	0	26°20'48.84S	28°45'47.91E	Erven
597	IMPUMELELO	2667	0	26°20'44.28S	28°45'48.61E	Erven
598	IMPUMELELO	2691	0	26°20'51.07S	28°45'52.02E	Erven
599	IMPUMELELO	2702	0	26°20'54.78S	28°45'50.53E	Erven
600	IMPUMELELO	2722	0	26°20'55.48S	28°45'52.98E	Erven
601	IMPUMELELO	2730	0	26°20'53S	28°45'52.9E	Erven
602	IMPUMELELO	2734	0	26°20'51.22S	28°45'53.17E	Erven
603	IMPUMELELO	2751	0	26°20'55.48S	28°45'54.17E	Erven
604	IMPUMELELO	2755	0	26°20'53.73S	28°45'54.64E	Erven
605	IMPUMELELO	2757	0	26°20'52.85S	28°45'54.75E	Erven
606	IMPUMELELO	2758	0	26°20'52.38S	28°45'54.82E	Erven
607	IMPUMELELO	2779	0	26°20'53.88S	28°45'56.5E	Erven
608	IMPUMELELO	2780	0	26°20'53.42S	28°45'56.54E	Erven
609	IMPUMELELO	2788	0	26°20'52.4S	28°45'58.67E	Erven
610	IMPUMELELO	2441	0	26°20'50.59S	28°45'44.18E	Erven
611	IMPUMELELO	2442	0	26°20'51.04S	28°45'44.12E	Erven
612	IMPUMELELO	2457	0	26°20'49.21S	28°45'43.77E	Erven
613	IMPUMELELO	2459	0	26°20'49.54S	28°45'46.37E	Erven
614	IMPUMELELO	2467	0	26°20'52.52S	28°45'45.13E	Erven
615	IMPUMELELO	2469	0	26°20'51.61S	28°45'45.28E	Erven
616	IMPUMELELO	2481	0	26°20'40.36S	28°45'52.6E	Erven
617	IMPUMELELO	2487	0	26°20'38.69S	28°45'55.57E	Erven
618	IMPUMELELO	2491	0	26°20'40.14S	28°46'0.65E	Erven
619	IMPUMELELO	2501	0	26°20'45.05S	28°45'59.88E	Erven
620	IMPUMELELO	2512	0	26°20'43.19S	28°45'58.9E	Erven
621	IMPUMELELO	2513	0	26°20'43.62S	28°45'58.82E	Erven
622	IMPUMELELO	2514	0	26°20'44.05S	28°45'58.78E	Erven
623	IMPUMELELO	2523	0	26°20'46.53S	28°45'57.69E	Erven
624	IMPUMELELO	2537	0	26°20'43.4S	28°45'57.02E	Erven
625	IMPUMELELO	2538	0	26°20'43.83S	28°45'56.94E	Erven
626	IMPUMELELO	2547	0	26°20'46.26S	28°45'55.83E	Erven
627	IMPUMELELO	2571	0	26°20'46.06S	28°45'54.02E	Erven

628	IMPUMELELO	2581	0	26°20'41.81S	28°45'54.75E	Erven
629	IMPUMELELO	2586	0	26°20'42.92S	28°45'53.37E	Erven
630	IMPUMELELO	2605	0	26°20'41.98S	28°45'52.86E	Erven
631	IMPUMELELO	2630	0	26°20'46.13S	28°45'48.98E	Erven
632	IMPUMELELO	2638	0	26°20'49.76S	28°45'48.39E	Erven
633	IMPUMELELO	2656	0	26°20'49.27S	28°45'47.82E	Erven
634	IMPUMELELO	2663	0	26°20'46.08S	28°45'48.31E	Erven
635	IMPUMELELO	2666	0	26°20'44.75S	28°45'48.53E	Erven
636	IMPUMELELO	2679	0	26°20'54.75S	28°45'48.65E	Erven
637	IMPUMELELO	2681	0	26°20'53.9S	28°45'48.94E	Erven
638	IMPUMELELO	2690	0	26°20'50.65S	28°45'52.09E	Erven
639	IMPUMELELO	2789	0	26°20'52.87S	28°45'58.61E	Erven
640	IMPUMELELO	2809	0	26°20'57.55S	28°45'54.1E	Erven
641	IMPUMELELO	2815	0	26°20'58.68S	28°45'56.46E	Erven
642	IMPUMELELO	2824	0	26°20'57.54S	28°45'52.01E	Erven
643	IMPUMELELO	2837	0	26°20'48.98S	28°45'28.08E	Erven
644	IMPUMELELO	2843	0	26°20'47.24S	28°45'44.3E	Erven
645	IMPUMELELO	2846	0	26°20'40.59S	28°45'55.9E	Erven
646	IMPUMELELO	2880	0	26°20'31.27S	28°45'16.88E	Erven
647	IMPUMELELO	2888	0	26°20'28.07S	28°45'16.75E	Erven
648	IMPUMELELO	2889	0	26°20'28.45S	28°45'17.01E	Erven
649	IMPUMELELO	2891	0	26°20'29.27S	28°45'17.57E	Erven
650	IMPUMELELO	2900	0	26°20'28.76S	28°45'16.51E	Erven
651	IMPUMELELO	2917	0	26°20'28.36S	28°45'18.3E	Erven
652	IMPUMELELO	2919	0	26°20'29.12S	28°45'18.8E	Erven
653	IMPUMELELO	2922	0	26°20'29.62S	28°45'19.9E	Erven
654	IMPUMELELO	2936	0	26°20'25.7S	28°45'22.6E	Erven
655	IMPUMELELO	2948	0	26°20'21.32S	28°45'29.42E	Erven
656	IMPUMELELO	2954	0	26°20'21.12S	28°45'30.98E	Erven
657	IMPUMELELO	2962	0	26°20'22.96S	28°45'27.64E	Erven
658	IMPUMELELO	2971	0	26°20'31.44S	28°45'18.75E	Erven
659	IMPUMELELO	2972	0	26°20'31.2S	28°45'19.19E	Erven
660	IMPUMELELO	2973	0	26°20'30.94S	28°45'19.62E	Erven
661	IMPUMELELO	2981	0	26°20'32.25S	28°45'18.64E	Erven
662	IMPUMELELO	2986	0	26°20'33.66S	28°45'18.35E	Erven
663	IMPUMELELO	3003	0	26°20'35.37S	28°45'18.86E	Erven
664	IMPUMELELO	3013	0	26°20'34.15S	28°45'22.38E	Erven
665	IMPUMELELO	3020	0	26°20'35.89S	28°45'19.2E	Erven
666	IMPUMELELO	3028	0	26°20'35.1S	28°45'23.04E	Erven
667	IMPUMELELO	3036	0	26°20'36.83S	28°45'21.09E	Erven
668	IMPUMELELO	3438	0	26°20'36.06S	28°45'30.1E	Erven
669	IMPUMELELO	3439	0	26°20'35.86S	28°45'30.5E	Erven
670	IMPUMELELO	3441	0	26°20'35.39S	28°45'31.31E	Erven
671	IMPUMELELO	3447	0	26°20'33.79S	28°45'34.3E	Erven
672	IMPUMELELO	3449	0	26°20'33.36S	28°45'35.13E	Erven
673	IMPUMELELO	3453	0	26°20'32.48S	28°45'36.75E	Erven
674	IMPUMELELO	3470	0	26°20'33.72S	28°45'33.14E	Erven
675	IMPUMELELO	3483	0	26°20'38.19S	28°45'29.82E	Erven
676	IMPUMELELO	3486	0	26°20'37.53S	28°45'31.06E	Erven
677	IMPUMELELO	3488	0	26°20'37.07S	28°45'31.88E	Erven
678	IMPUMELELO	3492	0	26°20'35.91S	28°45'34E	Erven
679	IMPUMELELO	3502	0	26°20'33.72S	28°45'38.13E	Erven
680	IMPUMELELO	3506	0	26°20'32.5S	28°45'39.01E	Erven
681	IMPUMELELO	3508	0	26°20'32.96S	28°45'38.19E	Erven
682	IMPUMELELO	3519	0	26°20'35.41S	28°45'33.67E	Erven
683	IMPUMELELO	3524	0	26°20'30.04S	28°45'41.1E	Erven
684	IMPUMELELO	3525	0	26°20'29.64S	28°45'40.81E	Erven
685	IMPUMELELO	3531	0	26°20'28.17S	28°45'40.53E	Erven
686	IMPUMELELO	3538	0	26°20'30.94S	28°45'42.42E	Erven
687	IMPUMELELO	3549	0	26°20'27.27S	28°45'41.32E	Erven

688	IMPUMELELO	3555	0	26°20'25.83S	28°45'43.99E	Erven
689	IMPUMELELO	3558	0	26°20'24.63S	28°45'46.21E	Erven
690	IMPUMELELO	3563	0	26°20'24.14S	28°45'48.18E	Erven
691	IMPUMELELO	3577	0	26°20'25.57S	28°45'48.43E	Erven
692	IMPUMELELO	3591	0	26°20'28.16S	28°45'42.64E	Erven
693	IMPUMELELO	3594	0	26°20'29.31S	28°45'43.44E	Erven
694	IMPUMELELO	3595	0	26°20'29.73S	28°45'43.66E	Erven
695	IMPUMELELO	3597	0	26°20'30.52S	28°45'44.17E	Erven
696	IMPUMELELO	3602	0	26°20'28.44S	28°45'47.78E	Erven
697	IMPUMELELO	2317	0	26°20'54.06S	28°45'39.83E	Erven
698	IMPUMELELO	2322	0	26°20'53.42S	28°45'37.55E	Erven
699	IMPUMELELO	2332	0	26°20'52.68S	28°45'37.31E	Erven
700	IMPUMELELO	2340	0	26°20'53.74S	28°45'40.94E	Erven
701	IMPUMELELO	2351	0	26°20'47.85S	28°45'31.17E	Erven
702	IMPUMELELO	2354	0	26°20'49.15S	28°45'31.19E	Erven
703	IMPUMELELO	2362	0	26°20'49.87S	28°45'30.27E	Erven
704	IMPUMELELO	2376	0	26°20'45.04S	28°45'40.35E	Erven
705	IMPUMELELO	2378	0	26°20'44.97S	28°45'41.43E	Erven
706	IMPUMELELO	3613	0	26°20'28.2S	28°45'44.58E	Erven
707	IMPUMELELO	3627	0	26°20'26.38S	28°45'51.74E	Erven
708	IMPUMELELO	3645	0	26°20'21.47S	28°45'54.97E	Erven
709	IMPUMELELO	3649	0	26°20'23.19S	28°45'54.71E	Erven
710	IMPUMELELO	3650	0	26°20'23.6S	28°45'54.68E	Erven
711	IMPUMELELO	3651	0	26°20'24.01S	28°45'54.63E	Erven
712	IMPUMELELO	3655	0	26°20'24.91S	28°45'53E	Erven
713	IMPUMELELO	3669	0	26°20'23.32S	28°45'53.57E	Erven
714	IMPUMELELO	3678	0	26°20'24.4S	28°45'50.41E	Erven
715	IMPUMELELO	3681	0	26°20'23.42S	28°45'49.73E	Erven
716	IMPUMELELO	3693	0	26°20'20.99S	28°45'53.42E	Erven
717	IMPUMELELO	3704	0	26°20'23.16S	28°45'49.04E	Erven
718	IMPUMELELO	3720	0	26°20'20.78S	28°45'46.03E	Erven
719	IMPUMELELO	3723	0	26°20'18.99S	28°45'45.6E	Erven
720	IMPUMELELO	3734	0	26°20'16.76S	28°45'49.84E	Erven
721	IMPUMELELO	3752	0	26°20'17.42S	28°45'49.53E	Erven
722	IMPUMELELO	3760	0	26°20'19.61S	28°45'47.5E	Erven
723	IMPUMELELO	3763	0	26°20'20.74S	28°45'48.22E	Erven
724	IMPUMELELO	3764	0	26°20'21.12S	28°45'48.48E	Erven
725	IMPUMELELO	3772	0	26°20'20.29S	28°45'47.16E	Erven
726	IMPUMELELO	3773	0	26°20'19.9S	28°45'46.88E	Erven
727	IMPUMELELO	3776	0	26°20'18.49S	28°45'48.86E	Erven
728	IMPUMELELO	3781	0	26°20'20.59S	28°45'50.3E	Erven
729	IMPUMELELO	3785	0	26°20'20.46S	28°45'49.45E	Erven
730	IMPUMELELO	3788	0	26°20'19.19S	28°45'48.61E	Erven
731	IMPUMELELO	3804	0	26°20'14.83S	28°45'48.68E	Erven
732	IMPUMELELO	3807	0	26°20'15.8S	28°45'48.18E	Erven
733	IMPUMELELO	3836	0	26°20'14.18S	28°45'47.62E	Erven
734	IMPUMELELO	3837	0	26°20'14.39S	28°45'47.23E	Erven
735	IMPUMELELO	3114	0	26°20'29.84S	28°45'25.78E	Erven
736	IMPUMELELO	3122	0	26°20'30.69S	28°45'27.12E	Erven
737	IMPUMELELO	3139	0	26°20'27.13S	28°45'26.13E	Erven
738	IMPUMELELO	3142	0	26°20'28.26S	28°45'26.85E	Erven
739	IMPUMELELO	3156	0	26°20'28.33S	28°45'27.7E	Erven
740	IMPUMELELO	3161	0	26°20'26.44S	28°45'26.42E	Erven
741	IMPUMELELO	3181	0	26°20'29.37S	28°45'30.49E	Erven
742	IMPUMELELO	3189	0	26°20'26.36S	28°45'28.5E	Erven
743	IMPUMELELO	3191	0	26°20'25.6S	28°45'27.99E	Erven
744	IMPUMELELO	3205	0	26°20'27.67S	28°45'30.74E	Erven
745	IMPUMELELO	3215	0	26°20'27S	28°45'31.06E	Erven
746	IMPUMELELO	3226	0	26°20'23.47S	28°45'30.03E	Erven
747	IMPUMELELO	3241	0	26°20'27.67S	28°45'33.59E	Erven

748	IMPUMELELO	3243	0	26°20'26.93S	28°45'33.08E	Erven
749	IMPUMELELO	3258	0	26°20'23.46S	28°45'32.14E	Erven
750	IMPUMELELO	3261	0	26°20'24.65S	28°45'32.88E	Erven
751	IMPUMELELO	3266	0	26°20'26.6S	28°45'34.25E	Erven
752	IMPUMELELO	3267	0	26°20'27.01S	28°45'34.46E	Erven
753	IMPUMELELO	3270	0	26°20'28.18S	28°45'35.26E	Erven
754	IMPUMELELO	3275	0	26°20'27.85S	28°45'35.82E	Erven
755	IMPUMELELO	3279	0	26°20'26.27S	28°45'34.8E	Erven
756	IMPUMELELO	3283	0	26°20'24.73S	28°45'33.73E	Erven
757	IMPUMELELO	3288	0	26°20'22.76S	28°45'32.44E	Erven
758	IMPUMELELO	3298	0	26°20'31.91S	28°45'28.92E	Erven
759	IMPUMELELO	3299	0	26°20'31.7S	28°45'29.33E	Erven
760	IMPUMELELO	3314	0	26°20'30.26S	28°45'31.96E	Erven
761	IMPUMELELO	3317	0	26°20'29.62S	28°45'33.17E	Erven
762	IMPUMELELO	3320	0	26°20'28.95S	28°45'34.45E	Erven
763	IMPUMELELO	3322	0	26°20'29.67S	28°45'34.35E	Erven
764	IMPUMELELO	3331	0	26°20'33.46S	28°45'31.15E	Erven
765	IMPUMELELO	2693	0	26°20'52.06S	28°45'51.87E	Erven
766	IMPUMELELO	2696	0	26°20'53.51S	28°45'51.62E	Erven
767	IMPUMELELO	2701	0	26°20'55.26S	28°45'50.33E	Erven
768	IMPUMELELO	2704	0	26°20'53.9S	28°45'50.87E	Erven
769	IMPUMELELO	2709	0	26°20'51.49S	28°45'51.35E	Erven
770	IMPUMELELO	2711	0	26°20'50.57S	28°45'51.46E	Erven
771	IMPUMELELO	2723	0	26°20'55.97S	28°45'52.78E	Erven
772	IMPUMELELO	2724	0	26°20'55.75S	28°45'52.15E	Erven
773	IMPUMELELO	2726	0	26°20'54.84S	28°45'52.44E	Erven
774	IMPUMELELO	2728	0	26°20'53.89S	28°45'52.76E	Erven
775	IMPUMELELO	2731	0	26°20'52.59S	28°45'52.97E	Erven
776	IMPUMELELO	2737	0	26°20'51.56S	28°45'55.69E	Erven
777	IMPUMELELO	2765	0	26°20'52.65S	28°45'57.34E	Erven
778	IMPUMELELO	2770	0	26°20'54.8S	28°45'57.03E	Erven
779	IMPUMELELO	2772	0	26°20'56.55S	28°45'56.74E	Erven
780	IMPUMELELO	2775	0	26°20'56.4S	28°45'55.92E	Erven
781	IMPUMELELO	2777	0	26°20'54.73S	28°45'56.37E	Erven
782	IMPUMELELO	2778	0	26°20'54.29S	28°45'56.41E	Erven
783	IMPUMELELO	2782	0	26°20'52.58S	28°45'56.66E	Erven
784	IMPUMELELO	2794	0	26°20'55.13S	28°45'58.24E	Erven
785	IMPUMELELO	2803	0	26°20'56.66S	28°45'51.3E	Erven
786	IMPUMELELO	2813	0	26°20'58.07S	28°45'56.05E	Erven
787	IMPUMELELO	2820	0	26°20'58.09S	28°45'53.9E	Erven
788	IMPUMELELO	2831	0	26°20'55.92S	28°45'39.72E	Erven
789	IMPUMELELO	2835	0	26°20'51.96S	28°45'26.72E	Erven
790	IMPUMELELO	2840	0	26°20'50.95S	28°45'39.06E	Erven
791	IMPUMELELO	2848	0	26°20'37.25S	28°46'0.38E	Erven
792	IMPUMELELO	2857	0	26°20'43.31S	28°45'49.05E	Erven
793	IMPUMELELO	2878	0	26°20'30.47S	28°45'16.36E	Erven
794	IMPUMELELO	3123	0	26°20'30.28S	28°45'26.86E	Erven
795	IMPUMELELO	3125	0	26°20'29.53S	28°45'26.39E	Erven
796	IMPUMELELO	3127	0	26°20'28.8S	28°45'25.87E	Erven
797	IMPUMELELO	3130	0	26°20'27.67S	28°45'25.11E	Erven
798	IMPUMELELO	3138	0	26°20'26.77S	28°45'25.86E	Erven
799	IMPUMELELO	3165	0	26°20'24.77S	28°45'26.69E	Erven
800	IMPUMELELO	3185	0	26°20'27.85S	28°45'29.46E	Erven
801	IMPUMELELO	3193	0	26°20'24.85S	28°45'27.46E	Erven
802	IMPUMELELO	3200	0	26°20'25.85S	28°45'29.48E	Erven
803	IMPUMELELO	3206	0	26°20'28.08S	28°45'30.98E	Erven
804	IMPUMELELO	3208	0	26°20'28.83S	28°45'31.47E	Erven
805	IMPUMELELO	3211	0	26°20'28.52S	28°45'32.01E	Erven
806	IMPUMELELO	3219	0	26°20'25.52S	28°45'30.05E	Erven
807	IMPUMELELO	3220	0	26°20'25.1S	28°45'29.79E	Erven

808	IMPUMELELO	3222	0	26°20'24.38S	28°45'29.29E	Erven
809	IMPUMELELO	3225	0	26°20'23.09S	28°45'29.79E	Erven
810	IMPUMELELO	3227	0	26°20'23.86S	28°45'30.25E	Erven
811	IMPUMELELO	3232	0	26°20'25.74S	28°45'31.5E	Erven
812	IMPUMELELO	3234	0	26°20'26.49S	28°45'32.01E	Erven
813	IMPUMELELO	3239	0	26°20'28.38S	28°45'33.3E	Erven
814	IMPUMELELO	3246	0	26°20'25.8S	28°45'32.34E	Erven
815	IMPUMELELO	3247	0	26°20'25.44S	28°45'32.07E	Erven
816	IMPUMELELO	3249	0	26°20'24.69S	28°45'31.61E	Erven
817	IMPUMELELO	3259	0	26°20'23.85S	28°45'32.41E	Erven
818	IMPUMELELO	3262	0	26°20'25.02S	28°45'33.21E	Erven
819	IMPUMELELO	3263	0	26°20'25.45S	28°45'33.44E	Erven
820	IMPUMELELO	3276	0	26°20'27.45S	28°45'35.59E	Erven
821	IMPUMELELO	3278	0	26°20'26.69S	28°45'35.02E	Erven
822	IMPUMELELO	3296	0	26°20'32.36S	28°45'28.12E	Erven
823	IMPUMELELO	3297	0	26°20'32.12S	28°45'28.52E	Erven
824	IMPUMELELO	3042	0	26°20'29.36S	28°45'21.24E	Erven
825	IMPUMELELO	3045	0	26°20'30.54S	28°45'22.01E	Erven
826	IMPUMELELO	3048	0	26°20'31.7S	28°45'22.82E	Erven
827	IMPUMELELO	3065	0	26°20'31.41S	28°45'23.35E	Erven
828	IMPUMELELO	3084	0	26°20'30.69S	28°45'24.21E	Erven
829	IMPUMELELO	3086	0	26°20'31.46S	28°45'24.74E	Erven
830	IMPUMELELO	3113	0	26°20'29.48S	28°45'25.55E	Erven
831	IMPUMELELO	3118	0	26°20'31.37S	28°45'26.79E	Erven
832	IMPUMELELO	3141	0	26°20'27.91S	28°45'26.59E	Erven
833	IMPUMELELO	3151	0	26°20'30.19S	28°45'28.93E	Erven
834	IMPUMELELO	3154	0	26°20'29.08S	28°45'28.18E	Erven
835	IMPUMELELO	3155	0	26°20'28.68S	28°45'27.91E	Erven
836	IMPUMELELO	3160	0	26°20'26.83S	28°45'26.66E	Erven
837	IMPUMELELO	3163	0	26°20'25.66S	28°45'25.93E	Erven
838	IMPUMELELO	3167	0	26°20'25.55S	28°45'27.16E	Erven
839	IMPUMELELO	3169	0	26°20'26.31S	28°45'27.65E	Erven
840	IMPUMELELO	3177	0	26°20'29.27S	28°45'29.66E	Erven
841	IMPUMELELO	3179	0	26°20'30.04S	28°45'30.16E	Erven
842	IMPUMELELO	3183	0	26°20'28.61S	28°45'29.97E	Erven
843	IMPUMELELO	3196	0	26°20'24.32S	28°45'28.48E	Erven
844	IMPUMELELO	3199	0	26°20'25.46S	28°45'29.19E	Erven
845	IMPUMELELO	3203	0	26°20'26.94S	28°45'30.24E	Erven
846	IMPUMELELO	3204	0	26°20'27.32S	28°45'30.47E	Erven
847	IMPUMELELO	3207	0	26°20'28.46S	28°45'31.2E	Erven
848	IMPUMELELO	3209	0	26°20'29.21S	28°45'31.74E	Erven
849	IMPUMELELO	3210	0	26°20'28.91S	28°45'32.29E	Erven
850	IMPUMELELO	3223	0	26°20'24.01S	28°45'29.02E	Erven
851	IMPUMELELO	3230	0	26°20'24.99S	28°45'31.02E	Erven
852	IMPUMELELO	3240	0	26°20'28.06S	28°45'33.82E	Erven
853	IMPUMELELO	3245	0	26°20'26.18S	28°45'32.61E	Erven
854	IMPUMELELO	2897	0	26°20'29.95S	28°45'17.33E	Erven
855	IMPUMELELO	2898	0	26°20'29.54S	28°45'17.04E	Erven
856	IMPUMELELO	2940	0	26°20'23.11S	28°45'26.08E	Erven
857	IMPUMELELO	2941	0	26°20'22.88S	28°45'26.5E	Erven
858	IMPUMELELO	2950	0	26°20'20.88S	28°45'30.21E	Erven
859	IMPUMELELO	2952	0	26°20'20.42S	28°45'31.04E	Erven
860	IMPUMELELO	2957	0	26°20'21.81S	28°45'29.72E	Erven
861	IMPUMELELO	2961	0	26°20'22.72S	28°45'28.05E	Erven
862	IMPUMELELO	2966	0	26°20'23.84S	28°45'25.96E	Erven
863	IMPUMELELO	2974	0	26°20'30.69S	28°45'20.1E	Erven
864	IMPUMELELO	2982	0	26°20'32.5S	28°45'18.2E	Erven
865	IMPUMELELO	2983	0	26°20'32.71S	28°45'17.72E	Erven
866	IMPUMELELO	2996	0	26°20'32.93S	28°45'20.98E	Erven
867	IMPUMELELO	2999	0	26°20'33.7S	28°45'19.61E	Erven

868	IMPUMELELO	3007	0	26°20'34.38S	28°45'20.67E	Erven
869	IMPUMELELO	3011	0	26°20'33.41S	28°45'22.54E	Erven
870	IMPUMELELO	3023	0	26°20'36.32S	28°45'20.74E	Erven
871	IMPUMELELO	3034	0	26°20'36.34S	28°45'21.98E	Erven
872	IMPUMELELO	3037	0	26°20'37.1S	28°45'20.61E	Erven
873	IMPUMELELO	3059	0	26°20'33.74S	28°45'24.94E	Erven
874	IMPUMELELO	3062	0	26°20'32.59S	28°45'24.14E	Erven
875	IMPUMELELO	3063	0	26°20'32.17S	28°45'23.89E	Erven
876	IMPUMELELO	3070	0	26°20'29.43S	28°45'22.04E	Erven
877	IMPUMELELO	3071	0	26°20'29.06S	28°45'21.79E	Erven
878	IMPUMELELO	3076	0	26°20'27.69S	28°45'22.25E	Erven
879	IMPUMELELO	3080	0	26°20'29.21S	28°45'23.24E	Erven
880	IMPUMELELO	3116	0	26°20'30.59S	28°45'26.3E	Erven
881	IMPUMELELO	3126	0	26°20'29.16S	28°45'26.09E	Erven
882	IMPUMELELO	3131	0	26°20'27.3S	28°45'24.87E	Erven
883	IMPUMELELO	3168	0	26°20'25.93S	28°45'27.41E	Erven
884	IMPUMELELO	3256	0	26°20'22.68S	28°45'31.58E	Erven
885	IMPUMELELO	3265	0	26°20'26.2S	28°45'33.98E	Erven
886	IMPUMELELO	3280	0	26°20'25.91S	28°45'34.5E	Erven
887	IMPUMELELO	3281	0	26°20'25.51S	28°45'34.26E	Erven
888	IMPUMELELO	3289	0	26°20'21.97S	28°45'31.85E	Erven
889	IMPUMELELO	3295	0	26°20'32.56S	28°45'27.69E	Erven
890	IMPUMELELO	3301	0	26°20'31.94S	28°45'30.06E	Erven
891	IMPUMELELO	3311	0	26°20'30.94S	28°45'30.75E	Erven
892	IMPUMELELO	3332	0	26°20'33.75S	28°45'30.78E	Erven
893	IMPUMELELO	3338	0	26°20'35.01S	28°45'28.39E	Erven
894	IMPUMELELO	3343	0	26°20'36.29S	28°45'26.68E	Erven
895	IMPUMELELO	3362	0	26°20'35.11S	28°45'26.85E	Erven
896	IMPUMELELO	3366	0	26°20'34.29S	28°45'28.45E	Erven
897	IMPUMELELO	3386	0	26°20'29.67S	28°45'36.96E	Erven
898	IMPUMELELO	3395	0	26°20'30.71S	28°45'39.91E	Erven
899	IMPUMELELO	3397	0	26°20'31.51S	28°45'40.44E	Erven
900	IMPUMELELO	3398	0	26°20'31.89S	28°45'40.68E	Erven
901	IMPUMELELO	3403	0	26°20'31.41S	28°45'39.59E	Erven
902	IMPUMELELO	3411	0	26°20'30.41S	28°45'36.9E	Erven
903	IMPUMELELO	3418	0	26°20'31.92S	28°45'34.1E	Erven
904	IMPUMELELO	3419	0	26°20'32.13S	28°45'33.68E	Erven
905	IMPUMELELO	3427	0	26°20'35.1S	28°45'30.54E	Erven
906	IMPUMELELO	3428	0	26°20'35.33S	28°45'30.16E	Erven
907	IMPUMELELO	3431	0	26°20'35.98S	28°45'28.91E	Erven
908	IMPUMELELO	3433	0	26°20'36.45S	28°45'28.08E	Erven
909	IMPUMELELO	3443	0	26°20'34.93S	28°45'32.11E	Erven
910	IMPUMELELO	3448	0	26°20'33.59S	28°45'34.71E	Erven
911	IMPUMELELO	3450	0	26°20'33.13S	28°45'35.52E	Erven
912	IMPUMELELO	3452	0	26°20'32.73S	28°45'36.37E	Erven
913	IMPUMELELO	3174	0	26°20'28.18S	28°45'28.89E	Erven
914	IMPUMELELO	3176	0	26°20'28.96S	28°45'29.41E	Erven
915	IMPUMELELO	3195	0	26°20'23.93S	28°45'28.23E	Erven
916	IMPUMELELO	3198	0	26°20'25.07S	28°45'28.96E	Erven
917	IMPUMELELO	3224	0	26°20'23.64S	28°45'28.78E	Erven
918	IMPUMELELO	3228	0	26°20'24.22S	28°45'30.55E	Erven
919	IMPUMELELO	3244	0	26°20'26.57S	28°45'32.81E	Erven
920	IMPUMELELO	3268	0	26°20'27.39S	28°45'34.72E	Erven
921	IMPUMELELO	3272	0	26°20'28.98S	28°45'35.83E	Erven
922	IMPUMELELO	3273	0	26°20'28.69S	28°45'36.34E	Erven
923	IMPUMELELO	3277	0	26°20'27.07S	28°45'35.27E	Erven
924	IMPUMELELO	3284	0	26°20'24.35S	28°45'33.46E	Erven
925	IMPUMELELO	3292	0	26°20'33.21S	28°45'26.51E	Erven
926	IMPUMELELO	3293	0	26°20'32.98S	28°45'26.9E	Erven
927	IMPUMELELO	3303	0	26°20'32.42S	28°45'29.25E	Erven

928	IMPUMELELO	3308	0	26°20'33.52S	28°45'27.27E	Erven
929	IMPUMELELO	3310	0	26°20'33.96S	28°45'26.39E	Erven
930	IMPUMELELO	3312	0	26°20'30.67S	28°45'31.17E	Erven
931	IMPUMELELO	3319	0	26°20'29.16S	28°45'33.98E	Erven
932	IMPUMELELO	3333	0	26°20'33.96S	28°45'30.39E	Erven
933	IMPUMELELO	3340	0	26°20'35.45S	28°45'27.6E	Erven
934	IMPUMELELO	3344	0	26°20'36.7S	28°45'26.88E	Erven
935	IMPUMELELO	3367	0	26°20'34.05S	28°45'28.83E	Erven
936	IMPUMELELO	3372	0	26°20'33S	28°45'30.86E	Erven
937	IMPUMELELO	3374	0	26°20'32.3S	28°45'32.17E	Erven
938	IMPUMELELO	3376	0	26°20'31.84S	28°45'32.95E	Erven
939	IMPUMELELO	3378	0	26°20'31.4S	28°45'33.77E	Erven
940	IMPUMELELO	3381	0	26°20'30.76S	28°45'34.97E	Erven
941	IMPUMELELO	3383	0	26°20'30.3S	28°45'35.74E	Erven
942	IMPUMELELO	3334	0	26°20'34.18S	28°45'29.99E	Erven
943	IMPUMELELO	3336	0	26°20'34.57S	28°45'29.19E	Erven
944	IMPUMELELO	3337	0	26°20'34.82S	28°45'28.8E	Erven
945	IMPUMELELO	3351	0	26°20'39.01S	28°45'27.64E	Erven
946	IMPUMELELO	3352	0	26°20'38.58S	28°45'27.38E	Erven
947	IMPUMELELO	3354	0	26°20'37.8S	28°45'26.83E	Erven
948	IMPUMELELO	3358	0	26°20'36.22S	28°45'25.83E	Erven
949	IMPUMELELO	3368	0	26°20'33.84S	28°45'29.24E	Erven
950	IMPUMELELO	3369	0	26°20'33.62S	28°45'29.65E	Erven
951	IMPUMELELO	3375	0	26°20'32.05S	28°45'32.56E	Erven
952	IMPUMELELO	3392	0	26°20'29.56S	28°45'39.12E	Erven
953	IMPUMELELO	3396	0	26°20'31.1S	28°45'40.18E	Erven
954	IMPUMELELO	3401	0	26°20'32.2S	28°45'40.1E	Erven
955	IMPUMELELO	3405	0	26°20'30.65S	28°45'39.06E	Erven
956	IMPUMELELO	3406	0	26°20'30.25S	28°45'38.82E	Erven
957	IMPUMELELO	3425	0	26°20'34.64S	28°45'31.38E	Erven
958	IMPUMELELO	3432	0	26°20'36.22S	28°45'28.51E	Erven
959	IMPUMELELO	3434	0	26°20'36.94S	28°45'28.41E	Erven
960	IMPUMELELO	3440	0	26°20'35.6S	28°45'30.92E	Erven
961	IMPUMELELO	3442	0	26°20'35.18S	28°45'31.76E	Erven
962	IMPUMELELO	3458	0	26°20'31.04S	28°45'38.08E	Erven
963	IMPUMELELO	3462	0	26°20'31.96S	28°45'36.41E	Erven
964	IMPUMELELO	3476	0	26°20'36.79S	28°45'31.15E	Erven
965	IMPUMELELO	3482	0	26°20'38.4S	28°45'29.38E	Erven
966	IMPUMELELO	3484	0	26°20'37.96S	28°45'30.25E	Erven
967	IMPUMELELO	3503	0	26°20'33.51S	28°45'38.57E	Erven
968	IMPUMELELO	3504	0	26°20'33.26S	28°45'38.97E	Erven
969	IMPUMELELO	3505	0	26°20'33S	28°45'39.37E	Erven
970	IMPUMELELO	3512	0	26°20'33.83S	28°45'36.53E	Erven
971	IMPUMELELO	2389	0	26°20'47.09S	28°45'38.14E	Erven
972	IMPUMELELO	2404	0	26°20'48.44S	28°45'37.14E	Erven
973	IMPUMELELO	2408	0	26°20'50.34S	28°45'36.8E	Erven
974	IMPUMELELO	2458	0	26°20'49.11S	28°45'46.44E	Erven
975	IMPUMELELO	2460	0	26°20'49.99S	28°45'46.29E	Erven
976	IMPUMELELO	2496	0	26°20'42.94S	28°46'0.2E	Erven
977	IMPUMELELO	2509	0	26°20'50.56S	28°45'58.99E	Erven
978	IMPUMELELO	2515	0	26°20'44.46S	28°45'58.71E	Erven
979	IMPUMELELO	2516	0	26°20'44.92S	28°45'58.61E	Erven
980	IMPUMELELO	2529	0	26°20'43.98S	28°45'58.06E	Erven
981	IMPUMELELO	2543	0	26°20'45.94S	28°45'56.56E	Erven
982	IMPUMELELO	2548	0	26°20'45.84S	28°45'55.91E	Erven
983	IMPUMELELO	2555	0	26°20'42.86S	28°45'56.39E	Erven
984	IMPUMELELO	2561	0	26°20'43.14S	28°45'55.17E	Erven
985	IMPUMELELO	2574	0	26°20'44.78S	28°45'54.2E	Erven
986	IMPUMELELO	2588	0	26°20'43.74S	28°45'53.2E	Erven
987	IMPUMELELO	2589	0	26°20'44.19S	28°45'53.12E	Erven

988	IMPUMELELO	2593	0	26°20'45.88S	28°45'52.86E	Erven
989	IMPUMELELO	2600	0	26°20'44.11S	28°45'52.47E	Erven
990	IMPUMELELO	2606	0	26°20'41.56S	28°45'52.65E	Erven
991	IMPUMELELO	2612	0	26°20'44.35S	28°45'51.24E	Erven
992	IMPUMELELO	2614	0	26°20'45.22S	28°45'51.11E	Erven
993	IMPUMELELO	2628	0	26°20'45.27S	28°45'49.13E	Erven
994	IMPUMELELO	2629	0	26°20'45.71S	28°45'49.1E	Erven
995	IMPUMELELO	2631	0	26°20'46.56S	28°45'48.89E	Erven
996	IMPUMELELO	2639	0	26°20'50.22S	28°45'48.34E	Erven
997	IMPUMELELO	2675	0	26°20'53.59S	28°45'49.75E	Erven
998	IMPUMELELO	2677	0	26°20'54.55S	28°45'49.42E	Erven
999	IMPUMELELO	2686	0	26°20'51.66S	28°45'49.38E	Erven
1000	IMPUMELELO	3516	0	26°20'34.73S	28°45'34.94E	Erven
1001	IMPUMELELO	3517	0	26°20'34.94S	28°45'34.5E	Erven
1002	IMPUMELELO	3522	0	26°20'30.84S	28°45'41.62E	Erven
1003	IMPUMELELO	3526	0	26°20'29.27S	28°45'40.52E	Erven
1004	IMPUMELELO	3539	0	26°20'31.35S	28°45'42.68E	Erven
1005	IMPUMELELO	3546	0	26°20'28.43S	28°45'42.08E	Erven
1006	IMPUMELELO	3552	0	26°20'26.53S	28°45'42.64E	Erven
1007	IMPUMELELO	3561	0	26°20'23.98S	28°45'47.47E	Erven
1008	IMPUMELELO	3567	0	26°20'25.68S	28°45'49.25E	Erven
1009	IMPUMELELO	3573	0	26°20'27.1S	28°45'49.53E	Erven
1010	IMPUMELELO	3574	0	26°20'26.72S	28°45'49.21E	Erven
1011	IMPUMELELO	3585	0	26°20'26.3S	28°45'44.33E	Erven
1012	IMPUMELELO	3586	0	26°20'26.56S	28°45'43.9E	Erven
1013	IMPUMELELO	3588	0	26°20'27.07S	28°45'42.98E	Erven
1014	IMPUMELELO	3592	0	26°20'28.52S	28°45'42.89E	Erven
1015	IMPUMELELO	3593	0	26°20'28.92S	28°45'43.19E	Erven
1016	IMPUMELELO	3604	0	26°20'27.91S	28°45'48.78E	Erven
1017	IMPUMELELO	3606	0	26°20'27.64S	28°45'47.96E	Erven
1018	IMPUMELELO	3607	0	26°20'27.89S	28°45'47.56E	Erven
1019	IMPUMELELO	3616	0	26°20'27.52S	28°45'45.83E	Erven
1020	IMPUMELELO	3624	0	26°20'27.63S	28°45'44.21E	Erven
1021	IMPUMELELO	3635	0	26°20'24.6S	28°45'55.05E	Erven
1022	IMPUMELELO	3646	0	26°20'21.91S	28°45'54.94E	Erven
1023	IMPUMELELO	3647	0	26°20'22.33S	28°45'54.81E	Erven
1024	IMPUMELELO	3652	0	26°20'24.28S	28°45'54.2E	Erven
1025	IMPUMELELO	3660	0	26°20'26.07S	28°45'50.94E	Erven
1026	IMPUMELELO	3662	0	26°20'24.91S	28°45'50.74E	Erven
1027	IMPUMELELO	3670	0	26°20'22.7S	28°45'53.64E	Erven
1028	IMPUMELELO	3677	0	26°20'24.17S	28°45'50.81E	Erven
1029	IMPUMELELO	3316	0	26°20'29.81S	28°45'32.8E	Erven
1030	IMPUMELELO	3318	0	26°20'29.37S	28°45'33.6E	Erven
1031	IMPUMELELO	3323	0	26°20'29.89S	28°45'33.93E	Erven
1032	IMPUMELELO	3339	0	26°20'35.26S	28°45'27.99E	Erven
1033	IMPUMELELO	3345	0	26°20'37.09S	28°45'27.16E	Erven
1034	IMPUMELELO	3346	0	26°20'37.47S	28°45'27.42E	Erven
1035	IMPUMELELO	3356	0	26°20'37.01S	28°45'26.32E	Erven
1036	IMPUMELELO	3361	0	26°20'35.32S	28°45'26.42E	Erven
1037	IMPUMELELO	3365	0	26°20'34.47S	28°45'28.04E	Erven
1038	IMPUMELELO	3371	0	26°20'33.21S	28°45'30.43E	Erven
1039	IMPUMELELO	3385	0	26°20'29.86S	28°45'36.53E	Erven
1040	IMPUMELELO	3393	0	26°20'29.93S	28°45'39.34E	Erven
1041	IMPUMELELO	3394	0	26°20'30.34S	28°45'39.65E	Erven
1042	IMPUMELELO	3407	0	26°20'29.85S	28°45'38.58E	Erven
1043	IMPUMELELO	3416	0	26°20'31.47S	28°45'34.91E	Erven
1044	IMPUMELELO	3421	0	26°20'32.57S	28°45'32.9E	Erven
1045	IMPUMELELO	3424	0	26°20'34.44S	28°45'31.81E	Erven
1046	IMPUMELELO	3426	0	26°20'34.88S	28°45'30.99E	Erven
1047	IMPUMELELO	3435	0	26°20'36.71S	28°45'28.85E	Erven

1048	IMPUMELELO	3437	0	26°20'36.28S	28°45'29.7E	Erven
1049	IMPUMELELO	3455	0	26°20'32.03S	28°45'37.59E	Erven
1050	IMPUMELELO	3459	0	26°20'31.25S	28°45'37.61E	Erven
1051	IMPUMELELO	3473	0	26°20'36.14S	28°45'32.36E	Erven
1052	IMPUMELELO	3475	0	26°20'36.56S	28°45'31.52E	Erven
1053	IMPUMELELO	3490	0	26°20'36.63S	28°45'32.68E	Erven
1054	IMPUMELELO	3491	0	26°20'36.4S	28°45'33.12E	Erven
1055	IMPUMELELO	3496	0	26°20'35.05S	28°45'35.67E	Erven
1056	IMPUMELELO	3497	0	26°20'34.83S	28°45'36.08E	Erven
1057	IMPUMELELO	3540	0	26°20'30.78S	28°45'43.68E	Erven
1058	IMPUMELELO	3556	0	26°20'25.58S	28°45'44.45E	Erven
1059	IMPUMELELO	3495	0	26°20'35.24S	28°45'35.27E	Erven
1060	IMPUMELELO	3499	0	26°20'34.41S	28°45'36.95E	Erven
1061	IMPUMELELO	3500	0	26°20'34.18S	28°45'37.33E	Erven
1062	IMPUMELELO	3521	0	26°20'31.18S	28°45'41.88E	Erven
1063	IMPUMELELO	3530	0	26°20'27.76S	28°45'40.31E	Erven
1064	IMPUMELELO	3544	0	26°20'29.21S	28°45'42.59E	Erven
1065	IMPUMELELO	3554	0	26°20'26.08S	28°45'43.52E	Erven
1066	IMPUMELELO	3584	0	26°20'26.06S	28°45'44.78E	Erven
1067	IMPUMELELO	3590	0	26°20'27.75S	28°45'42.39E	Erven
1068	IMPUMELELO	3598	0	26°20'29.93S	28°45'45.11E	Erven
1069	IMPUMELELO	3611	0	26°20'29.38S	28°45'44.75E	Erven
1070	IMPUMELELO	3615	0	26°20'27.74S	28°45'45.41E	Erven
1071	IMPUMELELO	3619	0	26°20'25.93S	28°45'47.43E	Erven
1072	IMPUMELELO	3622	0	26°20'27.15S	28°45'45.09E	Erven
1073	IMPUMELELO	3629	0	26°20'25.91S	28°45'52.54E	Erven
1074	IMPUMELELO	3637	0	26°20'23.66S	28°45'55.33E	Erven
1075	IMPUMELELO	3640	0	26°20'22.39S	28°45'55.48E	Erven
1076	IMPUMELELO	3663	0	26°20'24.67S	28°45'51.13E	Erven
1077	IMPUMELELO	3667	0	26°20'23.86S	28°45'52.78E	Erven
1078	IMPUMELELO	3668	0	26°20'23.62S	28°45'53.15E	Erven
1079	IMPUMELELO	3671	0	26°20'22.87S	28°45'53.21E	Erven
1080	IMPUMELELO	3684	0	26°20'22.81S	28°45'50.99E	Erven
1081	IMPUMELELO	3690	0	26°20'21.62S	28°45'53.39E	Erven
1082	IMPUMELELO	3694	0	26°20'20.93S	28°45'52.97E	Erven
1083	IMPUMELELO	3700	0	26°20'22.29S	28°45'50.61E	Erven
1084	IMPUMELELO	3709	0	26°20'21.1S	28°45'45.45E	Erven
1085	IMPUMELELO	3711	0	26°20'21.86S	28°45'46E	Erven
1086	IMPUMELELO	3717	0	26°20'21.97S	28°45'46.84E	Erven
1087	IMPUMELELO	3730	0	26°20'17.05S	28°45'48.13E	Erven
1088	IMPUMELELO	2692	0	26°20'51.58S	28°45'51.92E	Erven
1089	IMPUMELELO	2698	0	26°20'54.54S	28°45'51.35E	Erven
1090	IMPUMELELO	2715	0	26°20'52.24S	28°45'53.66E	Erven
1091	IMPUMELELO	2717	0	26°20'53.1S	28°45'53.54E	Erven
1092	IMPUMELELO	2718	0	26°20'53.55S	28°45'53.45E	Erven
1093	IMPUMELELO	2720	0	26°20'54.48S	28°45'53.27E	Erven
1094	IMPUMELELO	2727	0	26°20'54.38S	28°45'52.62E	Erven
1095	IMPUMELELO	2732	0	26°20'52.14S	28°45'53.03E	Erven
1096	IMPUMELELO	2739	0	26°20'52.43S	28°45'55.52E	Erven
1097	IMPUMELELO	2741	0	26°20'53.35S	28°45'55.4E	Erven
1098	IMPUMELELO	2752	0	26°20'55.05S	28°45'54.32E	Erven
1099	IMPUMELELO	2753	0	26°20'54.62S	28°45'54.48E	Erven
1100	IMPUMELELO	2769	0	26°20'54.36S	28°45'57.13E	Erven
1101	IMPUMELELO	2786	0	26°20'51.56S	28°45'58.81E	Erven
1102	IMPUMELELO	2797	0	26°20'56.97S	28°45'57.91E	Erven
1103	IMPUMELELO	2798	0	26°20'57.41S	28°45'57.8E	Erven
1104	IMPUMELELO	2804	0	26°20'56.86S	28°45'51.74E	Erven
1105	IMPUMELELO	2817	0	26°20'58.53S	28°45'55.34E	Erven
1106	IMPUMELELO	2818	0	26°20'58.37S	28°45'54.88E	Erven
1107	IMPUMELELO	2834	0	26°20'52.78S	28°45'28.66E	Erven

1108	IMPUMELELO	2839	0	26°20'49.78S	28°45'33.54E	Erven
1109	IMPUMELELO	2850	0	26°20'48.89S	28°45'55.03E	Erven
1110	IMPUMELELO	2874	0	26°20'28.88S	28°45'15.26E	Erven
1111	IMPUMELELO	2881	0	26°20'31.55S	28°45'16.36E	Erven
1112	IMPUMELELO	2887	0	26°20'29.13S	28°45'14.74E	Erven
1113	IMPUMELELO	2896	0	26°20'30.36S	28°45'17.59E	Erven
1114	IMPUMELELO	2904	0	26°20'25.13S	28°45'22.24E	Erven
1115	IMPUMELELO	2909	0	26°20'26.26S	28°45'20.24E	Erven
1116	IMPUMELELO	2912	0	26°20'26.91S	28°45'19.04E	Erven
1117	IMPUMELELO	3745	0	26°20'20.09S	28°45'51.33E	Erven
1118	IMPUMELELO	3751	0	26°20'17.8S	28°45'49.82E	Erven
1119	IMPUMELELO	3753	0	26°20'17.25S	28°45'48.96E	Erven
1120	IMPUMELELO	3771	0	26°20'20.67S	28°45'47.41E	Erven
1121	IMPUMELELO	3780	0	26°20'20.16S	28°45'50.01E	Erven
1122	IMPUMELELO	3783	0	26°20'21.3S	28°45'49.97E	Erven
1123	IMPUMELELO	3799	0	26°20'15.99S	28°45'46.61E	Erven
1124	IMPUMELELO	3800	0	26°20'15.75S	28°45'47.04E	Erven
1125	IMPUMELELO	3805	0	26°20'15.31S	28°45'49E	Erven
1126	IMPUMELELO	3810	0	26°20'16.47S	28°45'46.94E	Erven
1127	IMPUMELELO	3839	0	26°20'14.81S	28°45'46.38E	Erven
1128	IMPUMELELO	3849	0	26°20'18.09S	28°45'42.65E	Erven
1129	IMPUMELELO	3852	0	26°20'17.65S	28°45'40.18E	Erven
1130	IMPUMELELO	3860	0	26°20'14.26S	28°45'42.63E	Erven
1131	IMPUMELELO	3866	0	26°20'12.88S	28°45'45.13E	Erven
1132	IMPUMELELO	3870	0	26°20'12.01S	28°45'46.8E	Erven
1133	IMPUMELELO	3876	0	26°20'13.63S	28°45'45.03E	Erven
1134	IMPUMELELO	3885	0	26°20'16.53S	28°45'41.12E	Erven
1135	IMPUMELELO	3890	0	26°20'15.39S	28°46'2.91E	Erven
1136	IMPUMELELO	3894	0	26°20'33.24S	28°45'45.38E	Erven
1137	IMPUMELELO	3904	0	26°20'17.68S	28°45'33.44E	Erven
1138	IMPUMELELO	3906	0	26°20'15.12S	28°45'37.69E	Erven
1139	IMPUMELELO	3913	0	26°20'24.02S	28°45'24.35E	Erven
1140	IMPUMELELO	3914	0	26°20'27.5S	28°45'37.44E	Erven
1141	IMPUMELELO	2914	0	26°20'27.36S	28°45'18.26E	Erven
1142	IMPUMELELO	2925	0	26°20'28.43S	28°45'19.14E	Erven
1143	IMPUMELELO	2926	0	26°20'28.07S	28°45'18.86E	Erven
1144	IMPUMELELO	2938	0	26°20'25.22S	28°45'23.39E	Erven
1145	IMPUMELELO	2943	0	26°20'22.45S	28°45'27.31E	Erven
1146	IMPUMELELO	2945	0	26°20'21.98S	28°45'28.17E	Erven
1147	IMPUMELELO	2947	0	26°20'21.52S	28°45'28.96E	Erven
1148	IMPUMELELO	2956	0	26°20'21.58S	28°45'30.16E	Erven
1149	IMPUMELELO	2968	0	26°20'32.16S	28°45'17.37E	Erven
1150	IMPUMELELO	2970	0	26°20'31.7S	28°45'18.29E	Erven
1151	IMPUMELELO	2975	0	26°20'30.49S	28°45'20.58E	Erven
1152	IMPUMELELO	2978	0	26°20'31.51S	28°45'19.97E	Erven
1153	IMPUMELELO	2980	0	26°20'31.99S	28°45'19.1E	Erven
1154	IMPUMELELO	2988	0	26°20'33.15S	28°45'19.25E	Erven
1155	IMPUMELELO	3000	0	26°20'33.92S	28°45'19.13E	Erven
1156	IMPUMELELO	3002	0	26°20'34.42S	28°45'18.24E	Erven
1157	IMPUMELELO	3004	0	26°20'35.11S	28°45'19.32E	Erven
1158	IMPUMELELO	3006	0	26°20'34.62S	28°45'20.24E	Erven
1159	IMPUMELELO	3009	0	26°20'33.87S	28°45'21.59E	Erven
1160	IMPUMELELO	3010	0	26°20'33.63S	28°45'22.06E	Erven
1161	IMPUMELELO	3012	0	26°20'33.9S	28°45'22.85E	Erven
1162	IMPUMELELO	3018	0	26°20'35.4S	28°45'20.12E	Erven
1163	IMPUMELELO	3029	0	26°20'34.86S	28°45'23.5E	Erven
1164	IMPUMELELO	3033	0	26°20'36.1S	28°45'22.47E	Erven
1165	IMPUMELELO	3047	0	26°20'31.32S	28°45'22.55E	Erven
1166	IMPUMELELO	3051	0	26°20'32.91S	28°45'23.58E	Erven
1167	IMPUMELELO	3082	0	26°20'29.93S	28°45'23.74E	Erven

1168	IMPUMELELO	3083	0	26°20'30.32S	28°45'23.99E	Erven
1169	IMPUMELELO	3088	0	26°20'32.18S	28°45'25.24E	Erven
1170	IMPUMELELO	3557	0	26°20'25.34S	28°45'44.89E	Erven
1171	IMPUMELELO	3565	0	26°20'24.85S	28°45'48.73E	Erven
1172	IMPUMELELO	3620	0	26°20'26.18S	28°45'46.98E	Erven
1173	IMPUMELELO	3626	0	26°20'26.6S	28°45'51.25E	Erven
1174	IMPUMELELO	3642	0	26°20'21.55S	28°45'55.6E	Erven
1175	IMPUMELELO	3654	0	26°20'24.73S	28°45'53.43E	Erven
1176	IMPUMELELO	3659	0	26°20'25.85S	28°45'51.35E	Erven
1177	IMPUMELELO	3666	0	26°20'24.03S	28°45'52.36E	Erven
1178	IMPUMELELO	3672	0	26°20'23.08S	28°45'52.82E	Erven
1179	IMPUMELELO	3673	0	26°20'23.33S	28°45'52.39E	Erven
1180	IMPUMELELO	3675	0	26°20'23.73S	28°45'51.57E	Erven
1181	IMPUMELELO	3679	0	26°20'24.65S	28°45'50.02E	Erven
1182	IMPUMELELO	3680	0	26°20'23.66S	28°45'49.32E	Erven
1183	IMPUMELELO	3692	0	26°20'21.07S	28°45'53.94E	Erven
1184	IMPUMELELO	3699	0	26°20'22.06S	28°45'51.05E	Erven
1185	IMPUMELELO	3706	0	26°20'23.16S	28°45'45.55E	Erven
1186	IMPUMELELO	3719	0	26°20'21.15S	28°45'46.26E	Erven
1187	IMPUMELELO	3725	0	26°20'18.24S	28°45'45.9E	Erven
1188	IMPUMELELO	3726	0	26°20'18.01S	28°45'46.36E	Erven
1189	IMPUMELELO	3727	0	26°20'17.78S	28°45'46.81E	Erven
1190	IMPUMELELO	3733	0	26°20'16.26S	28°45'49.57E	Erven
1191	IMPUMELELO	3741	0	26°20'19.43S	28°45'51.64E	Erven
1192	IMPUMELELO	3754	0	26°20'17.55S	28°45'48.48E	Erven
1193	IMPUMELELO	3755	0	26°20'17.8S	28°45'47.97E	Erven
1194	IMPUMELELO	3756	0	26°20'18.12S	28°45'47.43E	Erven
1195	IMPUMELELO	3792	0	26°20'17.84S	28°45'43.88E	Erven
1196	IMPUMELELO	3796	0	26°20'16.62S	28°45'45.34E	Erven
1197	IMPUMELELO	3801	0	26°20'15.52S	28°45'47.41E	Erven
1198	IMPUMELELO	3820	0	26°20'17.95S	28°45'42E	Erven
1199	IMPUMELELO	3402	0	26°20'31.8S	28°45'39.85E	Erven
1200	IMPUMELELO	3445	0	26°20'34.29S	28°45'33.48E	Erven
1201	IMPUMELELO	3451	0	26°20'32.93S	28°45'35.93E	Erven
1202	IMPUMELELO	3456	0	26°20'31.79S	28°45'37.99E	Erven
1203	IMPUMELELO	3468	0	26°20'33.29S	28°45'33.95E	Erven
1204	IMPUMELELO	3472	0	26°20'35.89S	28°45'32.77E	Erven
1205	IMPUMELELO	3474	0	26°20'36.35S	28°45'31.94E	Erven
1206	IMPUMELELO	3478	0	26°20'37.21S	28°45'30.31E	Erven
1207	IMPUMELELO	3479	0	26°20'37.47S	28°45'29.9E	Erven
1208	IMPUMELELO	3489	0	26°20'36.86S	28°45'32.29E	Erven
1209	IMPUMELELO	3515	0	26°20'34.51S	28°45'35.32E	Erven
1210	IMPUMELELO	3529	0	26°20'28.06S	28°45'39.78E	Erven
1211	IMPUMELELO	3536	0	26°20'30.14S	28°45'41.9E	Erven
1212	IMPUMELELO	3543	0	26°20'29.6S	28°45'42.86E	Erven
1213	IMPUMELELO	3547	0	26°20'28.04S	28°45'41.86E	Erven
1214	IMPUMELELO	3560	0	26°20'24.19S	28°45'47.02E	Erven
1215	IMPUMELELO	3562	0	26°20'23.73S	28°45'47.95E	Erven
1216	IMPUMELELO	3571	0	26°20'27.19S	28°45'50.29E	Erven
1217	IMPUMELELO	3572	0	26°20'27.5S	28°45'49.77E	Erven
1218	IMPUMELELO	3579	0	26°20'24.74S	28°45'47.91E	Erven
1219	IMPUMELELO	3580	0	26°20'24.63S	28°45'47.42E	Erven
1220	IMPUMELELO	3581	0	26°20'24.91S	28°45'46.93E	Erven
1221	IMPUMELELO	3596	0	26°20'30.13S	28°45'43.92E	Erven
1222	IMPUMELELO	3601	0	26°20'29.25S	28°45'46.26E	Erven
1223	IMPUMELELO	3605	0	26°20'27.43S	28°45'48.43E	Erven
1224	IMPUMELELO	3609	0	26°20'28.92S	28°45'45.6E	Erven
1225	IMPUMELELO	3623	0	26°20'27.39S	28°45'44.64E	Erven
1226	IMPUMELELO	3631	0	26°20'25.51S	28°45'53.35E	Erven
1227	IMPUMELELO	3632	0	26°20'25.25S	28°45'53.74E	Erven

1228	IMPUMELELO	3686	0	26°20'22.37S	28°45'51.77E	Erven
1229	IMPUMELELO	3712	0	26°20'22.28S	28°45'46.27E	Erven
1230	IMPUMELELO	3714	0	26°20'23.07S	28°45'46.8E	Erven
1231	IMPUMELELO	3724	0	26°20'18.6S	28°45'45.64E	Erven
1232	IMPUMELELO	3728	0	26°20'17.53S	28°45'47.25E	Erven
1233	IMPUMELELO	3737	0	26°20'17.89S	28°45'50.63E	Erven
1234	IMPUMELELO	3743	0	26°20'20.19S	28°45'52.14E	Erven
1235	IMPUMELELO	3748	0	26°20'18.95S	28°45'50.57E	Erven
1236	IMPUMELELO	3767	0	26°20'22.17S	28°45'48.41E	Erven
1237	IMPUMELELO	3768	0	26°20'21.78S	28°45'48.14E	Erven
1238	IMPUMELELO	3774	0	26°20'19.53S	28°45'46.65E	Erven
1239	IMPUMELELO	3808	0	26°20'16.04S	28°45'47.76E	Erven
1240	IMPUMELELO	3809	0	26°20'16.23S	28°45'47.32E	Erven
1241	IMPUMELELO	3819	0	26°20'18.38S	28°45'41.89E	Erven
1242	IMPUMELELO	3830	0	26°20'14.29S	28°45'46.07E	Erven
1243	IMPUMELELO	3843	0	26°20'15.77S	28°45'44.75E	Erven
1244	IMPUMELELO	3845	0	26°20'16.19S	28°45'43.92E	Erven
1245	IMPUMELELO	3846	0	26°20'16.45S	28°45'43.42E	Erven
1246	IMPUMELELO	3853	0	26°20'17.26S	28°45'40.25E	Erven
1247	IMPUMELELO	3863	0	26°20'13.57S	28°45'43.86E	Erven
1248	IMPUMELELO	3871	0	26°20'12.49S	28°45'47.11E	Erven
1249	IMPUMELELO	3872	0	26°20'12.74S	28°45'46.71E	Erven
1250	IMPUMELELO	3879	0	26°20'14.3S	28°45'43.8E	Erven
1251	IMPUMELELO	3880	0	26°20'14.53S	28°45'43.38E	Erven
1252	IMPUMELELO	3883	0	26°20'15.76S	28°45'41.69E	Erven
1253	IMPUMELELO	3888	0	26°20'17.81S	28°45'40.82E	Erven
1254	IMPUMELELO	3892	0	26°20'28.61S	28°45'53.66E	Erven
1255	IMPUMELELO	3903	0	26°20'20.04S	28°45'27.24E	Erven
1256	IMPUMELELO	3847	0	26°20'17.23S	28°45'42.8E	Erven
1257	IMPUMELELO	3861	0	26°20'14.02S	28°45'43.04E	Erven
1258	IMPUMELELO	3864	0	26°20'13.33S	28°45'44.3E	Erven
1259	IMPUMELELO	3878	0	26°20'14.07S	28°45'44.22E	Erven
1260	IMPUMELELO	3881	0	26°20'14.74S	28°45'42.95E	Erven
1261	IMPUMELELO	3884	0	26°20'16.08S	28°45'41.37E	Erven
1262	IMPUMELELO	3889	0	26°20'18.22S	28°45'40.75E	Erven
1263	IMPUMELELO	3636	0	26°20'24.2S	28°45'55.25E	Erven
1264	IMPUMELELO	3639	0	26°20'22.79S	28°45'55.41E	Erven
1265	IMPUMELELO	3658	0	26°20'25.63S	28°45'51.79E	Erven
1266	IMPUMELELO	3682	0	26°20'23.25S	28°45'50.18E	Erven
1267	IMPUMELELO	3697	0	26°20'21.62S	28°45'51.83E	Erven
1268	IMPUMELELO	3705	0	26°20'23.59S	28°45'45.81E	Erven
1269	IMPUMELELO	3707	0	26°20'22.72S	28°45'45.33E	Erven
1270	IMPUMELELO	3715	0	26°20'22.73S	28°45'47.31E	Erven
1271	IMPUMELELO	3722	0	26°20'20.05S	28°45'45.37E	Erven
1272	IMPUMELELO	3738	0	26°20'18.25S	28°45'50.87E	Erven
1273	IMPUMELELO	3740	0	26°20'19.04S	28°45'51.4E	Erven
1274	IMPUMELELO	3742	0	26°20'19.77S	28°45'51.91E	Erven
1275	IMPUMELELO	3746	0	26°20'19.71S	28°45'51.04E	Erven
1276	IMPUMELELO	3747	0	26°20'19.34S	28°45'50.82E	Erven
1277	IMPUMELELO	3762	0	26°20'20.32S	28°45'47.99E	Erven
1278	IMPUMELELO	3770	0	26°20'21.03S	28°45'47.66E	Erven
1279	IMPUMELELO	3784	0	26°20'20.88S	28°45'49.71E	Erven
1280	IMPUMELELO	3793	0	26°20'17.37S	28°45'44.02E	Erven
1281	IMPUMELELO	3795	0	26°20'16.9S	28°45'44.93E	Erven
1282	IMPUMELELO	3802	0	26°20'15.32S	28°45'47.86E	Erven
1283	IMPUMELELO	3815	0	26°20'17.61S	28°45'44.82E	Erven
1284	IMPUMELELO	3817	0	26°20'18.38S	28°45'44.43E	Erven
1285	IMPUMELELO	3821	0	26°20'17.57S	28°45'42.06E	Erven
1286	IMPUMELELO	3822	0	26°20'17.13S	28°45'42.13E	Erven
1287	IMPUMELELO	3831	0	26°20'14.11S	28°45'46.49E	Erven

1288	IMPUMELELO	3838	0	26°20'14.56S	28°45'46.85E	Erven
1289	IMPUMELELO	3840	0	26°20'15.05S	28°45'45.99E	Erven
1290	IMPUMELELO	3842	0	26°20'15.5S	28°45'45.16E	Erven
1291	IMPUMELELO	3850	0	26°20'18.53S	28°45'42.56E	Erven
1292	IMPUMELELO	3825	0	26°20'15.47S	28°45'43.99E	Erven
1293	IMPUMELELO	3829	0	26°20'14.54S	28°45'45.67E	Erven
1294	IMPUMELELO	3851	0	26°20'18.1S	28°45'40.09E	Erven
1295	IMPUMELELO	3865	0	26°20'13.12S	28°45'44.71E	Erven
1296	IMPUMELELO	3867	0	26°20'12.67S	28°45'45.54E	Erven
1297	IMPUMELELO	3873	0	26°20'12.97S	28°45'46.28E	Erven
1298	IMPUMELELO	3891	0	26°20'24.91S	28°46'1.28E	Erven
1299	IMPUMELELO	3896	0	26°20'38.97S	28°45'31.83E	Erven
1300	IMPUMELELO	3915	0	26°20'26.28S	28°45'36.71E	Erven
1301	IMPUMELELO	3916	0	26°20'22.81S	28°45'41.43E	Erven
1302	IMPUMELELO	3091	0	26°20'31.9S	28°45'25.8E	Erven
1303	IMPUMELELO	3093	0	26°20'31.14S	28°45'25.3E	Erven
1304	IMPUMELELO	3098	0	26°20'29.26S	28°45'24.05E	Erven
1305	IMPUMELELO	3101	0	26°20'28.13S	28°45'23.33E	Erven
1306	IMPUMELELO	3119	0	26°20'31.73S	28°45'27.09E	Erven
1307	IMPUMELELO	3129	0	26°20'28.05S	28°45'25.36E	Erven
1308	IMPUMELELO	3145	0	26°20'29.36S	28°45'27.6E	Erven
1309	IMPUMELELO	3149	0	26°20'30.88S	28°45'28.63E	Erven
1310	IMPUMELELO	3153	0	26°20'29.46S	28°45'28.39E	Erven
1311	IMPUMELELO	3159	0	26°20'27.18S	28°45'26.92E	Erven
1312	IMPUMELELO	3164	0	26°20'25.32S	28°45'25.63E	Erven
1313	IMPUMELELO	3184	0	26°20'28.22S	28°45'29.74E	Erven
1314	IMPUMELELO	3192	0	26°20'25.23S	28°45'27.73E	Erven
1315	IMPUMELELO	3194	0	26°20'24.5S	28°45'27.2E	Erven
1316	IMPUMELELO	3201	0	26°20'26.22S	28°45'29.72E	Erven
1317	IMPUMELELO	3202	0	26°20'26.58S	28°45'29.97E	Erven
1318	IMPUMELELO	3216	0	26°20'26.64S	28°45'30.78E	Erven
1319	IMPUMELELO	3218	0	26°20'25.9S	28°45'30.3E	Erven
1320	IMPUMELELO	3229	0	26°20'24.63S	28°45'30.79E	Erven
1321	IMPUMELELO	3235	0	26°20'26.85S	28°45'32.28E	Erven
1322	IMPUMELELO	3264	0	26°20'25.83S	28°45'33.69E	Erven
1323	IMPUMELELO	3271	0	26°20'28.56S	28°45'35.53E	Erven
1324	IMPUMELELO	3274	0	26°20'28.26S	28°45'36.1E	Erven
1325	IMPUMELELO	3282	0	26°20'25.12S	28°45'34.02E	Erven
1326	IMPUMELELO	3285	0	26°20'23.95S	28°45'33.23E	Erven
1327	IMPUMELELO	3291	0	26°20'33.44S	28°45'26.07E	Erven
1328	IMPUMELELO	3305	0	26°20'32.89S	28°45'28.48E	Erven
1329	IMPUMELELO	3313	0	26°20'30.43S	28°45'31.6E	Erven
1330	IMPUMELELO	3315	0	26°20'30.04S	28°45'32.41E	Erven
1331	IMPUMELELO	3321	0	26°20'29.43S	28°45'34.81E	Erven
1332	IMPUMELELO	3869	0	26°20'12.22S	28°45'46.38E	Erven
1333	IMPUMELELO	3874	0	26°20'13.18S	28°45'45.86E	Erven
1334	IMPUMELELO	3882	0	26°20'15.4S	28°45'41.92E	Erven
1335	IMPUMELELO	3886	0	26°20'16.94S	28°45'40.98E	Erven
1336	IMPUMELELO	3887	0	26°20'17.37S	28°45'40.94E	Erven
1337	IMPUMELELO	3893	0	26°20'30.82S	28°45'50.3E	Erven
1338	IMPUMELELO	3912	0	26°20'4.55S	28°45'55.55E	Erven
1339	IMPUMELELO	3326	0	26°20'30.56S	28°45'32.74E	Erven
1340	IMPUMELELO	3330	0	26°20'31.45S	28°45'31.04E	Erven
1341	IMPUMELELO	3341	0	26°20'35.66S	28°45'27.2E	Erven
1342	IMPUMELELO	3342	0	26°20'35.85S	28°45'26.77E	Erven
1343	IMPUMELELO	3347	0	26°20'37.86S	28°45'27.68E	Erven
1344	IMPUMELELO	3349	0	26°20'38.67S	28°45'28.22E	Erven
1345	IMPUMELELO	3350	0	26°20'39.09S	28°45'28.4E	Erven
1346	IMPUMELELO	3390	0	26°20'28.74S	28°45'38.64E	Erven
1347	IMPUMELELO	3391	0	26°20'29.23S	28°45'38.86E	Erven

1348	IMPUMELELO	3399	0	26°20'32.29S	28°45'40.91E	Erven
1349	IMPUMELELO	3408	0	26°20'29.74S	28°45'38.12E	Erven
1350	IMPUMELELO	3413	0	26°20'30.85S	28°45'36.15E	Erven
1351	IMPUMELELO	3417	0	26°20'31.7S	28°45'34.52E	Erven
1352	IMPUMELELO	3460	0	26°20'31.53S	28°45'37.22E	Erven
1353	IMPUMELELO	3487	0	26°20'37.31S	28°45'31.46E	Erven
1354	IMPUMELELO	3493	0	26°20'35.68S	28°45'34.43E	Erven
1355	IMPUMELELO	3511	0	26°20'33.62S	28°45'36.93E	Erven
1356	IMPUMELELO	3514	0	26°20'34.31S	28°45'35.75E	Erven
1357	IMPUMELELO	3528	0	26°20'28.46S	28°45'40.05E	Erven
1358	IMPUMELELO	3533	0	26°20'28.96S	28°45'41.1E	Erven
1359	IMPUMELELO	3537	0	26°20'30.5S	28°45'42.14E	Erven
1360	IMPUMELELO	3541	0	26°20'30.39S	28°45'43.42E	Erven
1361	IMPUMELELO	3542	0	26°20'29.99S	28°45'43.11E	Erven
1362	IMPUMELELO	3551	0	26°20'26.79S	28°45'42.21E	Erven
1363	IMPUMELELO	3559	0	26°20'24.41S	28°45'46.62E	Erven
1364	IMPUMELELO	3564	0	26°20'24.47S	28°45'48.5E	Erven
1365	IMPUMELELO	3566	0	26°20'25.25S	28°45'49.02E	Erven
1366	IMPUMELELO	3568	0	26°20'26.03S	28°45'49.51E	Erven
1367	IMPUMELELO	3569	0	26°20'26.44S	28°45'49.78E	Erven
1368	IMPUMELELO	3578	0	26°20'25.16S	28°45'48.2E	Erven
1369	IMPUMELELO	3583	0	26°20'25.83S	28°45'45.19E	Erven
1370	IMPUMELELO	3589	0	26°20'27.33S	28°45'42.51E	Erven
1371	IMPUMELELO	3610	0	26°20'29.18S	28°45'45.18E	Erven
1372	IMPUMELELO	3612	0	26°20'28.42S	28°45'44.1E	Erven
1373	IMPUMELELO	3614	0	26°20'27.95S	28°45'44.97E	Erven
1374	IMPUMELELO	3621	0	26°20'26.89S	28°45'45.59E	Erven
1375	IMPUMELELO	3628	0	26°20'26.15S	28°45'52.14E	Erven
1376	IMPUMELELO	3633	0	26°20'25.06S	28°45'54.18E	Erven
1377	IMPUMELELO	3634	0	26°20'24.81S	28°45'54.57E	Erven
1378	IMPUMELELO	3644	0	26°20'21.04S	28°45'55.03E	Erven
1379	IMPUMELELO	3653	0	26°20'24.5S	28°45'53.81E	Erven
1380	IMPUMELELO	3664	0	26°20'24.49S	28°45'51.53E	Erven
1381	IMPUMELELO	3674	0	26°20'23.53S	28°45'51.99E	Erven
1382	IMPUMELELO	3676	0	26°20'23.94S	28°45'51.19E	Erven
1383	IMPUMELELO	3683	0	26°20'23.01S	28°45'50.58E	Erven
1384	IMPUMELELO	3691	0	26°20'21.65S	28°45'53.89E	Erven
1385	IMPUMELELO	3695	0	26°20'21.18S	28°45'52.64E	Erven
1386	IMPUMELELO	3696	0	26°20'21.43S	28°45'52.21E	Erven
1387	IMPUMELELO	3698	0	26°20'21.85S	28°45'51.44E	Erven
1388	IMPUMELELO	3708	0	26°20'20.7S	28°45'45.13E	Erven
1389	IMPUMELELO	3713	0	26°20'22.68S	28°45'46.55E	Erven
1390	IMPUMELELO	3718	0	26°20'21.56S	28°45'46.56E	Erven
1391	IMPUMELELO	3729	0	26°20'17.3S	28°45'47.69E	Erven
1392	IMPUMELELO	3731	0	26°20'16.79S	28°45'48.6E	Erven
1393	IMPUMELELO	3732	0	26°20'16.56S	28°45'49.04E	Erven
1394	IMPUMELELO	3735	0	26°20'17.14S	28°45'50.12E	Erven
1395	IMPUMELELO	3749	0	26°20'18.6S	28°45'50.34E	Erven
1396	IMPUMELELO	3757	0	26°20'18.37S	28°45'46.79E	Erven
1397	IMPUMELELO	3758	0	26°20'18.82S	28°45'46.97E	Erven
1398	IMPUMELELO	3759	0	26°20'19.23S	28°45'47.23E	Erven
1399	IMPUMELELO	3769	0	26°20'21.38S	28°45'47.91E	Erven
1400	IMPUMELELO	3775	0	26°20'19.02S	28°45'46.33E	Erven
1401	IMPUMELELO	3778	0	26°20'19.32S	28°45'49.45E	Erven
1402	IMPUMELELO	3787	0	26°20'19.61S	28°45'48.88E	Erven
1403	IMPUMELELO	3789	0	26°20'18.78S	28°45'48.31E	Erven
1404	IMPUMELELO	3790	0	26°20'18.69S	28°45'43.7E	Erven
1405	IMPUMELELO	3794	0	26°20'17.09S	28°45'44.53E	Erven
1406	IMPUMELELO	3813	0	26°20'17.14S	28°45'45.71E	Erven
1407	IMPUMELELO	3823	0	26°20'15.93S	28°45'43.12E	Erven

1408	IMPUMELELO	3841	0	26°20'15.27S	28°45'45.57E	Erven
1409	IMPUMELELO	3844	0	26°20'15.95S	28°45'44.32E	Erven
1410	IMPUMELELO	3858	0	26°20'15.41S	28°45'41.14E	Erven
1411	IMPUMELELO	3859	0	26°20'15.01S	28°45'41.43E	Erven
1412	IMPUMELELO	3875	0	26°20'13.41S	28°45'45.46E	Erven
1413	IMPUMELELO	3895	0	26°20'35.93S	28°45'39.7E	Erven
1414	IMPUMELELO	3897	0	26°20'38.03S	28°45'23.37E	Erven
1415	IMPUMELELO	3905	0	26°20'22.36S	28°45'35.77E	Erven
1416	IMPUMELELO	3907	0	26°20'10.77S	28°45'44.28E	Erven
1417	IMPUMELELO	3909	0	26°20'12.41S	28°45'52.46E	Erven
1418	IMPUMELELO	2321	0	26°20'53.54S	28°45'37.99E	Erven
1419	IMPUMELELO	2323	0	26°20'53.28S	28°45'37.12E	Erven
1420	IMPUMELELO	2324	0	26°20'53.14S	28°45'36.7E	Erven
1421	IMPUMELELO	2328	0	26°20'52.19S	28°45'35.48E	Erven
1422	IMPUMELELO	2329	0	26°20'52.29S	28°45'35.97E	Erven
1423	IMPUMELELO	2333	0	26°20'52.8S	28°45'37.76E	Erven
1424	IMPUMELELO	2342	0	26°20'50.33S	28°45'25.23E	Erven
1425	IMPUMELELO	2344	0	26°20'49.56S	28°45'24.72E	Erven
1426	IMPUMELELO	2347	0	26°20'48.4S	28°45'23.95E	Erven
1427	IMPUMELELO	2359	0	26°20'51.1S	28°45'29.96E	Erven
1428	IMPUMELELO	2371	0	26°20'45.43S	28°45'37.88E	Erven
1429	IMPUMELELO	2382	0	26°20'45.15S	28°45'43.84E	Erven
1430	IMPUMELELO	2384	0	26°20'46.74S	28°45'40.65E	Erven
1431	IMPUMELELO	2385	0	26°20'46.8S	28°45'40.21E	Erven
1432	IMPUMELELO	2390	0	26°20'47.15S	28°45'37.62E	Erven
1433	IMPUMELELO	2394	0	26°20'46.87S	28°45'36.04E	Erven
1434	IMPUMELELO	2396	0	26°20'46.66S	28°45'37.04E	Erven
1435	IMPUMELELO	2402	0	26°20'46.27S	28°45'40.08E	Erven
1436	IMPUMELELO	2423	0	26°20'50.96S	28°45'42.26E	Erven
1437	IMPUMELELO	2476	0	26°20'41.56S	28°45'50.02E	Erven
1438	IMPUMELELO	2477	0	26°20'41.32S	28°45'50.56E	Erven
1439	IMPUMELELO	2479	0	26°20'40.8S	28°45'51.55E	Erven
1440	IMPUMELELO	2483	0	26°20'39.79S	28°45'53.59E	Erven
1441	IMPUMELELO	2497	0	26°20'43.36S	28°46'0.16E	Erven
1442	IMPUMELELO	2507	0	26°20'49.74S	28°45'59.07E	Erven
1443	IMPUMELELO	2520	0	26°20'46.59S	28°45'58.3E	Erven
1444	IMPUMELELO	2528	0	26°20'44.39S	28°45'57.99E	Erven
1445	IMPUMELELO	2532	0	26°20'42.69S	28°45'58.27E	Erven
1446	IMPUMELELO	2534	0	26°20'42.11S	28°45'57.19E	Erven
1447	IMPUMELELO	2541	0	26°20'45.09S	28°45'56.69E	Erven
1448	IMPUMELELO	2544	0	26°20'46.35S	28°45'56.5E	Erven
1449	IMPUMELELO	2545	0	26°20'46.79S	28°45'56.46E	Erven
1450	IMPUMELELO	2553	0	26°20'43.72S	28°45'56.25E	Erven
1451	IMPUMELELO	2558	0	26°20'41.87S	28°45'55.32E	Erven
1452	IMPUMELELO	2580	0	26°20'42.19S	28°45'54.66E	Erven
1453	IMPUMELELO	2592	0	26°20'45.47S	28°45'52.94E	Erven
1454	IMPUMELELO	2602	0	26°20'43.25S	28°45'52.62E	Erven
1455	IMPUMELELO	2616	0	26°20'46.08S	28°45'50.94E	Erven
1456	IMPUMELELO	2645	0	26°20'52.78S	28°45'47.91E	Erven
1457	IMPUMELELO	2659	0	26°20'47.89S	28°45'47.99E	Erven
1458	IMPUMELELO	2668	0	26°20'50.41S	28°45'50.22E	Erven
1459	IMPUMELELO	2695	0	26°20'53.05S	28°45'51.71E	Erven
1460	IMPUMELELO	2716	0	26°20'52.66S	28°45'53.63E	Erven
1461	IMPUMELELO	2738	0	26°20'52.01S	28°45'55.6E	Erven
1462	IMPUMELELO	2743	0	26°20'54.27S	28°45'55.24E	Erven
1463	IMPUMELELO	2745	0	26°20'55.22S	28°45'54.97E	Erven
1464	IMPUMELELO	2759	0	26°20'51.93S	28°45'54.9E	Erven
1465	IMPUMELELO	2761	0	26°20'51.04S	28°45'55.06E	Erven
1466	IMPUMELELO	2766	0	26°20'53.11S	28°45'57.31E	Erven
1467	IMPUMELELO	2790	0	26°20'53.33S	28°45'58.49E	Erven

1468	IMPUMELELO	2806	0	26°20'57.14S	28°45'52.67E	Erven
1469	IMPUMELELO	2814	0	26°20'58.11S	28°45'56.54E	Erven
1470	IMPUMELELO	2826	0	26°20'57.24S	28°45'51.01E	Erven
1471	IMPUMELELO	2829	0	26°20'59.36S	28°45'51.37E	Erven
1472	IMPUMELELO	2842	0	26°20'47.04S	28°45'42.42E	Erven
1473	IMPUMELELO	2844	0	26°20'47.41S	28°45'46.01E	Erven
1474	IMPUMELELO	2852	0	26°20'48.3S	28°45'50.64E	Erven
1475	IMPUMELELO	2860	0	26°20'47.55S	28°45'59.47E	Erven
1476	IMPUMELELO	2882	0	26°20'31.16S	28°45'16.09E	Erven
1477	IMPUMELELO	2885	0	26°20'29.94S	28°45'15.27E	Erven
1478	IMPUMELELO	2907	0	26°20'25.8S	28°45'21.04E	Erven
1479	IMPUMELELO	2910	0	26°20'26.46S	28°45'19.84E	Erven
1480	IMPUMELELO	2923	0	26°20'29.16S	28°45'19.64E	Erven
1481	IMPUMELELO	2927	0	26°20'27.61S	28°45'18.96E	Erven
1482	IMPUMELELO	2931	0	26°20'26.76S	28°45'20.58E	Erven
1483	IMPUMELELO	2933	0	26°20'26.34S	28°45'21.38E	Erven
1484	IMPUMELELO	2937	0	26°20'25.47S	28°45'22.98E	Erven
1485	IMPUMELELO	2949	0	26°20'21.08S	28°45'29.83E	Erven
1486	IMPUMELELO	2955	0	26°20'21.35S	28°45'30.57E	Erven
1487	IMPUMELELO	2959	0	26°20'22.28S	28°45'28.89E	Erven
1488	IMPUMELELO	2967	0	26°20'32.44S	28°45'16.92E	Erven
1489	IMPUMELELO	2977	0	26°20'31.28S	28°45'20.48E	Erven
1490	IMPUMELELO	2995	0	26°20'32.69S	28°45'21.44E	Erven
1491	IMPUMELELO	3005	0	26°20'34.87S	28°45'19.78E	Erven
1492	IMPUMELELO	3014	0	26°20'34.4S	28°45'21.92E	Erven
1493	IMPUMELELO	3017	0	26°20'35.12S	28°45'20.58E	Erven
1494	IMPUMELELO	3022	0	26°20'36.56S	28°45'20.3E	Erven
1495	IMPUMELELO	3060	0	26°20'33.37S	28°45'24.68E	Erven
1496	IMPUMELELO	3067	0	26°20'30.61S	28°45'22.84E	Erven
1497	IMPUMELELO	3069	0	26°20'29.84S	28°45'22.33E	Erven
1498	IMPUMELELO	3077	0	26°20'28.07S	28°45'22.49E	Erven
1499	IMPUMELELO	3085	0	26°20'31.07S	28°45'24.49E	Erven
1500	IMPUMELELO	3089	0	26°20'32.58S	28°45'25.51E	Erven
1501	IMPUMELELO	3092	0	26°20'31.53S	28°45'25.56E	Erven
1502	IMPUMELELO	3096	0	26°20'30.02S	28°45'24.55E	Erven
1503	IMPUMELELO	3103	0	26°20'27.4S	28°45'22.82E	Erven
1504	IMPUMELELO	3106	0	26°20'26.85S	28°45'23.81E	Erven
1505	IMPUMELELO	3111	0	26°20'28.73S	28°45'25.06E	Erven
1506	IMPUMELELO	3124	0	26°20'29.93S	28°45'26.59E	Erven
1507	IMPUMELELO	3128	0	26°20'28.42S	28°45'25.62E	Erven
1508	IMPUMELELO	3144	0	26°20'28.99S	28°45'27.36E	Erven
1509	IMPUMELELO	3148	0	26°20'30.5S	28°45'28.36E	Erven
1510	IMPUMELELO	3152	0	26°20'29.83S	28°45'28.63E	Erven
1511	IMPUMELELO	3170	0	26°20'26.7S	28°45'27.91E	Erven
1512	IMPUMELELO	3173	0	26°20'27.8S	28°45'28.67E	Erven
1513	IMPUMELELO	3175	0	26°20'28.55S	28°45'29.15E	Erven
1514	IMPUMELELO	3178	0	26°20'29.67S	28°45'29.9E	Erven
1515	IMPUMELELO	3180	0	26°20'29.75S	28°45'30.69E	Erven
1516	IMPUMELELO	3187	0	26°20'27.1S	28°45'28.96E	Erven
1517	IMPUMELELO	3212	0	26°20'28.13S	28°45'31.78E	Erven
1518	IMPUMELELO	3214	0	26°20'27.38S	28°45'31.26E	Erven
1519	IMPUMELELO	3233	0	26°20'26.1S	28°45'31.76E	Erven
1520	IMPUMELELO	3252	0	26°20'23.56S	28°45'30.85E	Erven
1521	IMPUMELELO	3253	0	26°20'23.16S	28°45'30.62E	Erven
1522	IMPUMELELO	3254	0	26°20'22.79S	28°45'30.3E	Erven
1523	IMPUMELELO	3255	0	26°20'22.24S	28°45'31.38E	Erven
1524	IMPUMELELO	3260	0	26°20'24.24S	28°45'32.66E	Erven
1525	IMPUMELELO	3287	0	26°20'23.17S	28°45'32.7E	Erven
1526	IMPUMELELO	3325	0	26°20'30.35S	28°45'33.14E	Erven
1527	IMPUMELELO	3328	0	26°20'30.98S	28°45'31.95E	Erven

1528	IMPUMELELO	3348	0	26°20'38.28S	28°45'27.96E	Erven
1529	IMPUMELELO	3353	0	26°20'38.21S	28°45'27.12E	Erven
1530	IMPUMELELO	3357	0	26°20'36.61S	28°45'26.07E	Erven
1531	IMPUMELELO	3359	0	26°20'35.8S	28°45'25.53E	Erven
1532	IMPUMELELO	3363	0	26°20'34.89S	28°45'27.24E	Erven
1533	IMPUMELELO	3370	0	26°20'33.41S	28°45'30.05E	Erven
1534	IMPUMELELO	3384	0	26°20'30.1S	28°45'36.18E	Erven
1535	IMPUMELELO	3387	0	26°20'29.45S	28°45'37.35E	Erven
1536	IMPUMELELO	3404	0	26°20'31S	28°45'39.34E	Erven
1537	IMPUMELELO	3412	0	26°20'30.62S	28°45'36.48E	Erven
1538	IMPUMELELO	3444	0	26°20'34.44S	28°45'33.02E	Erven
1539	IMPUMELELO	3461	0	26°20'31.7S	28°45'36.79E	Erven
1540	IMPUMELELO	3463	0	26°20'32.18S	28°45'35.99E	Erven
1541	IMPUMELELO	3465	0	26°20'32.63S	28°45'35.17E	Erven
1542	IMPUMELELO	3466	0	26°20'32.82S	28°45'34.77E	Erven
1543	IMPUMELELO	3471	0	26°20'33.98S	28°45'32.69E	Erven
1544	IMPUMELELO	3481	0	26°20'37.91S	28°45'29.05E	Erven
1545	IMPUMELELO	3498	0	26°20'34.62S	28°45'36.5E	Erven
1546	IMPUMELELO	3501	0	26°20'33.95S	28°45'37.74E	Erven
1547	IMPUMELELO	3507	0	26°20'32.74S	28°45'38.6E	Erven
1548	IMPUMELELO	3513	0	26°20'34.05S	28°45'36.14E	Erven
1549	IMPUMELELO	3532	0	26°20'28.56S	28°45'40.86E	Erven
1550	IMPUMELELO	3534	0	26°20'29.35S	28°45'41.36E	Erven
1551	IMPUMELELO	3545	0	26°20'28.79S	28°45'42.35E	Erven
1552	IMPUMELELO	3548	0	26°20'27.66S	28°45'41.58E	Erven
1553	IMPUMELELO	3587	0	26°20'26.82S	28°45'43.46E	Erven
1554	IMPUMELELO	3600	0	26°20'29.49S	28°45'45.96E	Erven
1555	IMPUMELELO	3603	0	26°20'28.15S	28°45'48.31E	Erven
1556	IMPUMELELO	3608	0	26°20'28.63S	28°45'46.07E	Erven
1557	IMPUMELELO	3618	0	26°20'26.42S	28°45'47.78E	Erven
1558	IMPUMELELO	3625	0	26°20'27.87S	28°45'43.77E	Erven
1559	IMPUMELELO	3630	0	26°20'25.73S	28°45'52.97E	Erven
1560	IMPUMELELO	3638	0	26°20'23.24S	28°45'55.4E	Erven
1561	IMPUMELELO	3641	0	26°20'21.97S	28°45'55.56E	Erven
1562	IMPUMELELO	3648	0	26°20'22.74S	28°45'54.76E	Erven
1563	IMPUMELELO	3657	0	26°20'25.39S	28°45'52.19E	Erven
1564	IMPUMELELO	3661	0	26°20'25.12S	28°45'50.32E	Erven
1565	IMPUMELELO	3665	0	26°20'24.27S	28°45'51.96E	Erven
1566	IMPUMELELO	3685	0	26°20'22.6S	28°45'51.37E	Erven
1567	IMPUMELELO	3687	0	26°20'22.15S	28°45'52.19E	Erven
1568	IMPUMELELO	3689	0	26°20'21.69S	28°45'52.97E	Erven
1569	IMPUMELELO	3701	0	26°20'22.5S	28°45'50.19E	Erven
1570	IMPUMELELO	3702	0	26°20'22.76S	28°45'49.84E	Erven
1571	IMPUMELELO	3703	0	26°20'22.94S	28°45'49.47E	Erven
1572	IMPUMELELO	3716	0	26°20'22.34S	28°45'47.09E	Erven
1573	IMPUMELELO	3721	0	26°20'20.41S	28°45'45.76E	Erven
1574	IMPUMELELO	3739	0	26°20'18.67S	28°45'51.13E	Erven
1575	IMPUMELELO	3744	0	26°20'20.48S	28°45'51.59E	Erven
1576	IMPUMELELO	3766	0	26°20'21.85S	28°45'48.96E	Erven
1577	IMPUMELELO	3777	0	26°20'18.88S	28°45'49.15E	Erven
1578	IMPUMELELO	3786	0	26°20'20.06S	28°45'49.14E	Erven
1579	IMPUMELELO	3791	0	26°20'18.3S	28°45'43.81E	Erven
1580	IMPUMELELO	3798	0	26°20'16.21S	28°45'46.22E	Erven
1581	IMPUMELELO	3824	0	26°20'15.67S	28°45'43.56E	Erven
1582	IMPUMELELO	3826	0	26°20'15.23S	28°45'44.42E	Erven
1583	IMPUMELELO	3828	0	26°20'14.78S	28°45'45.26E	Erven
1584	IMPUMELELO	3833	0	26°20'13.62S	28°45'47.31E	Erven
1585	IMPUMELELO	3835	0	26°20'13.91S	28°45'48.07E	Erven
1586	IMPUMELELO	3848	0	26°20'17.67S	28°45'42.71E	Erven
1587	IMPUMELELO	3856	0	26°20'16.06S	28°45'40.58E	Erven

1588	IMPUMELELO	3899	0	26°20'33.7S	28°45'15.17E	Erven
1589	IMPUMELELO	3908	0	26°20'7.75S	28°45'49.71E	Erven
1590	IMPUMELELO	3910	0	26°20'17.83S	28°45'54.27E	Erven
1591	NOOITGEDACHT	294	0	26°21'12.42S	28°44'46.01E	Farm
1592	COUWENBURG	300	0	26°17'18.51S	28°46'33.67E	Farm
1593	HOLSPRUIT	303	0	26°20'16.34S	28°51'30.69E	Farm
1594	ZEERKRY	292	0	26°19'43.78S	28°44'3.72E	Farm
1595	LEEUWKOP	299	0	26°20'6.92S	28°47'30.22E	Farm
1596	WINTERHOEK	314	0	26°22'28.94S	28°49'53.91E	Farm
1597	STEENKOOLSPRUIT	302	0	26°18'17.08S	28°51'23.92E	Farm
1598	GOEDE HOOP	290	0	26°17'12.37S	28°44'59.97E	Farm
1599	ENKELDEBOSCH	301	0	26°18'25.27S	28°48'56.17E	Farm
1600	RIETFONTEIN	313	0	26°22'10.44S	28°52'27.18E	Farm
1601	PALMIETFONTEIN	316	0	26°23'48.24S	28°47'0.99E	Farm
1602	NOOITGEDACHT	294	23	26°20'24.14S	28°45'42.37E	Farm Portion
1603	NOOITGEDACHT	294	17	26°19'41.71S	28°45'0.6E	Farm Portion
1604	LEEUWKOP	299	4	26°19'36.27S	28°46'5.22E	Farm Portion
1605	RIETFONTEIN	313	15	26°20'53.89S	28°51'15.89E	Farm Portion
1606	COUWENBURG	300	6	26°18'47.03S	28°46'1.21E	Farm Portion
1607	ENKELDEBOSCH	301	11	26°20'5.28S	28°49'28.38E	Farm Portion
1608	ENKELDEBOSCH	301	5	26°17'39.27S	28°48'18.1E	Farm Portion
1609	PALMIETFONTEIN	316	26	26°23'41.47S	28°48'56.78E	Farm Portion
1610	NOOITGEDACHT	294	56	26°20'47.51S	28°45'42.93E	Farm Portion
1611	LEEUWKOP	299	6	26°20'58.94S	28°47'59.03E	Farm Portion
1612	ENKELDEBOSCH	301	12	26°18'25.11S	28°47'42.76E	Farm Portion
1613	RIETFONTEIN	313	23	26°23'53.94S	28°51'42.04E	Farm Portion
1614	WINTERHOEK	314	25	26°23'27.37S	28°50'12.04E	Farm Portion
1615	WINTERHOEK	314	12	26°23'12.47S	28°50'56.27E	Farm Portion
1616	WINTERHOEK	314	6	26°23'57.47S	28°50'51.03E	Farm Portion
1617	WINTERHOEK	314	9	26°22'52.26S	28°49'10.17E	Farm Portion
1618	PALMIETFONTEIN	316	19	26°24'6.57S	28°49'10.32E	Farm Portion
1619	PALMIETFONTEIN	316	21	26°23'28.01S	28°48'38.55E	Farm Portion
1620	GOEDE HOOP	290	3	26°18'52.34S	28°44'34.09E	Farm Portion
1621	WINTERHOEK	314	28	26°23'42.47S	28°51'4.5E	Farm Portion
1622	PALMIETFONTEIN	316	23	26°23'12.14S	28°48'46.33E	Farm Portion
1623	ZEERKRY	292	0	26°19'37.67S	28°44'15.78E	Farm Portion
1624	NOOITGEDACHT	294	18	26°19'59.14S	28°45'27.14E	Farm Portion
1625	LEEUWKOP	299	7	26°20'23.41S	28°46'34.78E	Farm Portion
1626	ENKELDEBOSCH	301	4	26°20'13.64S	28°49'56.58E	Farm Portion
1627	ENKELDEBOSCH	301	9	26°19'5.88S	28°48'48.73E	Farm Portion
1628	WINTERHOEK	314	22	26°22'8.9S	28°50'32.84E	Farm Portion
1629	WINTERHOEK	314	2	26°23'32.71S	28°49'25.68E	Farm Portion
1630	PALMIETFONTEIN	316	25	26°23'34.96S	28°48'51.91E	Farm Portion
1631	PALMIETFONTEIN	316	31	26°23'53.04S	28°48'33.46E	Farm Portion
1632	PALMIETFONTEIN	316	39	26°23'1.86S	28°48'42.47E	Farm Portion
1633	ENKELDEBOSCH	301	13	26°18'30.62S	28°47'14.07E	Farm Portion
1634	HOLSPRUIT	303	1	26°20'31.48S	28°50'53.14E	Farm Portion
1635	RIETFONTEIN	313	8	26°23'22.08S	28°52'5.71E	Farm Portion
1636	RIETFONTEIN	313	22	26°23'52.18S	28°51'44.54E	Farm Portion
1637	WINTERHOEK	314	19	26°22'10.53S	28°48'25.28E	Farm Portion
1638	WINTERHOEK	314	27	26°23'31.52S	28°50'26.58E	Farm Portion
1639	WINTERHOEK	314	23	26°23'16.16S	28°49'31.31E	Farm Portion
1640	GRUISFONTEIN	344	2	26°24'37.98S	28°51'3.04E	Farm Portion
1641	LEEUWKOP	299	1	26°20'17.94S	28°47'54.55E	Farm Portion
1642	LEEUWKOP	299	5	26°19'28.03S	28°47'6.6E	Farm Portion
1643	ENKELDEBOSCH	301	8	26°17'27.02S	28°48'54.18E	Farm Portion
1644	ENKELDEBOSCH	301	10	26°19'13.37S	28°49'42.4E	Farm Portion
1645	STEENKOOLSPRUIT	302	6	26°19'46.11S	28°51'1.07E	Farm Portion
1646	WINTERHOEK	314	14	26°21'34S	28°48'41.78E	Farm Portion
1647	WINTERHOEK	314	7	26°23'26.2S	28°51'0.34E	Farm Portion

1648	PALMIETFONTEIN	316	8	26°23'57.33S	28°47'56.46E	Farm Portion
1649	LEEUWKOP	299	2	26°19'0.42S	28°47'55.84E	Farm Portion
1650	WINTERHOEK	314	1	26°22'5.82S	28°48'53.43E	Farm Portion
1651	WINTERHOEK	314	4	26°22'57.48S	28°50'39.77E	Farm Portion
1652	WINTERHOEK	314	11	26°21'7.4S	28°49'50.11E	Farm Portion
1653	WINTERHOEK	314	21	26°22'14.31S	28°49'47.5E	Farm Portion
1654	PALMIETFONTEIN	316	7	26°23'44.89S	28°48'9.98E	Farm Portion
1655	PALMIETFONTEIN	316	18	26°23'48.27S	28°49'2.21E	Farm Portion
1656	PALMIETFONTEIN	316	24	26°23'22.69S	28°48'48.36E	Farm Portion
1657	WINTERHOEK	314	5	26°23'26.28S	28°51'16.71E	Farm Portion
1658	WINTERHOEK	314	3	26°24'3.63S	28°50'7.87E	Farm Portion
1659	WINTERHOEK	314	8	26°23'31.41S	28°51'9.02E	Farm Portion
1660	PALMIETFONTEIN	316	6	26°23'4.97S	28°48'22.09E	Farm Portion
1661	IMPUMELELO	3919	0	26°20'28.55S	28°45'46.9E	Public Place
1662	IMPUMELELO	3921	0	26°20'25.18S	28°45'45.72E	Public Place
1663	IMPUMELELO	3924	0	26°20'14.81S	28°45'42.24E	Public Place
1664	IMPUMELELO	3927	0	26°20'25.43S	28°45'57.44E	Public Place
1665	IMPUMELELO	3923	0	26°20'16.63S	28°45'42.74E	Public Place
1666	IMPUMELELO	3925	0	26°20'12.68S	28°45'40.69E	Public Place
1667	IMPUMELELO	2863	0	26°20'35.01S	28°45'53.61E	Public Place
1668	IMPUMELELO	2864	0	26°20'42.97S	28°45'30.95E	Public Place
1669	IMPUMELELO	3920	0	26°20'26.82S	28°45'46.45E	Public Place
1670	IMPUMELELO	3922	0	26°20'23.06S	28°45'44.74E	Public Place
1671	IMPUMELELO	3917	0	26°20'37.44S	28°45'34.44E	Public Place
1672	IMPUMELELO	2862	0	26°20'55.42S	28°45'56.57E	Public Place
1673	IMPUMELELO	3918	0	26°20'32.2S	28°45'47.81E	Public Place
1674	IMPUMELELO	3926	0	26°20'14.42S	28°45'59.27E	Public Place

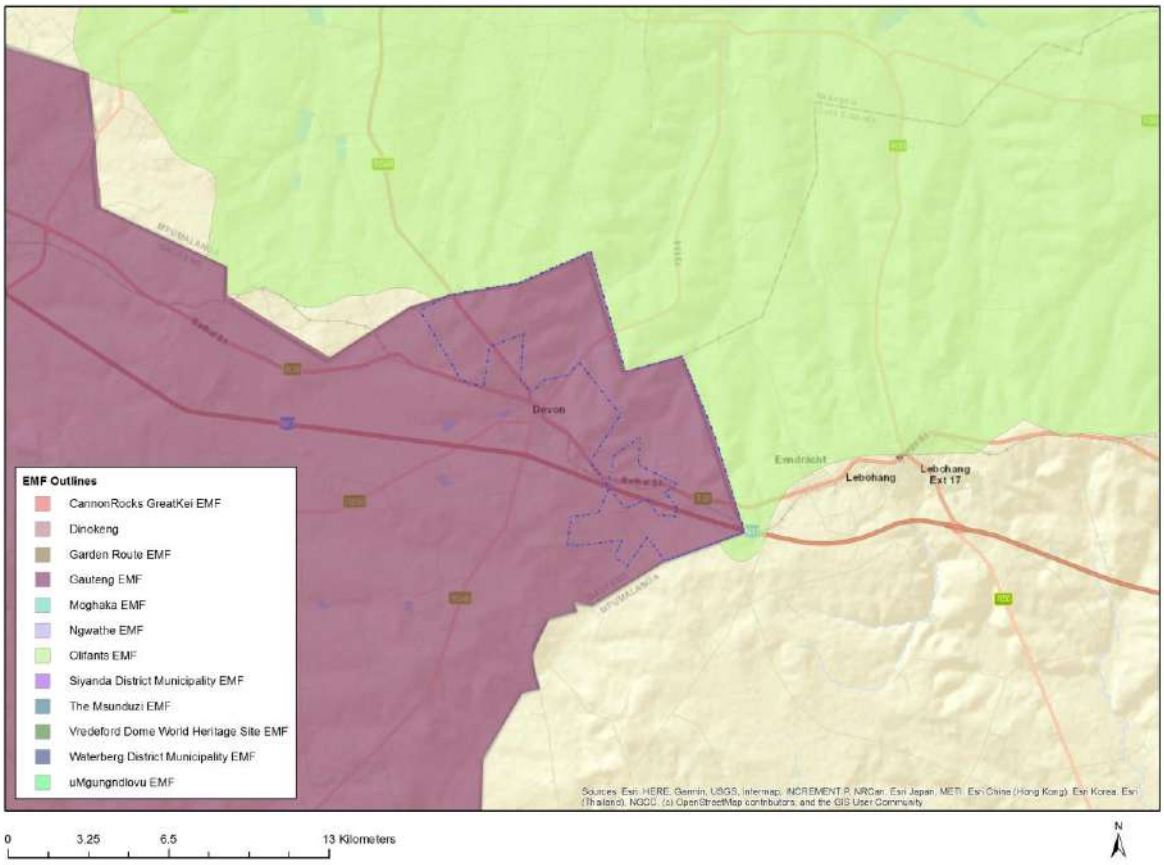
Development footprint[1] vertices:
No development footprint(s) specified.

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

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/2/706	Solar CSP	Approved	19.5

[1] "development footprint", means the area within the site on which the development will take place and incudes 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.

Environmental Management Frameworks relevant to the application



Environmental Management Framework	LINK
Olifants EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/Zone_46_67_78_80_92_103_122_129.pdf
Gauteng EMF	https://screening.environment.gov.za/ScreeningDownloads/EMF/GPEMF_2021_Gazette_and_summary.pdf

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	Implication

or prohibition	
Strategic Transmission Corridor-International corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf
Air Quality-Highveld Priority Area	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/HIGHVELD_PRIORITY_AREA_AQMP.pdf
Strategic Gas Pipeline Corridors-Phase 8: Rompco Pipeline Corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf
South African Protected Areas	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/SAPAD_OR_2022_Q4_Metadata.pdf

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 known impacts associated with the proposed development, 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.

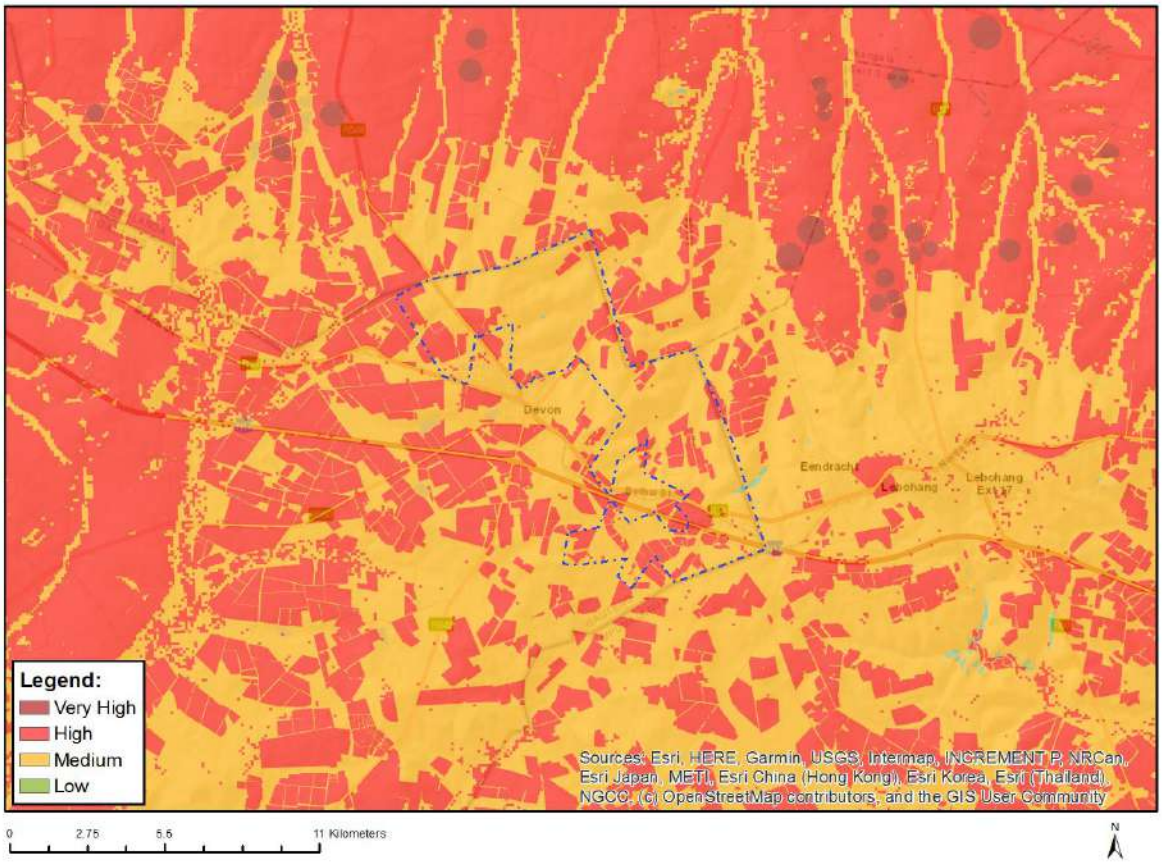
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact	https://screening.environment.gov.za/ScreeningDownloads/Asse

	Assessment	ssmentProtocols/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 Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/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

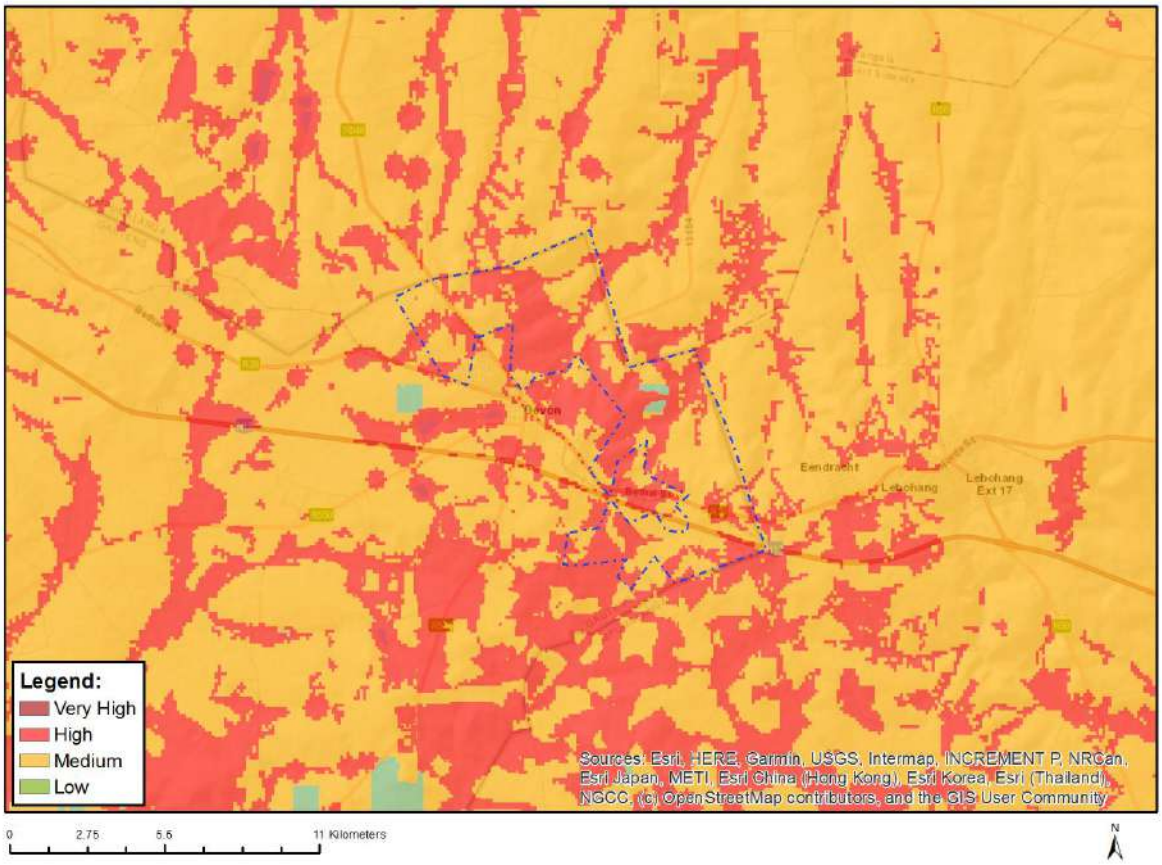


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

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
High	Old Fields;Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
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



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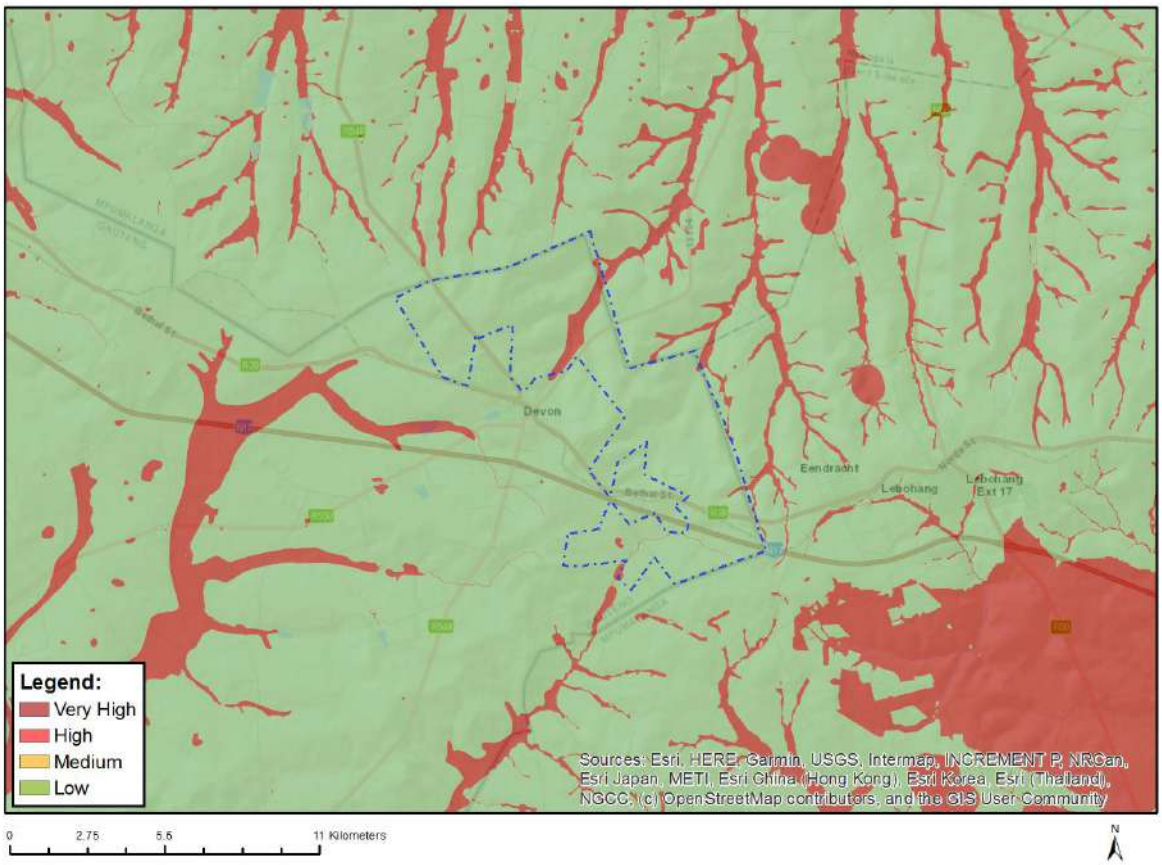
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Tyto capensis
High	Aves-Circus ranivorus
High	Aves-Sagittarius serpentarius
High	Aves-Eupodotis senegalensis
High	Aves-Mycteria ibis
High	Aves-Grus carunculata
Low	Subject to confirmation
Medium	Aves-Tyto capensis
Medium	Aves-Hydroprogne caspia
Medium	Aves-Neotis denhami
Medium	Aves-Eupodotis senegalensis
Medium	Aves-Grus carunculata
Medium	Insecta-Lepidochrysops procera

Medium	Mammalia-Chrysospalax villosus
Medium	Mammalia-Crocidura maquassiensis
Medium	Mammalia-Dasymys robertsii
Medium	Mammalia-Hydrictis maculicollis

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

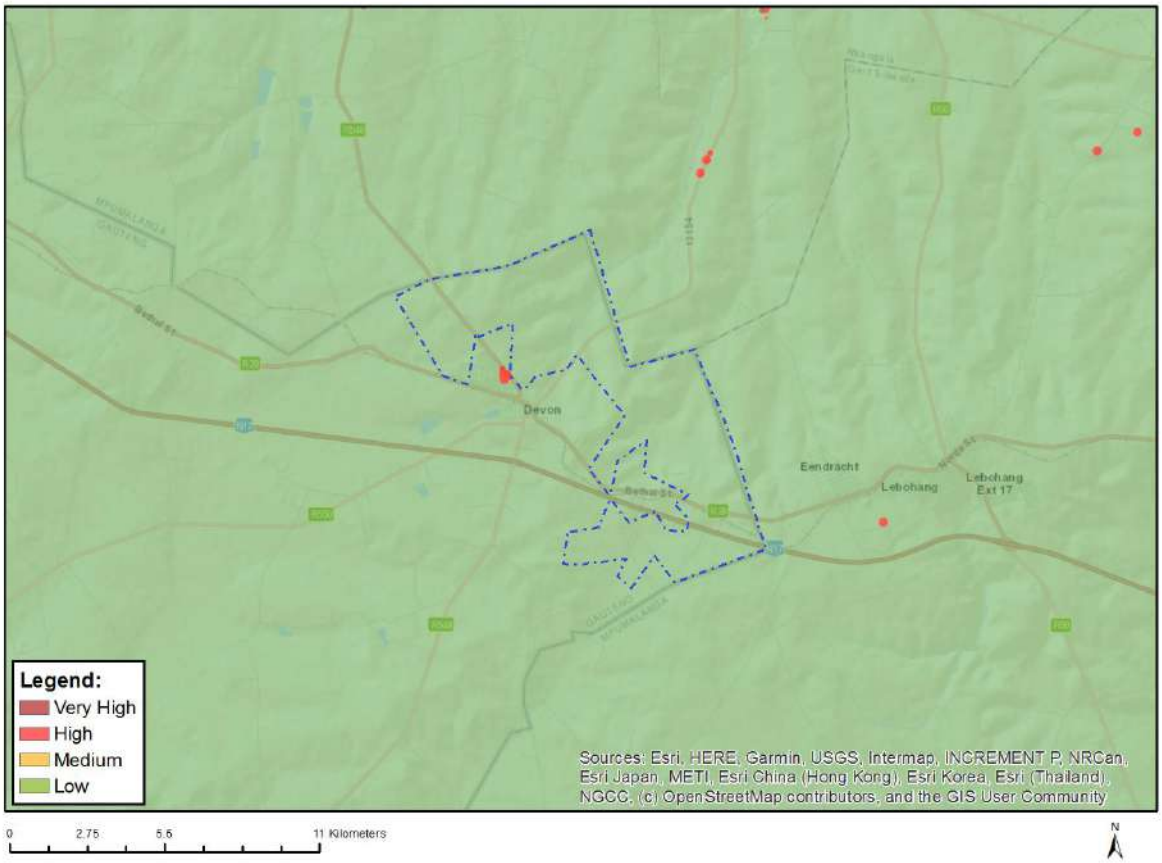


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	CBA: Wetlands
Very High	ESA: Wetlands
Very High	Rivers_C
Very High	Rivers_Z
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Depression)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Floodplain)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Seep)
Very High	Wetlands_Mesic Highveld Grassland Bioregion (Valley-bottom)

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

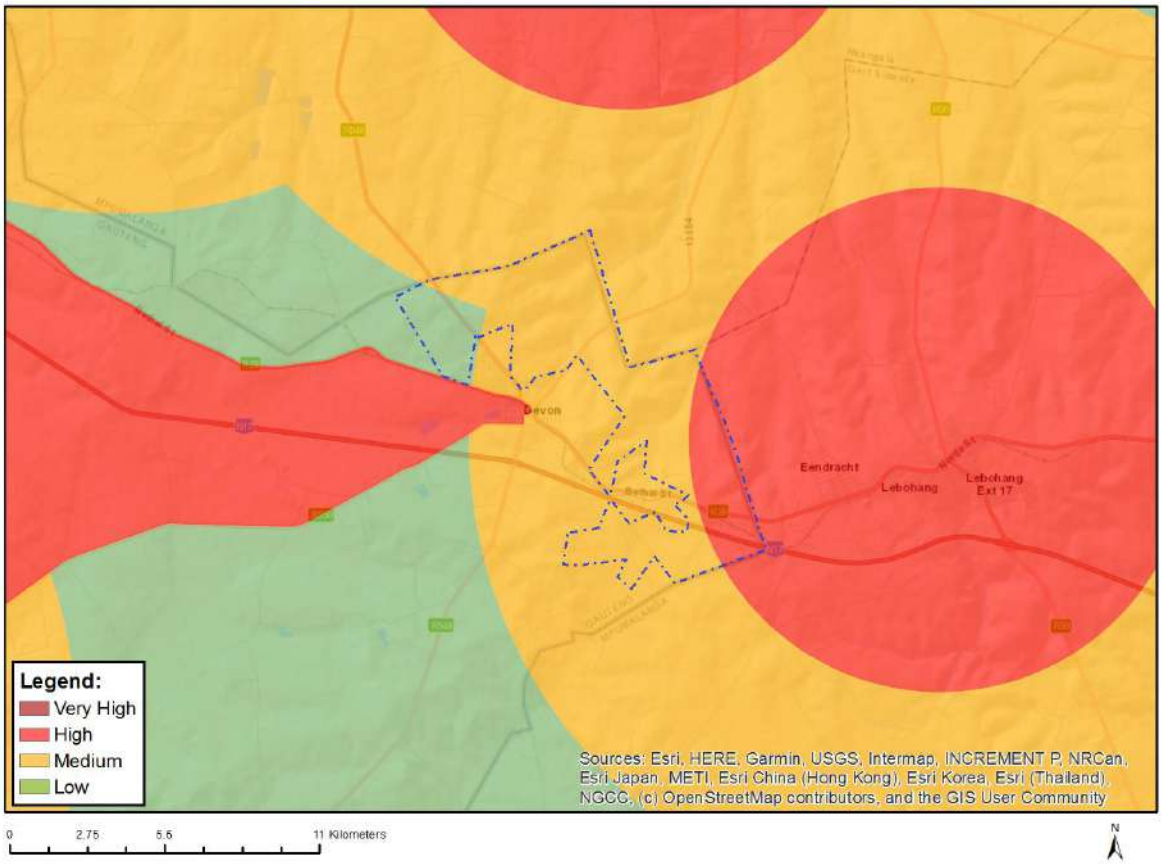


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 150m of a Grade IIIa Heritage site
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

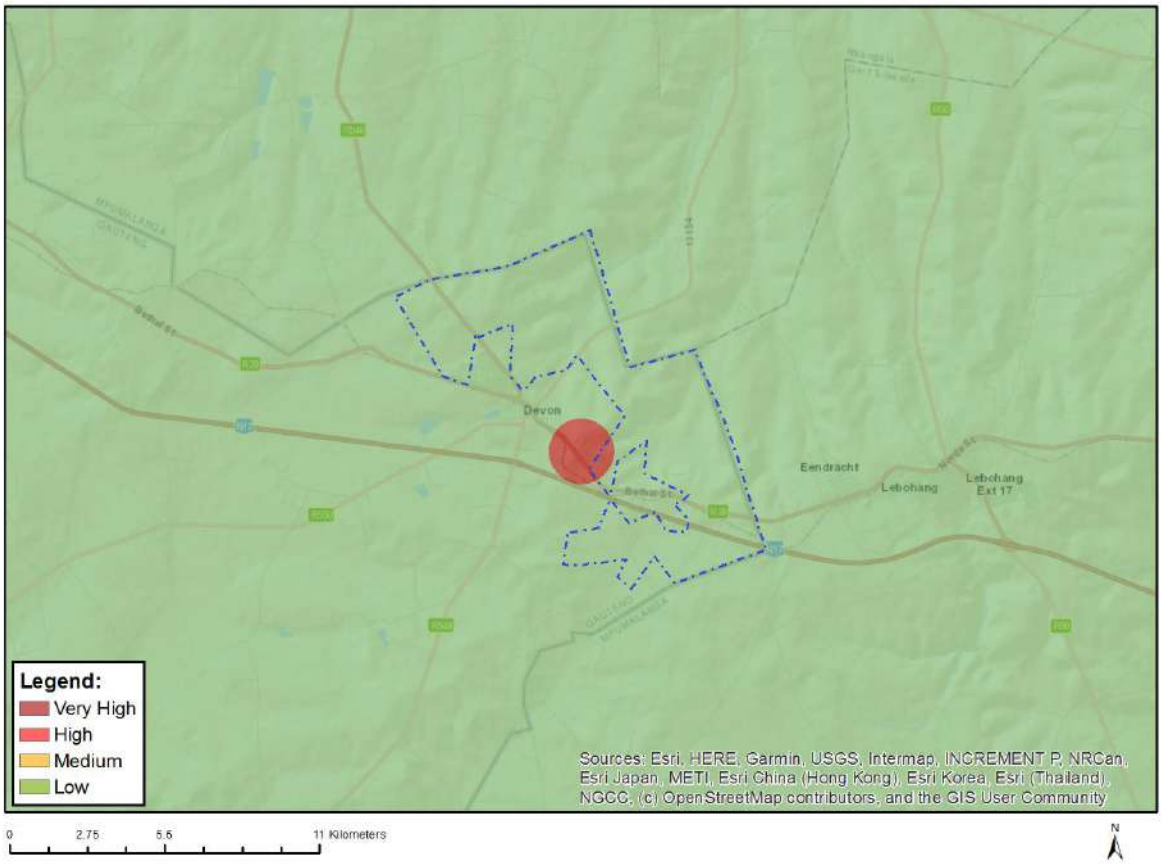


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 8 km of other civil aviation aerodrome
Low	Low sensitivity
Medium	Between 8 and 15 km of other civil aviation aerodrome

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

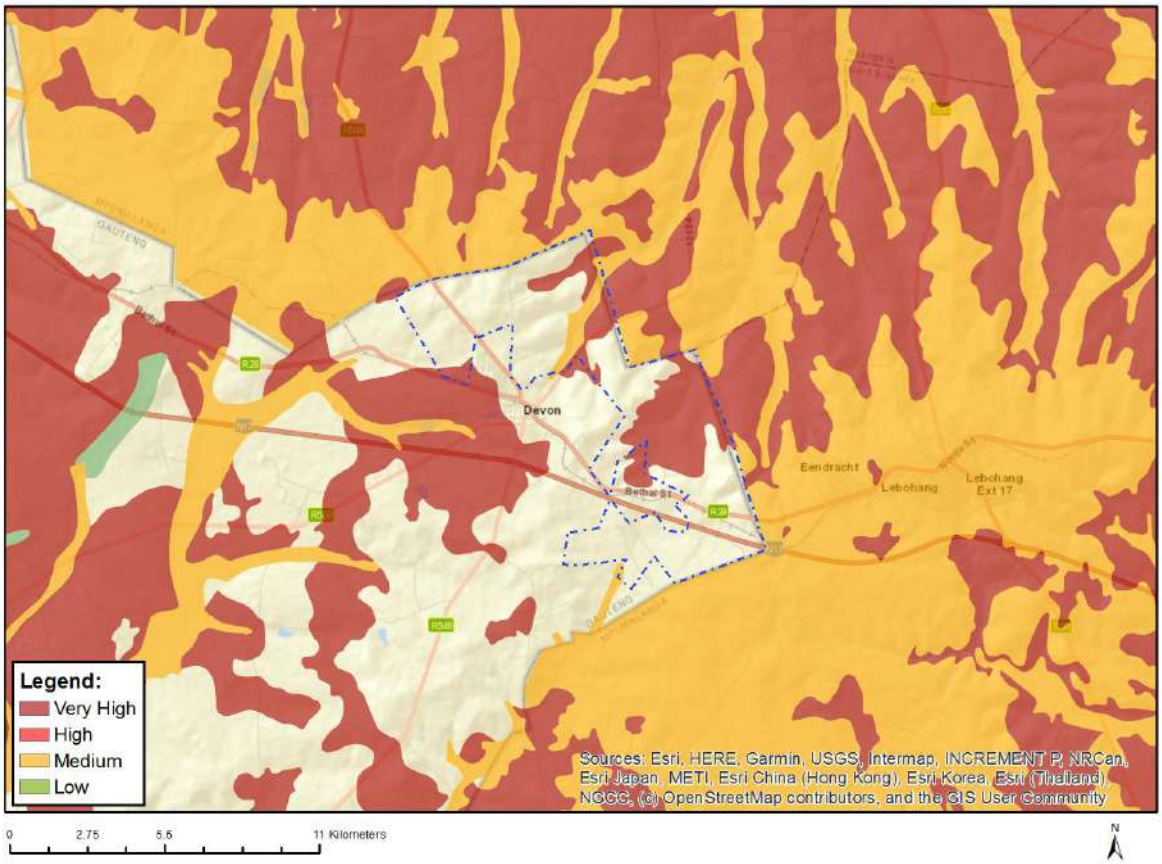


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	Military and Defence Site

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

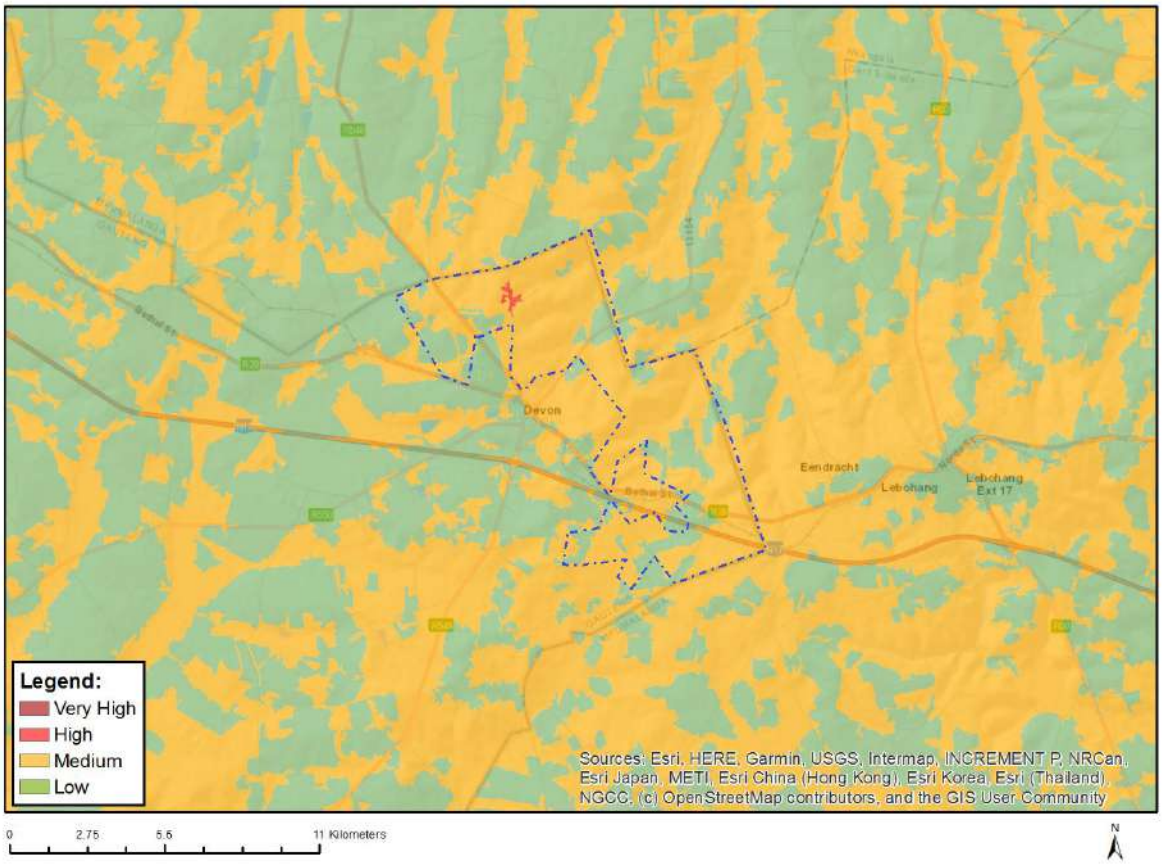


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

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



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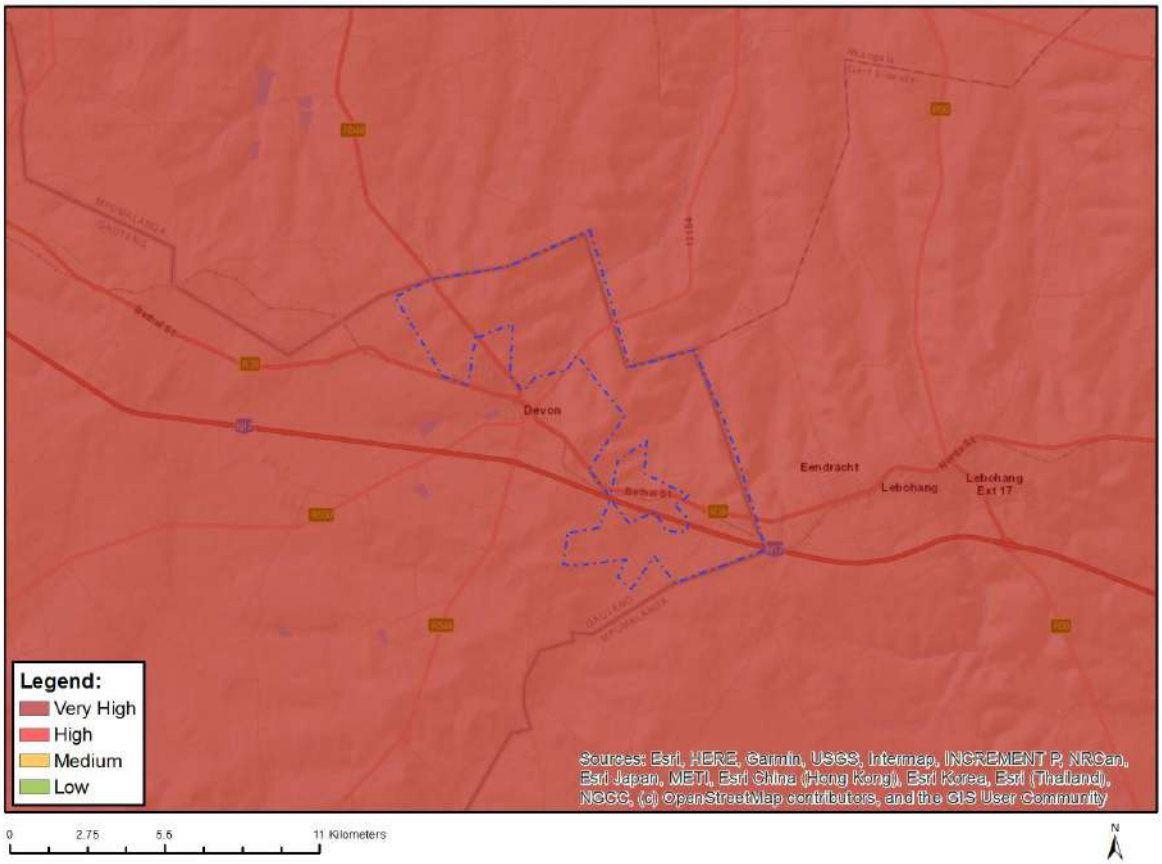
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Sensitive species 691
Low	Low Sensitivity
Medium	Sensitive species 1252
Medium	Sensitive species 691
Medium	Pachycarpus suaveolens

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 biodiveristy area 1
Very High	Critical biodiveristy area 2
Very High	Ecological support area
Very High	Devon Protected Environment
Very High	Protected Areas Expansion Strategy
Very High	Vulnerable ecosystem_Soweto Highveld Grassland