



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

DRAFT SCOPING REPORT

FOR LISTED ACTIVITIES ASSOCIATED WITH MINING RIGHT AND/OR BULK SAMPLING ACTIVITIES INCLUDING TRENCHING IN CASES OF ALLUVIAL DIAMOND PROSPECTING.

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: ERPM Extension Area 1 (Pty) Ltd

TEL NO: 084 050 4613

FAX NO: 086 684 8245

POSTAL ADDRESS: PO Box 6213, Cresta, 2118

PHYSICAL ADDRESS: Unit 206, Alto Level House, 4 Fir Drive, Northcliff, 2195, Johannesburg, South Africa

FILE REFERENCE NUMBER SAMRAD: GP 30/5/1/2/2 10078 MR

MARCH 2019

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.

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.
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ACRONYMS

AEL	Atmospheric Emission Licence
BA	Basic Assessment
BID	Background Information Document
CA	Competent Authority
CBA	Critical Biodiversity Area
CLS	Cold Lime Softening
CoE	City of Ekurhuleni
C-Plan	Gauteng Conservation Plan
CR	Critically Endangered
CRR	Comments and Response Report
DAFF	Department of Agriculture, Fisheries and Forestry
DMR	Department of Mineral Resources
DRDLR	Gauteng Department of Rural Development and Land Reform
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EBOSS	CoE Biodiversity and Open Space Strategy
EC	Electrical Conductivity
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMM	Ekurhuleni Metropolitan Municipality
EMPr	Environmental Management Programme
EN	Endangered
ERB	East Rand Basin
ESA	Ecological Support Area
Gautrans	Gauteng Department of Roads and Transport
GDARD	Gauteng Department of Agriculture and Rural Development
GDP	Gross Domestic Product
GIS	Geographical Information Systems
GPEMF	Gauteng Province Environmental Management Framework
HDPE	High Density Polyethylene
IAPs	Interested and Affected Parties
IDP	Integrated Development Plan
LED	Local Economic Development
LoM	Life of Mine
mamsl	Metres above mean sea level
mbgl	Metres below groundlevel
MEC	Member of the Executive Council
ML	Megalitres

MPRDA	Minerals and Petroleum Resources Development Act (No. 28 of 2002)
NAAQS	National Ambient Air Quality Standards
NEMA	National Environmental Management Act (No. 107 of 1998)
NEMAQA	National Environmental Management Air Quality Act, No. 39 of 2004
NEMBA	National Environmental Management: Biodiversity Act, No. 10 of 2004
NEMPAA	National Environmental Management Protected Areas Amendment Act, No. 31 of 2004
NEMWA	National Environmental Management Waste Act, No. 59 of 2008
N/FEPA	National / Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act, No. 25 of 1999
NNR	National Nuclear Regulator
NNRA	National Nuclear Regulator Act, No. 47 of 1999
NWA	National Water Act, No. 36 of 1998
PES	Present Ecological State
PHRAG	Provincial Heritage Resources Authority of Gauteng
RE	Remaining Extent
REC	Recommended Ecological Category
ROD	Record of Decision
RSDF	Regional Spatial Development Framework
SAHRA	South African Heritage Resources Association
SAHRIS	South African Heritage Resources Information System
SANS	South African National Standards
SCC	Species of Conservation Concern
SDA	Surface Development Area/s
TDS	Total Dissolved Solids
VU	Vulnerable
WMA	Water Management Area
WML	Waste Management Licence
WUL	Water Use Licence
WULA	Water Use Licence Application
WWTW	Wastewater Treatment Works

SCOPING REPORT

2) CONTACT PERSON AND CORRESPONDENCE ADDRESS

a) Details of the EAP who prepared the report

Name of Environmental Assessment Practitioners	Prime Resources (Pty) Ltd
Physical Address:	70 - 7 th Avenue, Parktown North, Johannesburg
Postal Address:	PO Box 2316, Parklands, 2121
Telephone Number:	011 447 4888
Fax Number:	086 604 2219
Email:	prime@resources.co.za
Professional Affiliations:	PrEng; PrSciNat; SAImm; IAIAsa

b) Expertise of the EAP

i) The qualifications of the EAP (With evidence attached as Appendix 1)

Prime Resources (Pty) Ltd is a specialist environmental consulting firm providing environmental, social, and related services, which was established in 2003. Prime Resources was founded by Peter Theron (PrEng, SAImm), the Managing Director and Principal Environmental Consultant of the firm. Peter has a GDE Environmental Engineering from the University of Witwatersrand and over 30 years' experience in the field of environmental science and engineering.

Gené Main (Pr.Sci.Nat, Environmental Science), the Project Manager and Principal Scientist for the proposed project, has a M.Sc. (Botany) from the University of the Western Cape and eleven years' experience in the field of environmental science.

Key Prime Resources Personnel CVs are attached as Appendix 1.

ii) Summary of the EAP's past experience

A copy of the Prime Resources Company Profile is attached as Appendix 2.

3) DESCRIPTION OF THE PROPERTY

Farm Name:	Portions 5 and 19 of the farm Witpoortje 117 IR
Application area (Ha)	Approximately 27 ha 19.6 ha comprises the surface development area and 7.3 ha comprises the re-opening and re-equipping of the Witpoortje Vent Shaft area.
Magisterial district:	Ekurhuleni South East Magisterial District in the City of Ekurhuleni, Gauteng Province
Distance and direction from nearest town	7 km South-East of Boksburg Town 11 km East of Vosloorus
21 digit Surveyor General Code for each farm portion	Portion 5 of the Farm Witpoortje 117 IR - T0IR00000000011700005 Portion 19 of the Farm Witpoortje 117 IR - T0IR00000000011700019

(i) Locality map (show nearest town, scale not smaller than 1:250 000)

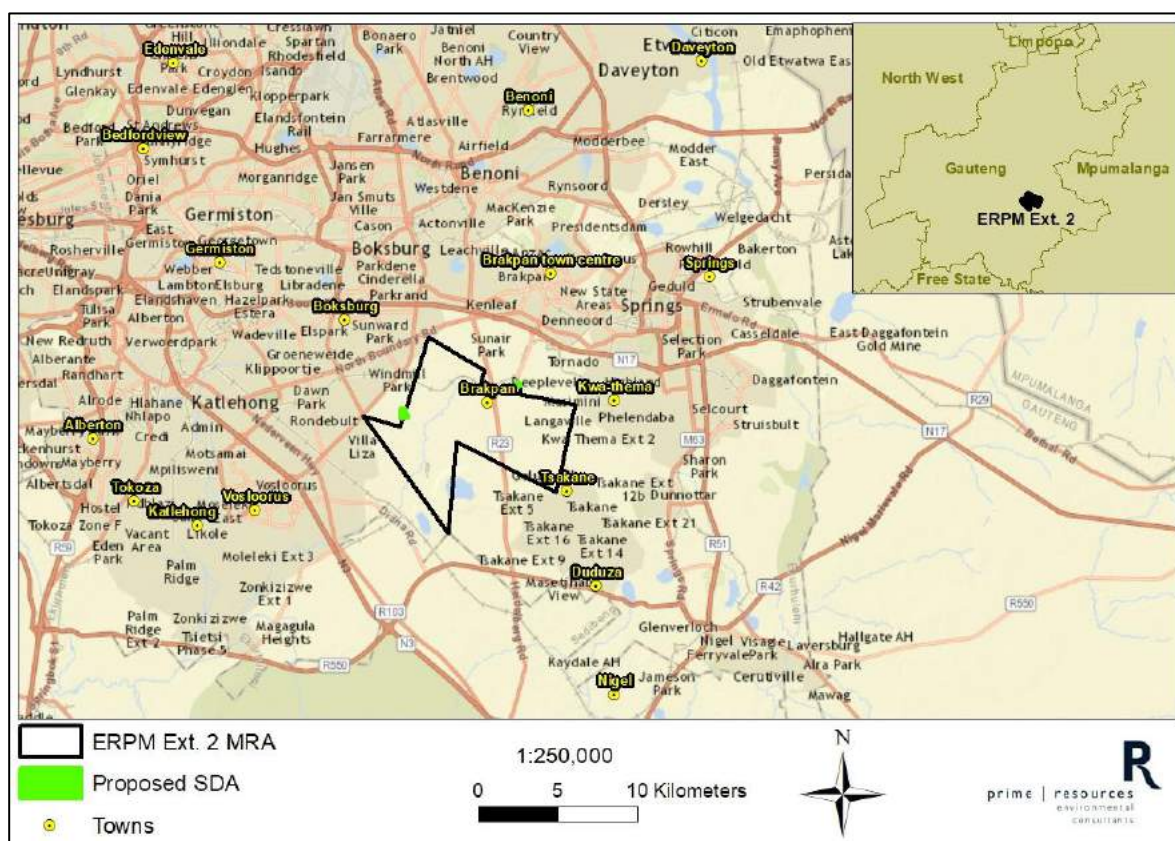


Figure 1: Locality map for proposed project

4) DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

a) **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 – refer to Figure 4.

NAME OF ACTIVITY (All activities including activities not listed) (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	AERIAL EXTENT Ha or m ²	LISTED ACTIVITY Mark with an X where applicable or affected.	APPLICABLE LISTING NOTICE
Underground mining activities	3 850 ha	X	Listing Notice 2 (GNR984 of 2014) (As amended by GNR325 of 2017) Activity 17 Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).
Surface infrastructure including refrigeration plant, access shaft and associated head gear, vent shaft, change house, administrative buildings, workshops, water treatment plant, powerlines (power supply connection), water pipelines, salvage yard, , topsoil stockpiles, stormwater and pollution control infrastructure, bulk fuel storage, explosives handling area, access roads, parking area, a stores area and a backfill / grout plant	27 ha	X	Listing Notice 1 (GNR983 of 2014) (As amended by GNR327 of 2017) Activity 16 The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100 cubic metres of treated water per day. Activity 20 Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002). Activity 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 2000 cubic metres but less than 15000 cubic metres.

			<p>Activity 28 Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p> <p>Activity 30 Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).</p> <p>Listing Notice 2 (GNR984 of 2014) (As amended by GNR325 of 2017)</p> <p>Activity 6 The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding (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 (ActNo. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; or (iii) the development of facilities or infrastructure for the treatment of effluent, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less.</p> <p>Activity 7 The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods- (i) in gas form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 700 tons per day; (ii) in liquid form, outside an industrial complex, using pipelines, exceeding 1000 metres in length, with a throughput capacity of more than 50 cubic metres per day; or (iii) in solid form, outside an industrial complex, using funiculars or conveyors with a throughput capacity of more than 50 tons day.</p> <p>Activity 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.</p>
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			<p>Activity 17 Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</p> <p>Activity 21 Any activity including the operation of that activity associated with the primary processing of a mineral resource including winning, reduction, extraction, classifying, concentrating, crushing, screening and washing but excluding the smelting, beneficiation, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.</p> <p>Listing Notice 3 (GNR985 of 2014) (As amended by GNR324 of 2017) Activity 12 The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. In Gauteng - i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>Activity 15 The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, such land was zoned open space, conservation or had an equivalent zoning, on or after 02 August 2010.</p>
Project activities that require a WULA - including dewatering, abstraction, dust suppression, discharge, pollution control dam, and river crossings.	27 ha	X	<p>Listing Notice 2 (GNR984 of 2014) (As amended by GNR325 of 2017) Activity 6 The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding (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 (ActNo. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; or (iii) the development of facilities or infrastructure for the treatment of effluent, wastewater or sewage where such facilities have a daily throughput capacity of 2000 cubic metres or less.</p>

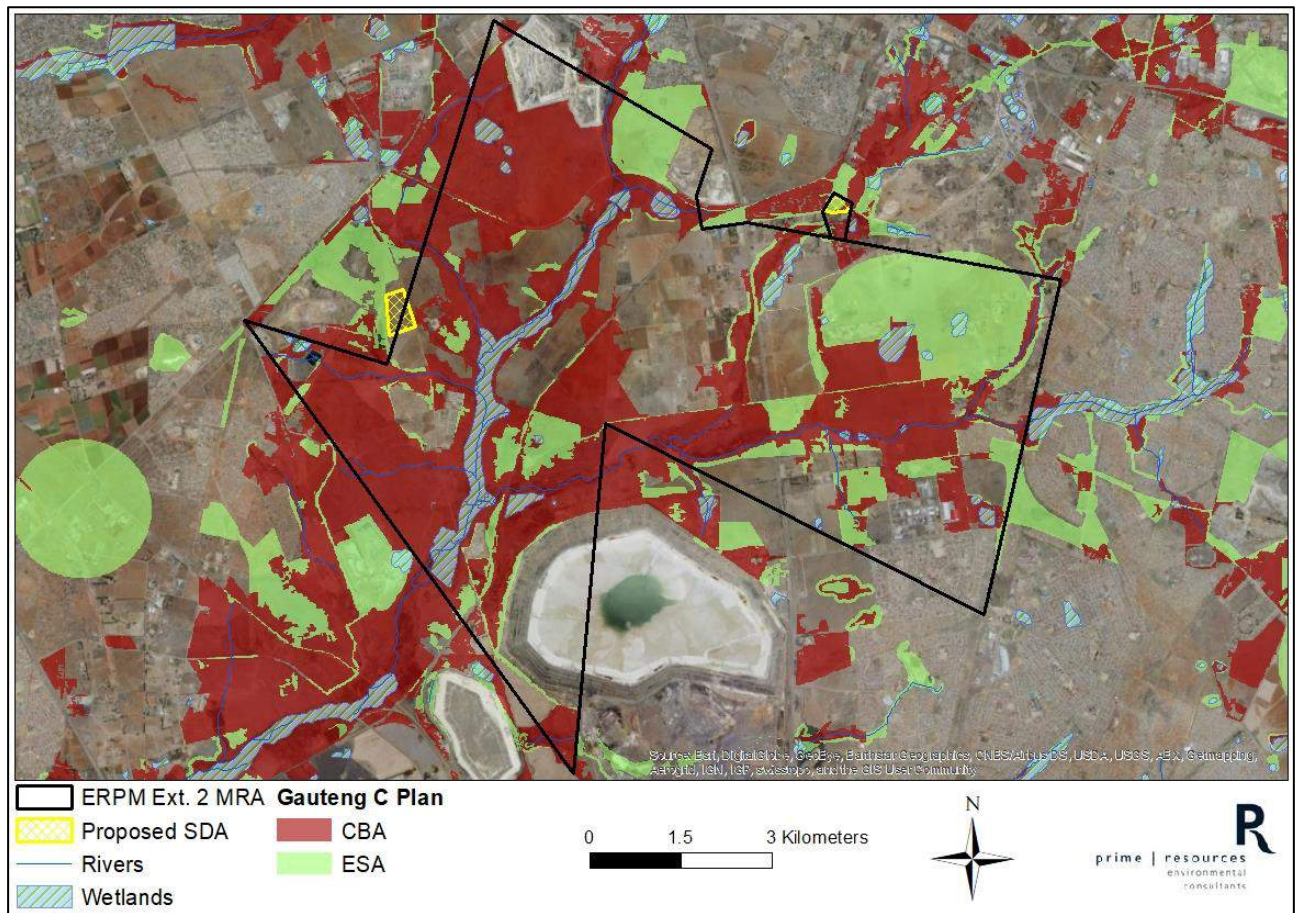


Figure 2: NEMA listed activities map

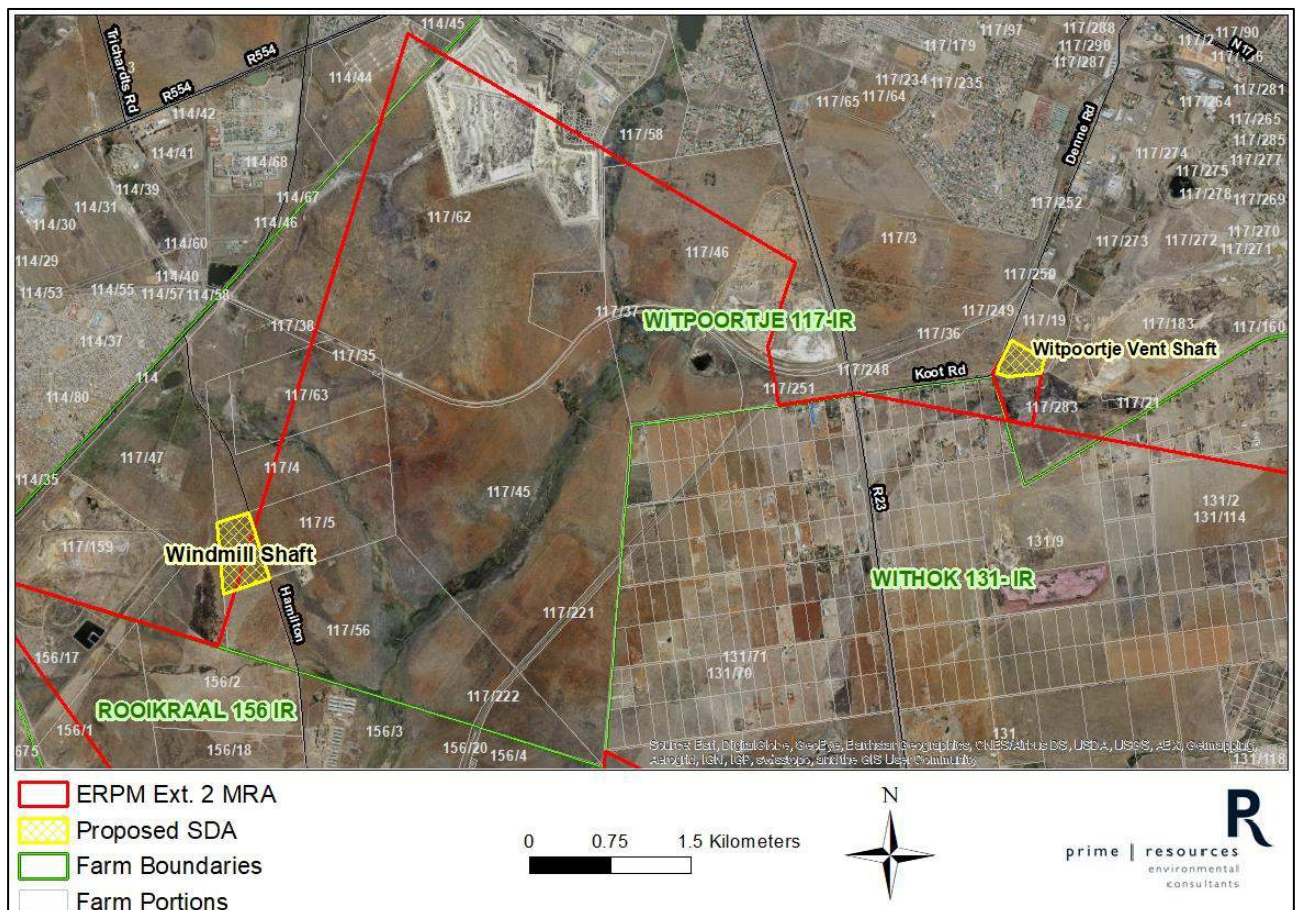


Figure 3: Farm portions of project area and adjacent farms

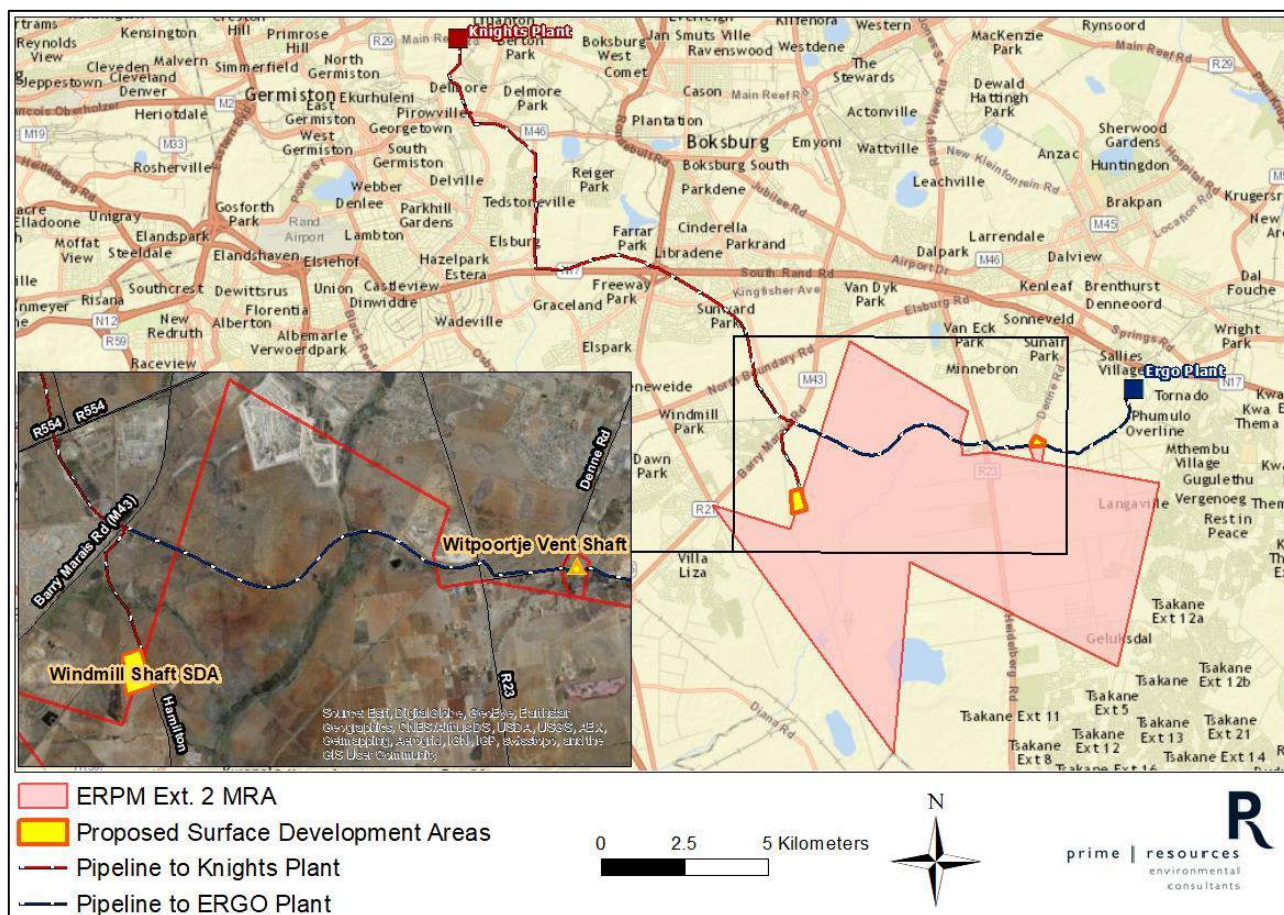


Figure 4: Proposed site plan

b) 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)

ERPM Extension Area 1 (Pty) Ltd ("ERPM Ext 1") is a subsidiary of ERPM (Pty) Ltd ("ERPM"). ERPM Ext 1 holds a prospecting right (GP243PR) which it intends to convert into a Mining Right (submitted with reference number: GP 30/5/1/2/2 10078 MR). Since submission of the EA application, ERPM's contiguous mining rights - GP151MR and GP150MR – have been sold to ERPM Ext 1.

GP243PR is located to the south and adjacent to GP150MR. ERPM Ext 1 plans to consolidate the underground resources of GP243PR (referred to as ERPM Extension Area 2 or ERPM Ext 2), with those of GP150MR and GP151MR. The combined underground resources within these three areas justifies the large capital commitment to develop a long term, large scale mining operation. The Far East Vertical (FEV) shaft and FEV vent shaft on GP151MR will be refurbished and used to access underground workings of GP151MR and GP150MR. An additional twin shaft (includes both access and vent shaft), termed Windmill Shaft, is proposed to be constructed on Portion 5 of the Farm Witpoortje 117 IR to allow access to the underground operations of the Ext 2 area and will include the development of the associated head gear. Ore that is mined below ground will be crushed and mixed with groundwater to form a slurry and will be brought to surface via a hydraulic hoist system and transported via existing pipelines to either the Knights Plant (via the Knight Plant Pipeline) to the north-west of the surface development area or the Ergo Plant (via the Ergo Plant Pipeline) to the north-east of the surface development area. An existing vent shaft on Portion 19 of the Farm Witpoortje 117 IR (Witpoortje Vent Shaft) will also be re-opened and re-equipped for use.

Surface infrastructure associated with the development of Windmill Shaft ,is to be developed within the proposed surface development areas (SDAs) of approximately 20 Ha. The surface infrastructure required for development is as follows:

- Twin shaft with headgear and winder and vent shaft;
- A refrigeration plant, that will allow for the cooling of underground mining operations;
- Change house, administrative buildings, workshops, salvage yard, and stores;
- A water treatment plant is potentially required for the treatment of underground water;
- Powerlines (power supply connection) will connect to existing power sources and water supply pipeline for both potable and service water supply from the municipal reticulation system;
- Stormwater and pollution control infrastructure, including diversion berms to divert clean run-off, dirty water storm water channels and a pollution control dam will be developed to catch run-off from the surface infrastructure area;
- A backup generator and a fuel supply tank within a bunded area;
- Explosives handling area;
- Existing access roads will be used as far as possible, however a small road network around the refrigeration plant and a parking area will be constructed; and
- A grout plant (backfill plant) will to provide material to support underground mine workings.

Ore and waste rock will be stored below ground. Waste rock will be used as backfill material.

It is proposed that any excess water from below ground, not used as service water by ERPM Ext 1, will be transferred to DRD Gold for use in their operations.

Topsoil will be used to create a berm upstream of the infrastructure area, and will further be vegetated to screen the residential areas from noise and visual impacts.

5) 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
<p>The Mineral and Petroleum Resources Development Act (No. 28 of 2002) (MPRDA) is the key legislation governing mining activities within South Africa. The Department of Mineral Resources (DMR) is the competent authority that deals with all mining related applications.</p>	<p>An integrated application in terms of the MPRDA and NEMA is being undertaken. While the NEMA process is being followed, the DMR is considered the Competent Authority.</p>
<p>The National Environmental Management Act, No. 107 of 1998 (NEMA) is enabling legislation intended to provide a framework for integrating environmental management into all developmental activities to promote co-operative environmental governance with regard to decision making by state organs on matters affecting the environment.</p> <p>The EIA Regulations of GNR982, December 2014 <i>as amended in 2017</i> serve to regulate the procedure and criteria for submitting, processing and considering decisions for applications for Environmental Authorisation. These Regulations provide details on the process to be followed for the consultation of stakeholders and Interested an Affected Parties (IAPs), the identification of the Competent Authority, and the various timeframes and application requirements for Environmental Authorisation. A further three Regulations, GNR983, GNR984, and GNR985 (all of 2014 <i>as amended in 2017</i>), provide lists of activities for which Environmental Authorisation, either in the form of a Basic Assessment or Scoping and Environmental Impact Assessment Report (EIAR) / Environmental Management Programme (EMPr), is required before the activity can commence.</p> <p>Since the enactment of the “One Environmental System” on 8 December 2014, the Environmental Authorisation process in terms of the NEMA must be followed for any mining activities requiring a right or permit in terms of the MPRDA to fulfil the requirements of Section 5A(a) of the Act. In instances where Environmental Authorisation is required for a mining project, the DMR is identified as the Competent Authority.</p> <p>An application for Environmental Authorisation in terms of Section 24 of NEMA was submitted for the NEMA listed activities on 21 February 2019. According to the EIA Regulations (2014) the following are to be submitted in support of the application:</p>	<p>Application for Environmental Authorisation was submitted on 21 February 2019. The DMR acknowledged receipt of the application on 5 March 2019.</p> <p>This Scoping Report has been prepared to meet the requirements of the EIA Regulations (GNR982 of 2014 <i>as amended in 2017</i>).</p> <p>Refer to Section 1)a) for the applicable listed activities.</p>

<ul style="list-style-type: none"> • Scoping Report (this document) together with the results of consultation with IAPs and State Departments, to be submitted to the Competent Authority within 44 days of receipt of the application by the DMR; and the • EIAR and EMPr together with the results of consultation with IAPs and State Departments within 106 days of acceptance of the Scoping Report (acceptance date not yet known). 	
<p>The National Environmental Management Air Quality Act, No. 39 of 2004 (NEMAQA) has placed the responsibility for air quality management on local authorities that will be tasked with baseline characterisation, management and operation of ambient monitoring networks, licensing of listed activities, and emissions reduction strategies. GN893 of 2013 provides the list of activities in terms of Section 21(1)(a) for which an Atmospheric Emission Licence (AEL) is required in terms of Chapter 5 of the Act. This notice further establishes minimum emission standards for the listed activities. The proposed project does not trigger any listed activities in terms of GN893.</p> <p>The National Dust Control Regulations (GNR827 of 2013) prescribe general measures for the control of dust in all areas, including residential and light commercial areas.</p>	<p>Refer to Section 1)a) for the applicable listed activities.</p> <p>Refer to Section 1)a)i) for a description of the ambient air quality within the project area.</p> <p>Refer to Section 1)c) for the potential impacts on ambient air and Section 1)c)iii) for potential mitigation.</p> <p>Refer to Section 1)c) for the plan of study for the EIA phase.</p>
<p>The National Heritage Resources Act, No. 25 of 1999 (NHRA) serves to protect and manage South African heritage and cultural resources, which include places, buildings, structures and equipment of cultural significance, historical settlements and townscapes, archaeological and paleontological sites, graves and burial grounds. The Act protects any heritage resources from damage by developments by stipulating in Section 38 that any person intending on undertaking any form of development which involves the activities listed below must, at the earliest stage of initiation, notify the South African Heritage Resources Association (SAHRA) specifically the Provincial Heritage Resources Authority of Gauteng (PHRAG):</p> <ol style="list-style-type: none"> the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length; the construction of a bridge or similar structure exceeding 50 m in length; any development or other activity which will change the character of a site— <ol style="list-style-type: none"> exceeding 5 000 m² in extent; or involving three or more existing erven or subdivisions thereof; or involving three or more erven or divisions thereof which have been consolidated within the past five years; or the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority; the re-zoning of a site exceeding 10 000 m² in extent; or Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority. 	<p>Refer to Section 1)a)vi)for a description of the cultural and heritage resources within the project area.</p> <p>Mitigation measures for potential chance finds will be included in the EMPr.</p>

<p>Section 38(8) of the Act states that if heritage considerations are taken into account as part of an application process undertaken in terms of NEMA and the EIA process, there is no need to undertake a separate application in terms of the NHRA. Heritage considerations will form part of this environmental process.</p>	
<p>The National Water Act, No. 36 of 1998 (NWA) regulates all matters relating to inland water resources. It thus operates as a management instrument with the lead authority being the Department of Water and Sanitation (DWS). This Act provides mechanisms for the prevention of the pollution of water resources to support the management of water as a renewable resource. Section 21 of the NWA lists water uses for which authorisation is required from the DWS.</p> <p>Regulation GN704 of 1999 provides regulations for the use of water for mining and related activities and is aimed to further protect water resources. These regulations describe how mining activities should be managed to protect water resources. The Act thus plays a crucial role in the mining process as many mining-related activities use water as listed in Section 21, thereby requiring approval from DWS.</p> <p>An application for a Water Use Licence (WUL) will be submitted to DWS for the full set of water uses associated with the mine.</p>	<p>Refer to Section 1)a)v) and Section 1)a)iv)for a detailed description of the groundwater and surface water resources within the project area.</p> <p>Refer to Section 1)c) for the potential impacts on water resources and Section 1)c)iii) for potential mitigation.</p> <p>Refer to Section 1)c) for the plan of studyfor the EIA phase.</p> <p>A confirmation email stating that the online WUL application process has commenced is attached as Appendix 3.</p>
<p>The National Environmental Management Waste Act, No. 59 of 2008 (NEMWA) serves to reform the laws regulating waste management in order to protect public and environmental health by providing measures for the prevention of pollution and ecological degradation and to provide defining requirements for the licensing and control of waste management activities. GN921 of 2013 provides definitions for activities which require a Waste Management Licence (WML) and identifies the relevant environmental authorisations which are further required for said activities.</p> <p>The storage of waste above the specific thresholds (in excess of 100 m³ of general waste or 80 m³ of hazardous waste) for a period of more than 90 days triggers a Category C activity which requires compliance with the National Norms and Standards for the Storage of Waste (GN926 of 2013). A commitment to abide by the norms and standards will be included in the EMP, should waste be stored in excess of threshold values and for longer than 90 days.</p>	<p>Since submission of the EA application, the project description has been revised and a WML will not be required as part of the application.</p>
<p>The Hazardous Substances Act, No. 15 of 1973 aims to control substances that may cause injury, ill-health, or death through their toxic, corrosive, irritant, strongly sensitising or flammable nature, or by the generation of pressure. The Act provides for the division of such substances or products into groups in relation to the degree of danger as well as the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products. Hazardous materials such as explosives and hydrocarbons will be handled on site. The Applicant will ensure that any hazardous materials on site are handled in a manner in line with that described in the Act.</p>	

<p>The purpose of the National Environmental Management: Biodiversity Act, No. 10 of 2004 (NEMBA) is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA. This includes, among others, the protection of species and ecosystems.</p> <p>Section 52 of the Act provides for listing of threatened or protected ecosystems, in one of four categories: Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Protected. The main purpose of listing threatened ecosystems is to reduce the rate of ecosystem and species extinction and includes the prevention of further degradation and loss of structure, function and composition of threatened ecosystems. Threatened terrestrial ecosystems have been delineated based on the South African Vegetation Map, national forest types and priority areas identified in a provincial systematic biodiversity plan.</p> <p>The proposed surface infrastructure area will be located within sections of Critical Biodiversity Area (CBA) and Ecological Support Area (ESA), as per the Gauteng Conservation Plan (C-Plan). Refer to Figure 2 above.</p> <p>Chapter 4, Part 2 of the Act provides for listing of species as threatened or protected. If a species is listed as threatened, it should be further classified as critically endangered, endangered or vulnerable (GNR151 of 2007). The Act also defines restricted activities in relation to a specimen of a listed threatened or protected species (GNR152 of 2007). The project area falls partially within the Critically Endangered Kliprivier Highveld Grassland Ecosystem which is considered a threatened ecosystem in terms of Section 52 of NEMBA.</p> <p>Conservation areas near the SDAs include:</p> <ul style="list-style-type: none"> • Rondebult Bird Sanctuary - approximately 7 km to the west of the SDA • Korsman Bird Sanctuary - approximately 12 km to the north of the SDA • Suikerbosrand Provincial Nature Reserve - approximately 13 km to the south of the SDA • Blesbokspruit Ramsar site and the Marievale Bird Sanctuary Provincial Nature Reserve - approximately 15 km to the east/ south-east of the SDA 	<p>Refer to the description of ecology in Section 1)a)iii)</p> <p>Refer to Section 1)c) for the potential impacts on the ecology and Section 1)c)iii) for potential mitigation.</p> <p>Refer to Section 1)c) for the plan of study for the EIA phase.</p>
<p>The Mine Health and Safety Act, No. 29 of 1996 and Regulations provide for protection of the health and safety of staff and other persons at mines and, for that purpose to promote a culture of health and safety; to provide for the enforcement of health and safety measures; to provide for appropriate systems of employee, employer and State participation in health and safety matters; to establish representative tripartite institutions to review legislation, promote health and enhance properly targeted research; to provide for effective monitoring systems and inspections, investigations and inquiries to improve health and safety; to promote training and human resources development; to regulate employers' and staff' duties to identify hazards and eliminate, control and minimise the risk to health and safety; to entrench the right to refuse to work in dangerous conditions; and to give effect to the public international law obligations relating to mining health and safety. The Applicant will ensure that operations on site are in line with the requirements of the Act and Regulations.</p>	
<p>The National Nuclear Regulator Act, No. 47 of 1999 (NNRA) applies to the siting, design, construction, operation, decontamination, decommissioning and closure of any nuclear installation; vessels propelled by nuclear power or having radioactive material on board which is capable of causing nuclear damage; and any</p>	

<p>action which is capable of causing nuclear damage. The NNRA is regulated by the National Nuclear Regulator and Certificates of Registration are required for radiation sources above a certain threshold. The NNRA also makes provision for safety standards and regulatory practices by means of the regulations (GNR388 of 2006).</p>	
<p>The City of Ekurhuleni (CoE) Integrated Development Plan (IDP) (2013/14 - 2015/16) provides the regional socio-economic context of the project area. The IDP states that the CoE has a total surface area of 1 975 km² that accommodates a population of approximately 3 million. Migration into the area is a key challenge, which is evident in the number of informal settlements and by the informal trading activity. The CoE is considered an industrial hub. Economically active people constitute 41.5 % of the population. The area contributes approximately 6.1 % to national production. Over the period 1996 to 2011, the economy grew by an estimated average of 3.2 % per annum. The main contributing sectors have been identified as retail, entertainment, aviation, property development, mining and manufacturing (food and beverage, packaging, chemicals, metal, services, and other manufacturing services). The CoE has a 100 year history of mining which has resulted in environmental deficits including acid mine drainage, undermined degraded areas, and mine dumps containing radio-active materials. Approximately 41 % of the City of Ekurhuleni has been identified as being of importance for protection for agriculture; 22 % of this is of high importance, while 19 % is of moderate to high importance. The natural environment of the CoE can be broken down as follows: 19 % Critical Biodiversity Areas, 18 % Ecological Areas, 1 % Protected Areas, 16 Threatened Plant Species, 14 Threatened Animal Species, and 10 % Threatened Ecosystems. The industrial and urban development that has shaped the CoE has resulted in high levels of pollution impacting soil, water and air resources. It has also resulted in degradation of ecosystems and the subsequent loss of biodiversity.</p>	<p>Refer to the social baseline in Section 1)a)viii) This has also been taken into consideration in the determining the need and desirability of the project, refer to Section 6).</p>
<p>The CoE Regional Spatial Development Framework (RSDF) (2015) provides the framework for making resource-effective decisions regarding planning. The project area falls largely within Region E as per the CoE RSDF. Witpoortje vent shaft falls within Region D.</p> <p>Region E is made up of Nigel, Kwatsaduza and Springs South. The most prominent land uses in Region E include: residential uses (low, medium and high income housing); mining land, including active and closed mines and related mining legacy issues (such as slime dams, mine heaps, etc.); conservation areas (Marievale Conservation Area); the Dunnotar Airport and military base; industrial development concentrated around Nigel and to the south of Springs; and vacant/undeveloped and agricultural land. Region E contains approximately 18100 ha of open space, which is the greatest quantity of available open space within the EMM and translates to 46% of the surface area within the region. Development in Region E is highly limited, with an estimated 71% of the region containing environmental constraints. The predominant environmental constraints within this region include high agricultural potential land, protected areas and areas of ecological importance. Brakpan, in particular, is highly constrained by ecological important areas.</p> <p>The Witpoortje Vent Shaft SDA falls over an area classified as open space and the Windmill Shaft SDA falls over an area classified as urban. Refer to Figure 5 and Figure 6.</p>	<p>This has been taken into consideration in the determining of the need and desirability of the project, refer to Section 6).</p>

<p>The objective of the RSDF is to ensure continued functioning of the area (ecological/ agricultural/open space) and to ensure that the area is not compromised. Developments within these areas should be limited to existing development / disturbed footprints, and should avoid encroaching on natural or agricultural landscapes. Development should be undertaken in such a way that ecological and open space networks remain intact, and that fragmentation of the system, resulting in the isolation of ecologically important areas and open space, does not occur.</p> <p>The relevant national, provincial and local legislative requirements will be adhered to for the proposed development.</p>	
<p>The Gauteng Province Environmental Management Framework (GPEMF) (2015) provides a framework to guide decision-making regarding land-use at all levels of planning. According to the GPEMF, <i>the SDA falls within Zones 3 and 4.</i></p> <p>Zone 3 is “High control (outside Zone 1)” and Zone 4 is “Normal control”.</p> <p>Zone 3 is also considered sensitive to development activities and in several cases may have specific values that need to be protected. Conservation and related tourism and recreation activities should dominate development in this zone. Zone 4 is dominated by agricultural uses outside of urban development, thus the intention is to promote agriculture and rural development that supports agriculture in these areas. Refer to Figure 7.</p>	<p>This has been taken into consideration in the determining of the need and desirability of the project, refer to Section 6) as well as the planned post mining land use.</p>

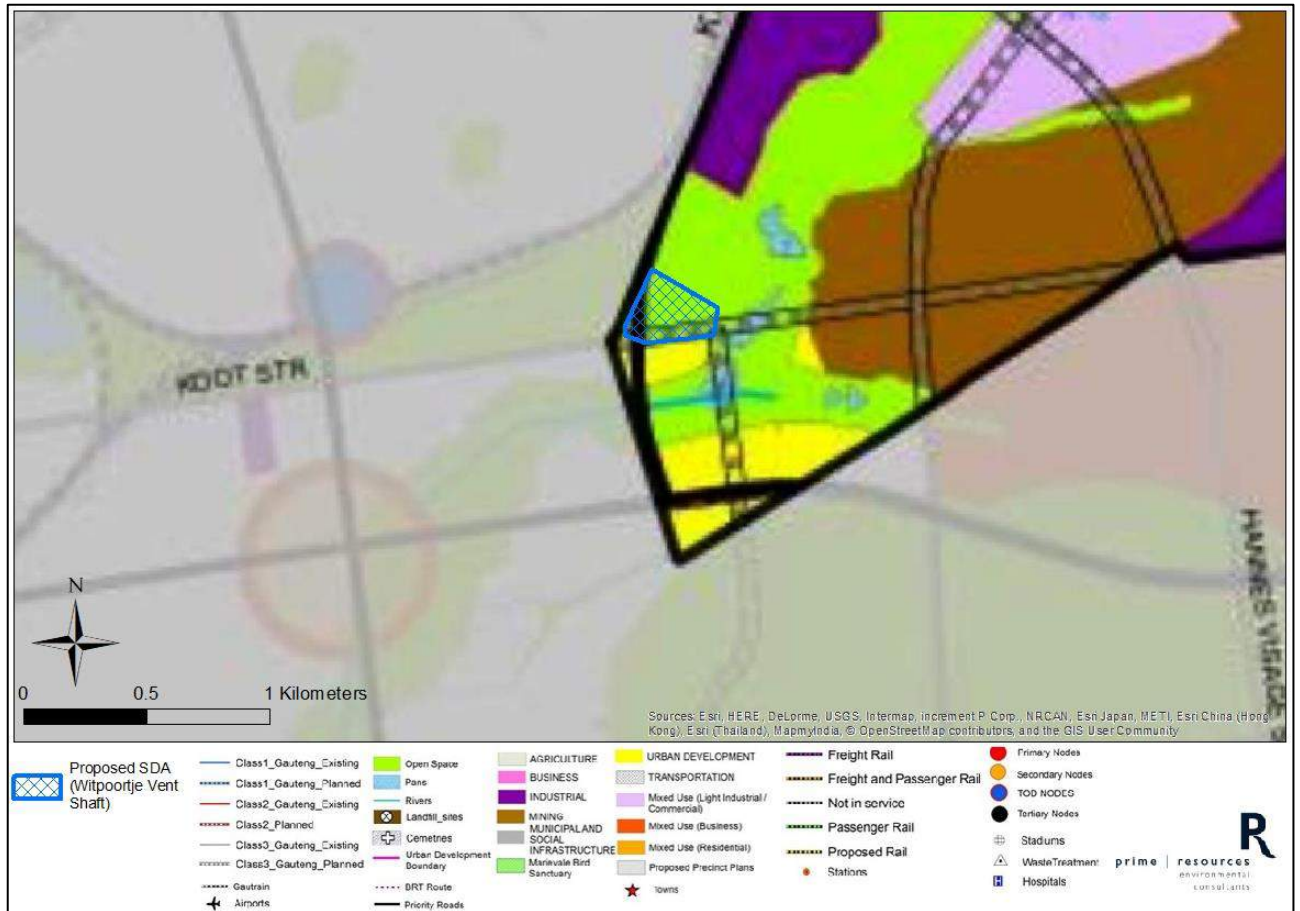


Figure 5: Proposed SDA (Witpoortje Vent Shaft) relative to the CoE Region D RSDF



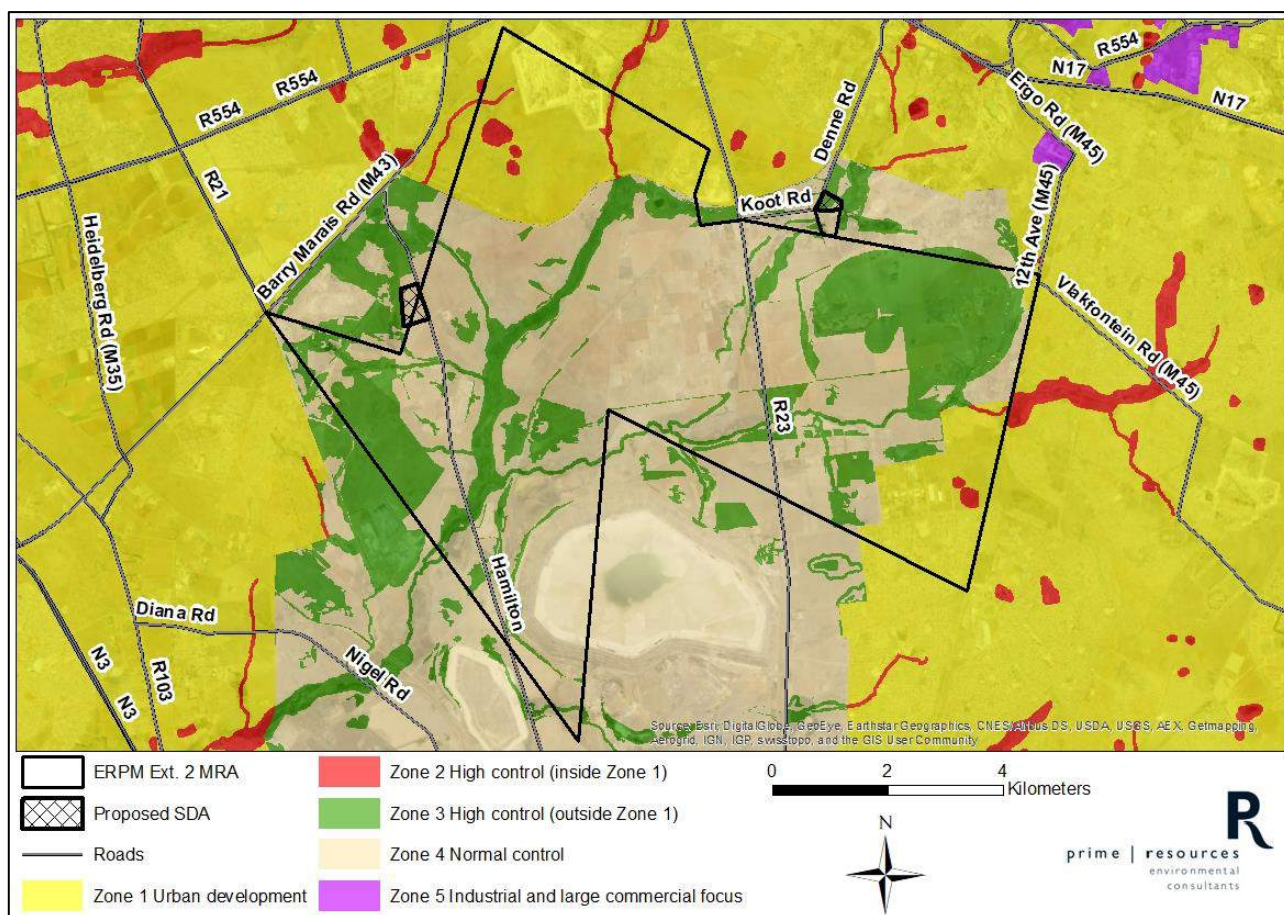


Figure 7: Proposed project relative to the GPEMF zoning

6) 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 proposed SDA for the ERP Ext 2 Mine is relatively free from urban development and consists mainly of open land used for agriculture and livestock grazing. Existing surface infrastructure within the general area of interest includes Eskom Substations, railways, +88kV power lines, main roads, freeways and surface resources (tailings and calcine dams). The substantial existing infrastructure is such that this area is ideal for the establishment of a new mine using the surface footprints where the landscape has previously been disturbed.

ERP Ext 1 is committed to contributing towards the socio-economic activities of the immediate community and the region. The required workforce is currently estimated at 976 permanent employment opportunities (excluding procurement or contractors). The bulk of these will consist of unskilled and semi-skilled labour. Once the mine becomes operational, the employment of a local workforce will translate into more individuals being impacted through direct and indirect income.

7) PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

The period for which authorisation is required will be from the year 2019 to the year 2064 (45 years).

8) DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED SITE

(NB!! – 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.)

The location of the surface infrastructure area to be developed is located as far as possible in areas where there is limited natural vegetation / CBA / ESA, thereby avoiding sensitive areas. Other contributing factors to the SDA infrastructure placement is the location of the resource, where as far as possible the SDA is placed on low grade resource areas, so as not to sterilise the resource. Other factors include the location of existing infrastructure such as pipeline routes and access roads. The SDA has been kept to the minimum extent possible. The project will also make use of existing vent and access shafts in the area, that will be refurbished or re-equipped, thus having the least impact on the environment.

9) DETAILS OF ALL ALTERNATIVES CONSIDERED

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

- (a) the property on which or location where it is proposed to undertake the activity;**
- (b) the type of activity to be undertaken;**
- (c) the design or layout of the activity;**
- (d) the technology to be used in the activity;**
- (e) the operational aspects of the activity; and**
- (f) the option of not implementing the activity.)**

a) Site Alternatives

No alternative sites were assessed as the proposed location of the Windmill shaft was selected based on a number of factors and determined to be the most suitable. The Witpoortje vent shaft is an existing shaft to be refurbished.

b) Type of Activity

The mining activity comprises of underground mining operations and associated activities, including, blasting to extract the ore. To gain access to Ext 2 underground workings a new access and vent shaft will be constructed (Windmill Shaft), while existing vent shafts will be re-equipped as mine operations progress. Supporting surface infrastructure associated with the new shafts will be developed on site.

c) Design and Layout Alternatives

The design and layout is based largely on the existing shaft locations and the location of the ore body. The surface infrastructure to be developed on site is proposed to be over an area of approximately 20 ha.

The chosen layout is the most suitable in terms of fitting onto the selected property. An upstream berm will screen the communities from noise, dust, and visual impacts. Minor changes could be made to the layout if required, based on comments received during the public participation process.

d) Operational Alternatives

The operational method chosen of combining the two mining rights and with the prospecting right and using and developing the necessary infrastructure is the only option to create a financially feasible project that will be able to obtain funding in order to ensure mining activities commence.

The proposed operation involves the use of existing infrastructure as far as possible in order to limit capital expenditure. This also limits the environmental and social impacts of the project and very little new development will occur as a result of this project. No operational alternatives were considered.

Hydraulic hoisting of slurry prevents surface development and existing slurry pipelines will be used for the transport of the slurry materials. The operational plan is based on economic feasibility and no other operational alternatives have been considered.

e) The “No-Go” Option

If the activities associated with ERPM Ext 2 are not approved, then the potential mining activities associated with that project as well as the two adjacent mining right areas will no longer be financially viable. The associated economic benefits of employment will not be realised. The potential negative impacts will however also not materialise to the same extent, and the land could potentially be used for alternative purposes, such as agriculture.

10) 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)

The public participation process to be followed will meet the requirements of Chapter 6 of the NEMA EIA Regulations, GNR982 of 2014 (*as amended by GNR326 of 2017*).

Landowner notification

The landowners of the properties where the surface infrastructure is to be located and under which underground mining is to take place (i.e. the portions and farms as listed in the table in Section 2) have been identified and notified of the proposed project activities via registered mail or email. Refer to Appendix 4.1. Contact details for one of the landowners (Ms Suzanne Weitze) could not be obtained at the time of submitting the Scoping Report. Ongoing efforts will be made to contact her.

Scoping phase public participation process

The Scoping phase public commenting period runs from 8 March to 8 April 2019.

IAP registration

An IAP register was opened and representatives from all of the relevant State Departments, as well as any IAPs requesting to register, were added to the database. Refer to Appendix 4.2.

Media notice

A media notice was published in two local newspapers (Brakpan Herald and the African Reporter) on 8 March 2019 in English. The media notice provides a brief project description, legislative requirements, and the registration process to be followed for Interested and Affected Parties (IAPs), details on the availability of the Scoping Report, and contact details for more information. Refer to Appendix 4.3.

Site notices

Site notices were posted on site and at conspicuous locations within the surrounding communities on 8 March 2019, providing a brief project description, legislative requirements, the process to be followed to register as an IAP, details on the availability of the Scoping Report, and contact details for more information. Refer to Appendix 4.4.

Background Information Document (BID)

The BID provides a brief description of the project and potential impacts, the legislated environmental process, availability of the Scoping Report, the process to follow to register as an IAP, and contact details for queries. The BID was made available to State Departments and IAPs via email on 8 March 2019, and to surrounding residents by hand on 8 March 2019. The BID will also be made available to any IAPs requesting further information. Refer to Appendix 4.5.

Scoping Report

The Scoping Report was made available for comment to State Departments (including the Competent Authority) via email or hard copy as requested (proof of this will be added as Appendix 4.6 in the Scoping Report submitted to the DMR), and placed within the public domain on the Prime Resources website (www.resources.co.za), and at the Vosloorus, Tsakane, Kwa-Thema, Geluksdal and Brakpan Public Libraries for a commenting period of 30 calendar days (8 March to 8 April 2019).

Meetings

Focus group meetings will be scheduled to be held during the Scoping phase public consultation period, from 8 March to 8 April 2019. Minutes of these meetings will be attached to the final Scoping Report to be submitted to the DMR.

Comments and Response Report (CRR)

A CRR will be compiled for the project after the 30 day commenting period has ended, incorporating all comments received (and responses thereto) from IAP and State Departments during the Scoping phase public consultation period. This will be submitted to the Competent Authority in the final Scoping Report.

a) Summary of issues raised by IAPs (Complete the table summarising comments and issues raised, and reaction to those responses)

This table will be completed once the Scoping phase public participation process has ended. The table is also referred to as the Comments and Response Report.

INTERESTED AND AFFECTED PARTIES	DATE & METHOD NOTIFIED	DATE COMMENTS RECEIVED (METHOD)	ISSUES RAISED	(DATE & METHOD OF RESPONSE) EAP'S RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT	CONSULTATION STATUS
Landowner/s and lawful occupier/s of the land where the activity will take place					
Landowners or lawful occupiers on adjacent properties					
Municipal ward councillor					
Municipality					
Organs of state (responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWS etc.)					
Department Land Affairs					
Traditional Leaders					
Department Environmental Affairs					
Other Competent Authorities affected					
Organisations					
Surrounding communities					

11) THE ENVIRONMENTAL ATTRIBUTES ASSOCIATED WITH THE SITE

a) **Baseline environment** (Type of environment affected by the proposed activity - its current geographical, physical, biological, socio- economic, and cultural character)

i) Air Quality

Meteorological conditions

The project is situated with the Highveld Climatic Zone, which is characterised by warm summers accompanied by rainfall in the region. Mean annual precipitation is 461 mm, and average temperatures range from a minimum of 4 °C in July to a maximum of 28 °C in February. Monthly total rainfall and average daily temperatures measured in Springs since January 2017 are shown in Figure 8, which shows the historical rainfall between 2017 and 2018 for Springs, compiled by WeatherSA (2018).

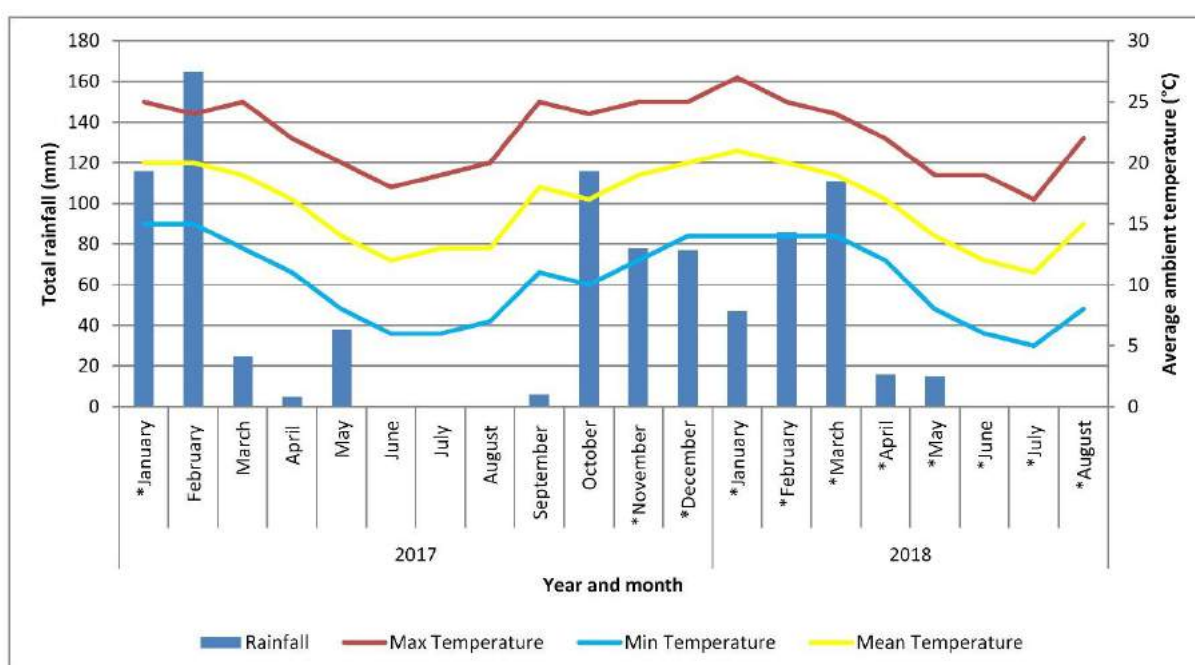


Figure 8: Monthly total rainfall and average daily temperatures, Springs, CoE (Source: WeatherSA, 2018)

Existing emissions sources

Sources of air pollutants in the CoE were compiled during the development of an Air Quality Management Plan for Ekurhuleni Metropolitan Municipality (EMM) in 2004. Source types within CoE include:

- Industrial and commercial – including fuel burning by businesses, hospitals and schools;
- Waste treatment and disposal – waste incineration, landfills and waste water treatment works;
- Residential – household combustion of coal, paraffin, liquid petroleum gas and wood;
- Transport – petrol and diesel driven vehicle tailpipe emissions, vehicle entrained road dust, brake and tyre wear fugitives, rail-related and aviation emissions;
- Mining – especially wind-blown emissions from mine tailings impoundments; and
- Other – tyre burning, wild fires, fugitive dust emissions from open areas and agricultural activities.

Identified sources within close proximity to the mine include:

- Small industrial sources and fuel burning appliances such as boilers at schools and hospitals, stand-by generators, and air heaters;
- Waste - emissions emanating from landfill areas;
- Household fuel combustion
- Windblown emissions from nearby tailings storage facilities
- Vehicle tailpipe emissions
- Fugitive dust sources from roads, open areas, agricultural activities and mining
- Biomass burning

CoE falls within the Highveld Priority Area, as identified by the Department of Environmental Affairs. Being an industrial hub, the municipality has deployed continuous Ambient Air Quality Monitoring Stations across the metro. Ten such stations were located in areas that were identified as having high levels of air pollutants such in industrial areas or areas with high traffic congestion. Some of these stations have been installed in Bedfordview, Springs and Tembisa.

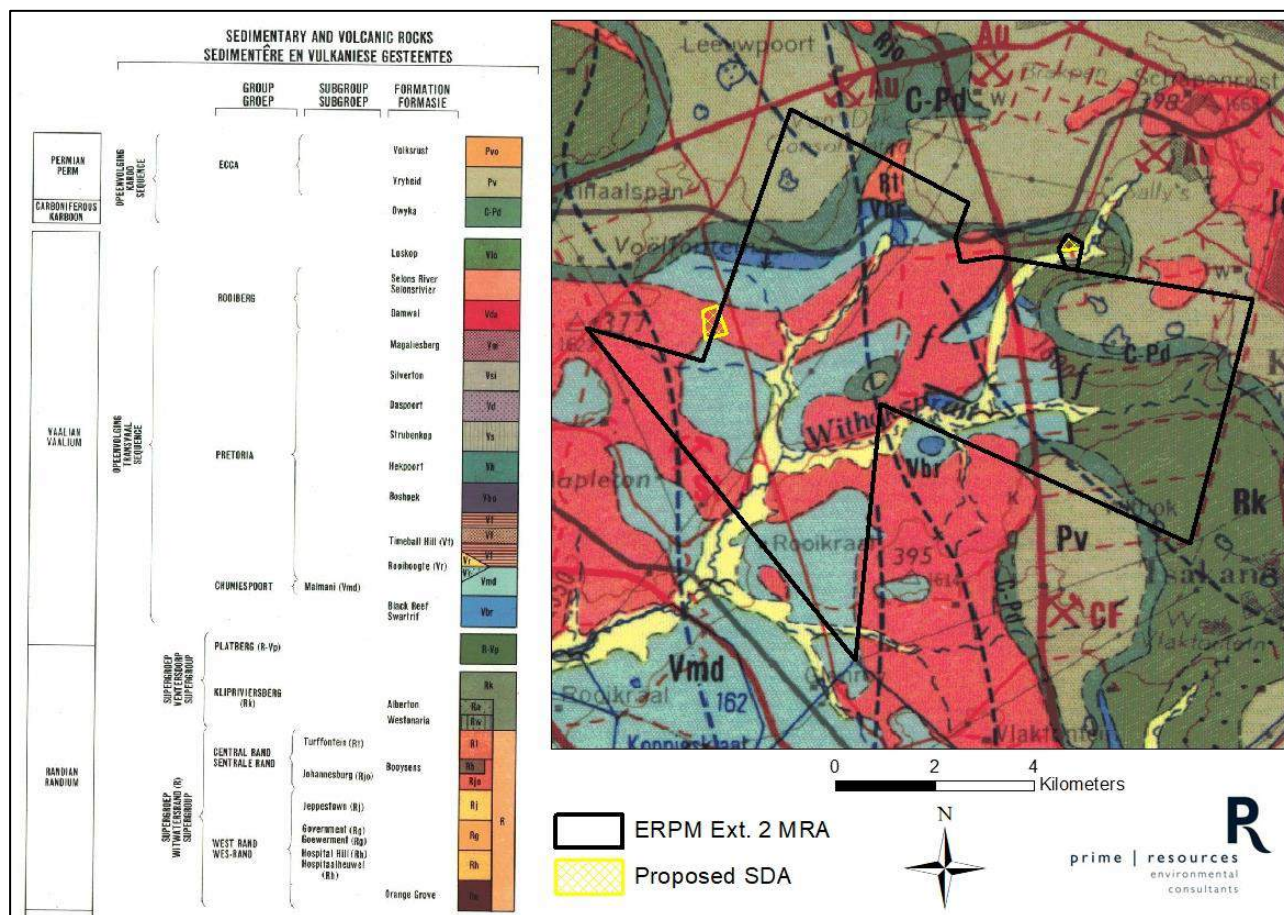
ii) Geology, Soil and Land Use

This information was obtained from ERPM's 2014 EIA/EMP compiled by Digby Wells and Associates and also from an EIA report conducted in the same area authored by Kongiwe Environmental (2018). Within the study area, the oldest rock outcrops are sediments that derive from the Witwatersrand Supergroup, these have formed pronounced ridges in the Germiston region. The reefs formed in the Witwatersrand sediments are gold-bearing and have been extensively mined through out the East Rand region. As a result of such extensive mining there is a vast proliferation of mine dumps, which are at present being reclaimed by various mine operators in the area.

Surface outcrops across the area of interest consists predominantly of the Dwyka Group and Vryheid Formation, which are from the Karoo Supergroup, and are unconformably deposited onto older strata. The Vryheid Formation is made up of Feld spathic sandstone, shale, mudstone and coal . This formation contains bitinous coal seams at 5 locations, and have been historically mined within the Springs area. Unconsolidated alluvial deposits deriving from the quarternary/tertiary age are located along streams, wetlands and pans. Refer to Figure 9.

With respect to soil found in the region, much of it consists of hill wash materials, alluvium along watercourses, and residual soils, all derived from the areas underlying geology. Found within the hill wash and the residual soils are sand, fine gravel and minor silt. While in the case of the water courses, alluvial deposits a mostly comprised of sand and clay with minor gravels. In addition, there are locally developed pedogenic horizons of ferricrete and ferruginous soils, particularly along the margins of water courses and the capillary fringes of perched water. These soils are typically poor and acidic, stony or sandy (Digby Wells and Associates, 2014).

Refer to Figure 20.



iii) Terrestrial Ecology

The region is dominated by areas of high agricultural potential land, protected areas and areas of ecological importance. Brakpan in particular appears dominated by ecologically important areas. Much of the land within the MRA area falls within a Critical Biodiversity Area (CBA), and the remaining portions consists of Ecological Support Areas (ESA) and areas that have no classification (refer to Figure 2). A CBA is considered important for the survival of threatened species and includes valuable ecosystems such as wetlands, untransformed vegetation and ridges, while ESAs are largely natural or near-natural landscapes.

Ecosystem threat status outlines the degree to which ecosystems are still intact or alternatively losing vital aspects of their structure, function and composition, on which their ability to provide ecosystem services ultimately depends (Driver et al., 2011). Ecosystem types are categorised as Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Least Threatened (LT), based on the proportion of each ecosystem type that remains in good ecological condition

Flora

The entire area of the MRA falls with the Grassland biome, within the Mesic Highveld Grassland Bioregion.

The project area is situated within three ecosystem types: Tsakane Clay Grassland (endangered), Klip River Highveld Grassland (critically endangered) and Soweto Highveld Grassland (vulnerable) (refer to Figure 10). The Grassland biome is typically made up of many different vegetation types. Relevant to the MRA and the proposed surface installations, there are three vegetation types present: the Tsakane Clay Grassland (Endangered), the

Eastern Temperate Freshwater Wetlands (Least Threatened) and the Soweto Highveld Grassland (Endangered) (Figure 11) Plant taxa and species that may be of importance to these vegetation types include:

- **Graminoids:** Grasses include *Andropogon schirensis*, *Brachiaria serrata*, *Cymbopogon caesius*, *Cynodon dactylon*, *Digitaria ternata*, *Diheteropogon amplexans*, *Elionurus muticus*, *Eragrostis racemosa*, *Eragrostis chloromelas*, *Eragrostis patentipilosa*, *Eragrostis plana*, *Heteropogon contortus*, *Hyparrhenia hirta*, *Microchloa caffra*, *Setaria sphacelata*, *Themeda triandra* and *Trachypogon spicatus*;
- **Herbs:** Herbs occurring in this vegetation type include *Acanthospermum australe*, *Ajuga ophrydis*, *Eriosema salignum*, *Euryops transvaalensis* subsp. *transvaalensis*, *Gerbera viridifolia*, *Helichrysum nudifolium*, *Helichrysum rugulosum*, *Hermannia depressa*, *Lotononis macrosepala*, *Nidorella hottentotica*, *Pentanisia prunelloides*, *Peucedanum caffrum*, *Rothea hirsuta*, *Selago paniculata*, *Senecio coronatus*, *Senecio inornatus*, *Sonchus nanus* and *Vernonia oligocephala*;
- **Geophytic herbs:** Geophytic herbs occurring in this vegetation type include *Aspidoglossum oligocephala*, *Hypoxis rigidula* var. *pilosissima*, and the semi-parasitic herb *Striga asiatica*;
- **Low shrubs:** Shrubs occurring in this vegetation type include *Anthospermum rigidum* subsp. *pumilum*, *Chaetacanthus setiger*, *Tephrosia capensis* var. *acutifolia* and *Thesium impeditum*.

Fauna

Much of the area within the MRA has been altered and transformed by activities such as agriculture (commercial crop farming), as well as settlements and mining activities. Throughout the area however there is a presence of wetland habitats that serve as home to a variety of fauna.

As per South African Bird Atlas Project, Version 2 (SABAP2) database, there are an expected 422 bird species within the vicinity of the project area. Of this, there are an estimated 37 species (8.7% that are listed as being Species of Conservation Concern (SCC), either at a regional (33) or global scale (18) (The Biodiversity Company, 2018).

In addition, the IUCN Red List Spatial Data has listed 86 mammal species that could be expected to occur in the MRA. Within this area there are an estimated 81 small to medium sized mammal species expected to exist, where 13 (16%) have been listed as being of conservation concern at a regional and global scale.

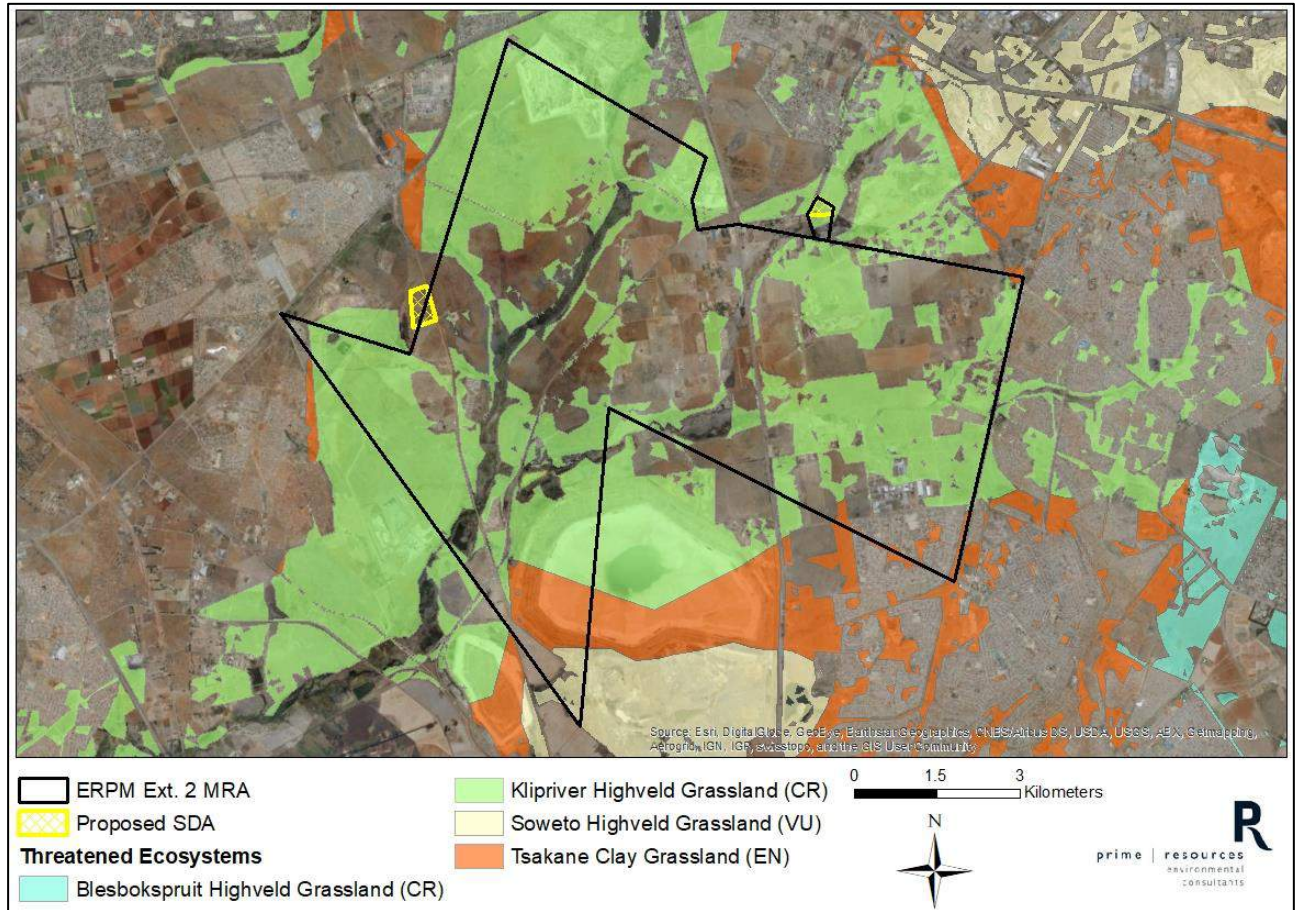


Figure 10: Ecosystem types of the project area

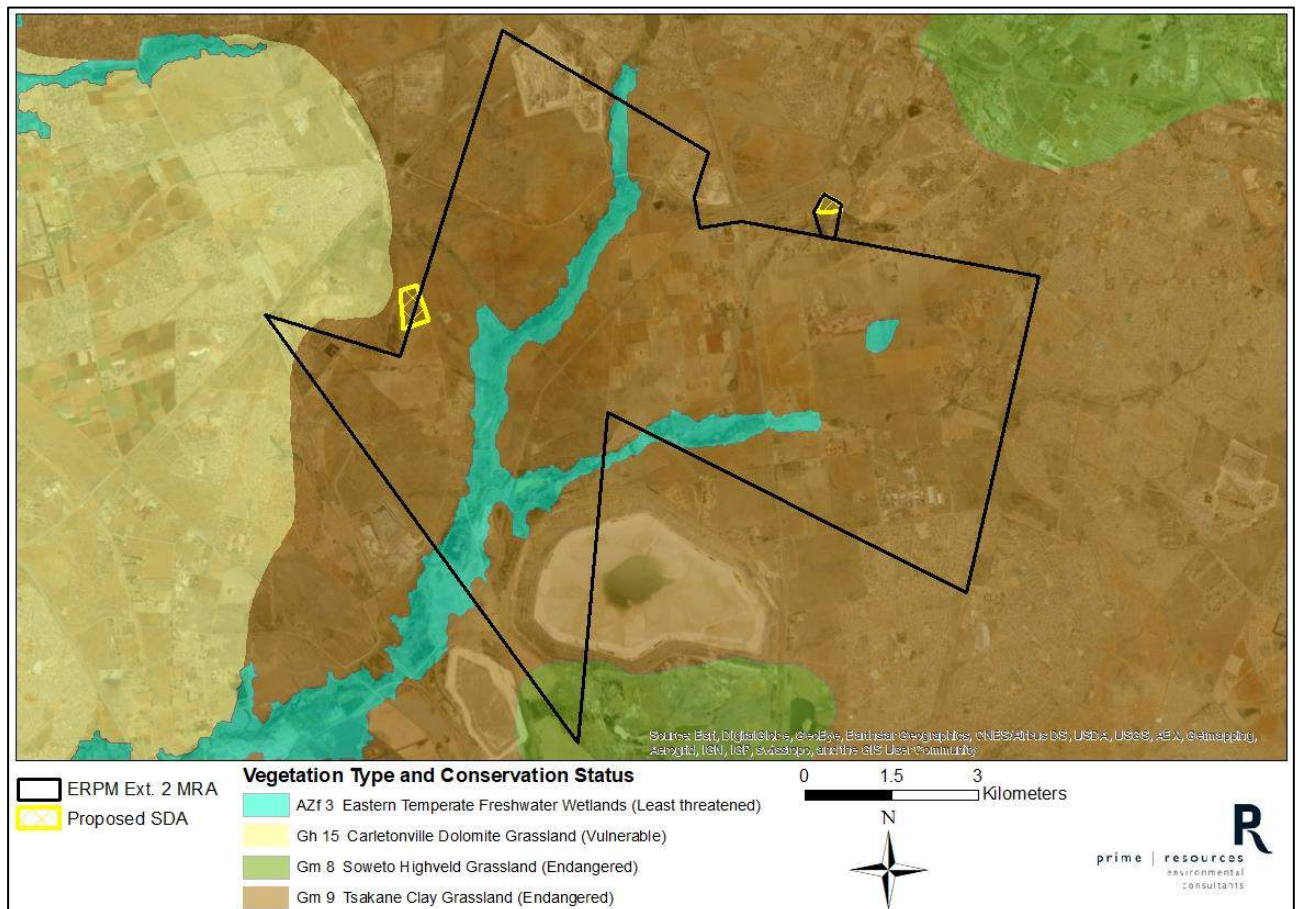



Figure 11: Vegetation types of the project area

iv) Hydology, Aquatic Ecology and Wetlands

The project is located within the Vaal Water Management area, and is situated within the C22C quaternary catchment of the Klip River Catchment (WMA:8). The most noticeable water feature within the MRA is that of the Rietspruit River - a perennial river, which flows in a north to south-westerly direction, until it joins the Klip River at the outlet of the quaternary catchment C22C. The Klip River then flows in a south-westerly manner, passing the town of Meyerton, and then into the Vaal River, which is immediately above the Vaal Barrage, near the town of Vereeniging. The Withokspruit Tributary, a non-perennial stream, is also located within the project area which flows in an east-west direction to join the Rietspruit (refer to Figure 11).

Rand Water has collected water quality data at two sampling points within the ERPM MRA (See Figure 11), as recently as January 2018 – December 2018 (Table 1).

Table 1: Water quality at sampling points in MRA project area



RAND WATER

Table 1: Water quality at sampling points in MKRA project area

Sample Points	Sample Point Description	Quarter	Aluminium	Ammonia	Chemical Oxygen Demand	Chloride	Conductivity	Daphnia Toxicity	Dissolved Oxygen	E.coli	Fluoride	Iron	Magnesium	Manganese	Nitrate	pH	Phosphate	Sodium	Sulphate	Suspended Solids
R1	Rietspruit from Sallies 26° 18.289'S 28° 20.145'E	1	0.23	3.55		114	169		3.8		0.27	0.05	92	0.07	3.08	7.0	0.20	212	1,516	
		2	2.04	14.97		163	357		4.1		0.37	0.06	112	0.44	2.48	4.8	0.20	252	1,937	
		3	0.53	6.55		165	333		0.9		0.36	0.03	70	2.04	3.83	4.7	0.22	145	2,177	
		4	0.43	6.20		168	388		2.7		4.03	0.01	105	6.57	3.90	4.9	0.25	201	2,167	
R2	Withokspruit Tributary 26° 19.418'S 28° 20.325'E	1	0.11	0.07		60	171		3.0		0.24	0.18	41	0.51	1.43	6.6	0.20	30	623	
		2	0.11	0.08		37	55		3.0		0.24	0.25	15	0.11	1.59	7.6	0.20	36	47	
		3	0.10	1.76		46	71		1.0		0.29	0.38	13	1.23	3.00	7.5	0.22	43	28	
		4	0.25	3.87		53	116		1.0		0.86	0.21	32	0.17	2.20	6.7	0.25	315	349	
R3	Tributary @ Carnival City 26° 15.569'S 28° 19.239'E	1	0.13	1.07		17	120		3.5		0.35	0.34	9	0.17	0.47	6.9	0.20	23	24	
		2	0.05	0.12		34	118		3.4		0.30	0.16	17	0.11	0.50	8.4	0.20	37	71	
		3	0.04	0.04		22	34		2.4		0.27	0.14	9	0.07	0.51	7.5	0.22	21	47	
		4	0.07	0.09		14	30		1.7		0.47	0.20	7	0.08	0.77	7.5	0.25	14	35	
R4	Rietspruit @ Vosloorus 26° 22.327'S 28° 14.682'E	1	0.06	0.05		145	102		3.1		0.39	0.08	64	0.17	2.53	7.2	0.20	198	1,447	
		2	0.03	0.05		113	146		4.5		0.27	0.02	70	0.07	5.80	7.5	0.20	215	947	
		3	0.08	0.04		138	205		1.2		0.37	0.06	77	0.25	1.41	7.8	0.22	90	990	
		4	0.15	0.40		122	172		1.1		1.88	0.39	70	0.44	0.50	7.1	0.25	93	737	

Water Quality Guidelines

	- Ideal
	- Acceptable
	- Tolerable
	- Unacceptable
	- Not analysed

These water sampling points show that the tributaries in the area have moderate to high concentrations of ammonia at the R1 and R2 tributaries, The R1 sampling point, appears to demonstrate elevated levels of Aluminium, Chloride, Magnesium, Sodium and Sulphate. Furthermore, the water is unacceptably acidic where it can be seen that there are extreme values for Sulphate at R1 and R4 sampling points.

The Rietspruit has a condition classification of E, EF – categorising the river as seriously modified to critically or extremely modified. As a result the stream is considered to not be intact and does not contribute towards river ecosystem biodiversity targets. The Withokspruit tributary has a condition classification of Z denoting it having a tributary condition modelled as not intact, according to natural land cover.

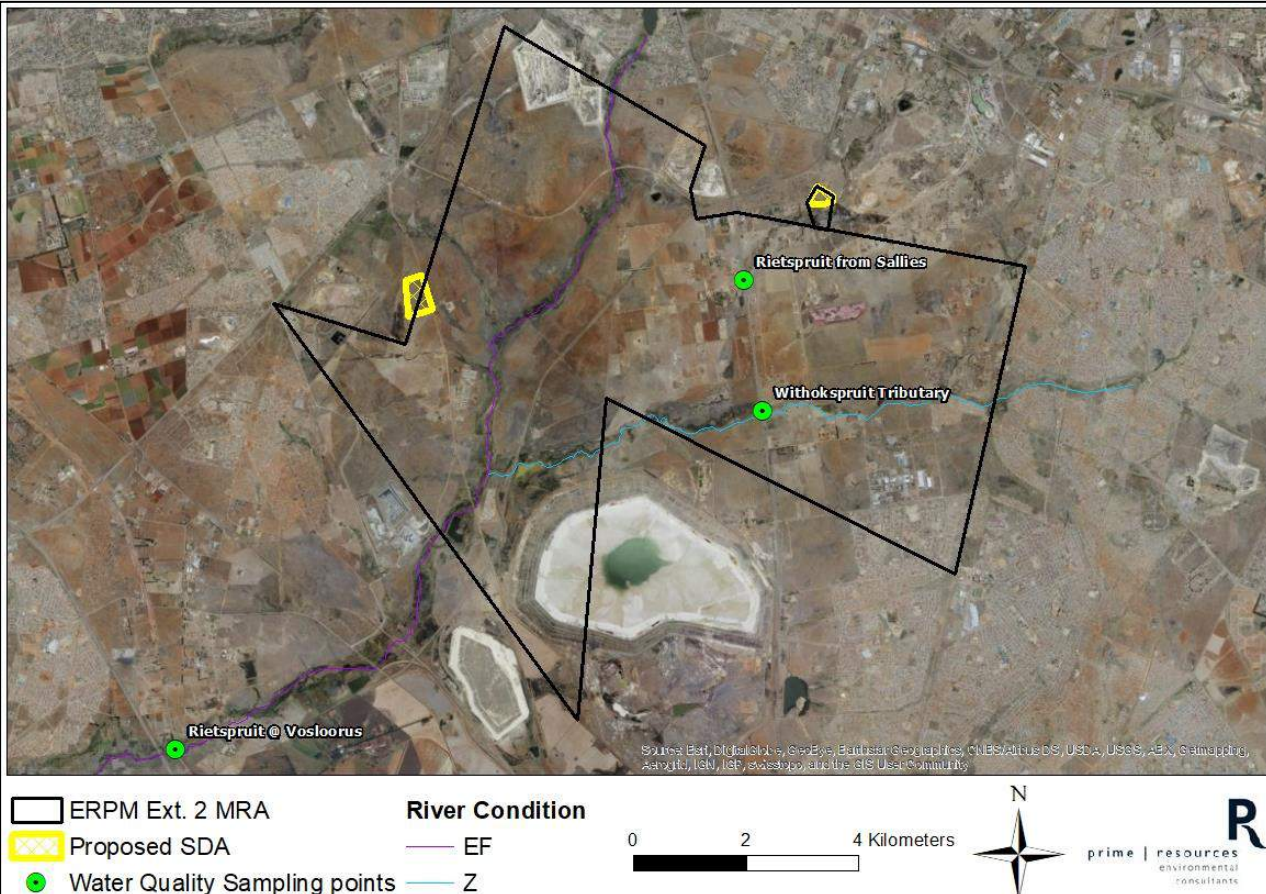
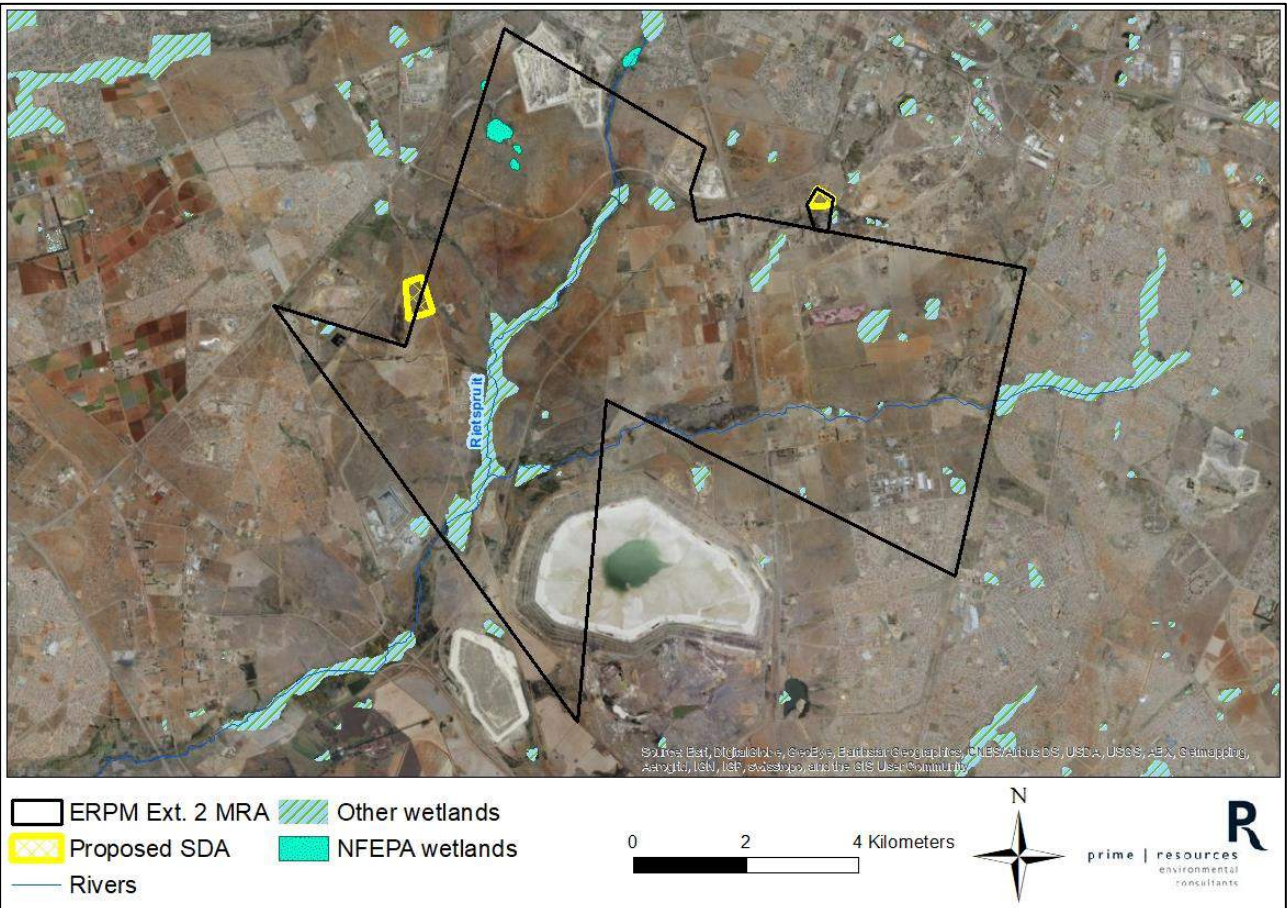
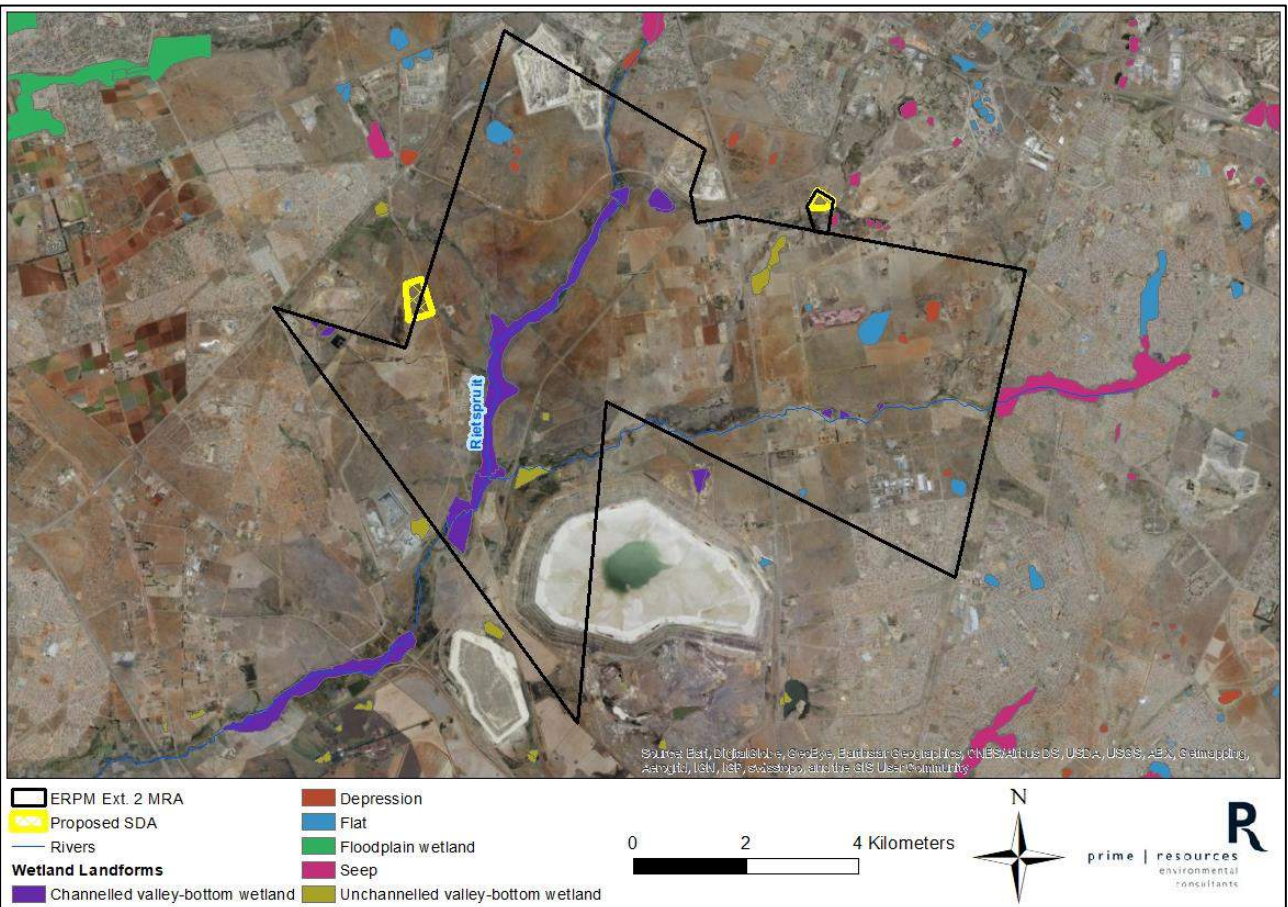


Figure 12: River systems and their condition classification associated with the project area

Within the MRA there are several identified National Freshwater Ecosystem Priority Area (NFEPA) wetlands (refer to Figure 12), that are located within the regulated 500 m assessment area. These are mostly associated with the Rietspruit. The wetland types include: channelled valley bottoms, unchanneled valley bottoms, and wetland flats and depressions (refer to Figure 13 for location of the different wetland types).

The wetlands located on site range have NFEPA conditions ranging from AB (Present Ecological State Equivalent (PES) natural or good) to Z3 / DEF (PES - heavily to critically modified). The wetland associated with the Rietspruit is categorised as DEF; it is heavily to critically modified (refer to Figure 15). Conditions of these wetlands range from being largely natural to being severely modified.





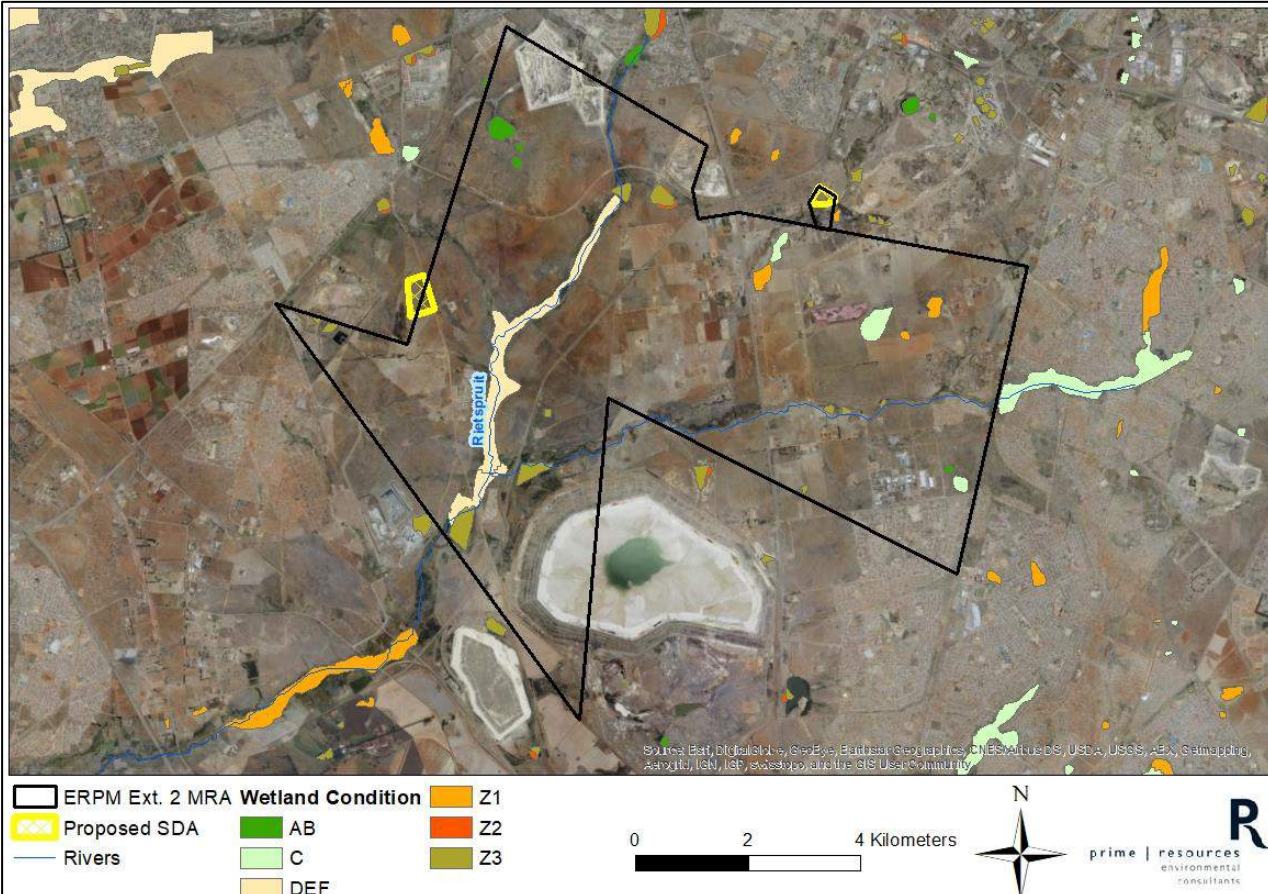


Figure 15: NFEPA and PES classification of the wetlands surrounding ERPM Ext. 2

v) Hydrogeology

Information was gathered from reports in the same area as compiled by Kongiwe Environmental (2018), Digby Wells and Associates (2009) and by the City of Ekurhuleni, GIS 2017. The proposed sites for implementation of surface infrastructure are underlain by weathered dolomite and chert of the Malmani Subgroup. These rock types overlie the regional fractured aquifer, which is mostly comprised of a thick dolomite that varies in composition from a fractured form to being solid. The base of the dolomite body is approximately 50 metres below ground level (mbgl). Generally, groundwater in the area can be found between 5 and 25 mbgl. The flow of the groundwater body within the MRA drains inwards toward the Rietspruit in a southeast to northwest direction. Due to the historical mining and tailings disposal of gold and uranium associated with the area, ERPM baseline water quality is indicative of these impacts. The impacts ranged from elevated sulphate, Total Dissolved Solids (TDS) solids associated with the slimes, Iron (Fe), pH, Electrical Conductivity (EC) and Manganese (Mn). These were mostly within or higher than Class 2. The only variables which fell within Class 1 are Nitrate (NO₃), Fluoride (F) and Aluminium (Al). Currently the Department of Water Affairs is managing the water within the Klip River catchment with an aim to prevent further surface water quality deterioration (Digby Wells and Associates, 2014).

According to the South African aquifer system management classification, all the aquifers in the study area – except that of the Malmani dolomite – are classified as being minor in nature. The quantity of water present within these aquifers are therefore limited, however they may play a potentially important role for local supply of water, and also in acting as a base flow for nearby rivers. The underlying dolomite of the nearby Rooikraal tailings storage facility (TSF) located just over 5km south-east of the proposed surface infrastructure installation, is classified as being a major aquifer system, and is generally viewed as being high yielding aquifer with water that is considered to be of good quality (Kongwiwe Environmental, 2018).

vi) Archaeology and Cultural Heritage

In the absence of further information, detailed studies will be conducted, specific to the surface development areas.

vii) Palaeontology

The palaeontological sensitivity map on the South African Heritage Resources Information System (SAHRIS) database shows red (very high palaeosensitivity), green (moderate palaeosensitivity) and blue (low palaeosensitivity) over the MRA. The SDA is green (moderate palaeosensitivity), grey (insignificant or zero) and blue (low palaeosensitivity) (refer to Figure 16).

Due to the moderate palaeosensitivity over parts of the SDA a desktop study is required.

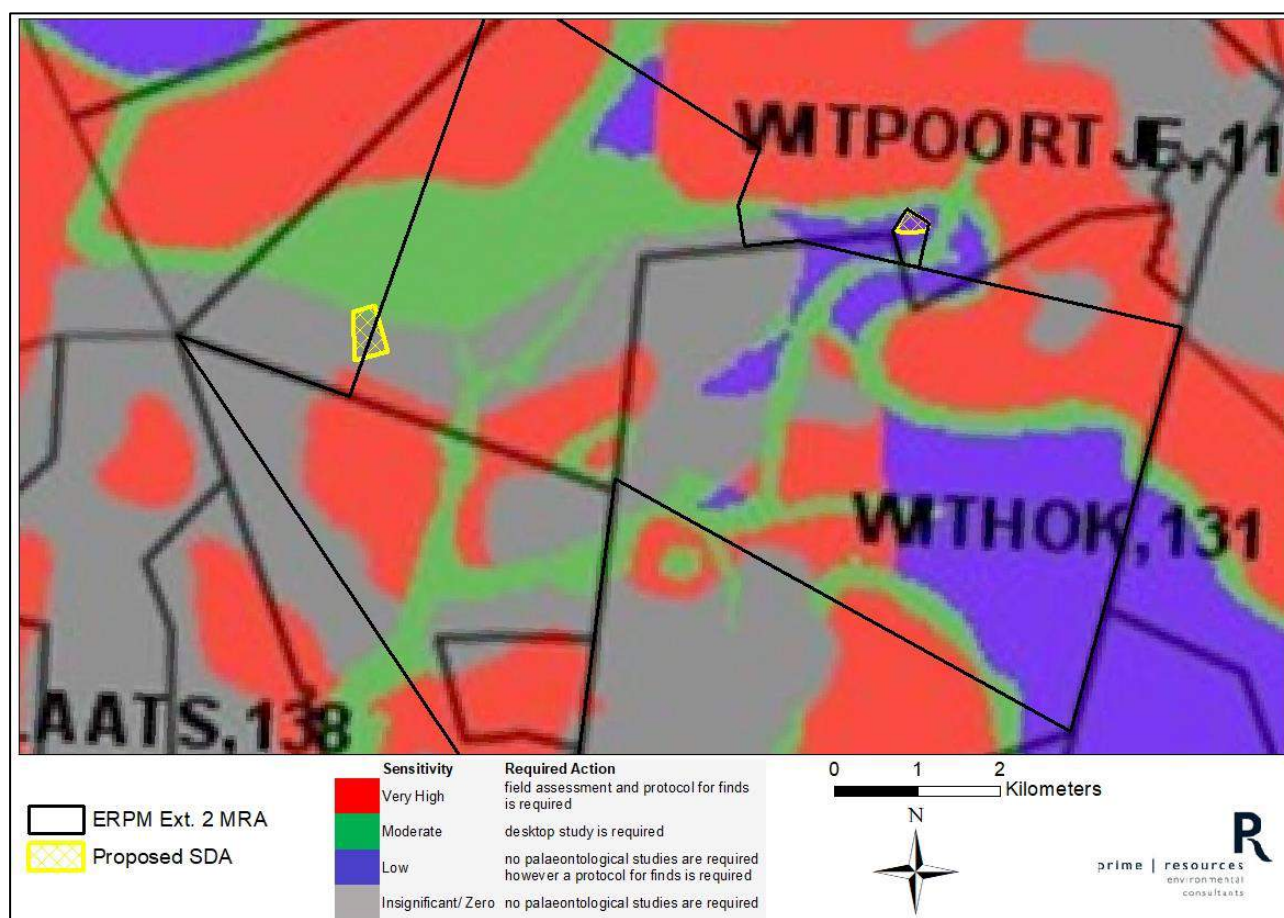


Figure 16: PalaeoSensitivity map of ERP Ext. 2

viii) Socio-economic

The following information was obtained from the City of Ekurhuleni Regional Spatial Development Framework for Region E, (2015) and from Stats SA (2016)..

Provincial context

Gauteng is the smallest of South Africa's nine provinces. The population in 2016 was estimated to be approximately 13 399 725 people, or approximately 24.1% of South Africa's population. Gauteng continues to serve as the economic engine room of the country and the subcontinent, responsible for over 34.8 % of the country's GDP. The Gauteng Province is divided into three metropolitan municipalities (City of Ekurhuleni (CoE), City of Johannesburg and City of Tshwane) and two district municipalities (Sedibeng and District). The most important sectors contributing

to Gauteng's economy are finance, real estate and business services, manufacturing, and general government services.

Regional description

The proposed surface infrastructure installation and associated MRA are located within the CoE. As of 2016 there were approximately 3.3 million people living within CoE which makes it the 4th largest municipality in the country (EMM, 2015). Being officially formed on 5 December 2000, the municipality was created as a result of the amalgamation of 9 towns, 11 local administrations as well as the Kyalami Metropolitan Council and the Eastern Gauteng Services Council. The 9 towns are that of Alberton (Thokoza), Benoni (Daveyton, Actonville, Wattville and Etwatwa), Brakpan (Geluksdal and Tsakane), Boksburg (Vosloorus and Reiger Park), Edenvale/Lethabong, Germiston (Katlhlong, Palm Ridge and Zonkizizwe), Kempton Park (Tembisa), Nigel (Duduza) and Springs (Kwa Thema and Bakerton).

The MRA is situated within Region E of the CoE and is made up of wards 82, 99 and 105, which can be found within the south-eastern section of CoE. Region E is bordered by the Lesedi Local Municipality along its southern and eastern borders. The region comprises of Kwatsaduza, Springs South and parts of Brakpan and also the northern areas of Nigel. Prominent land uses in Region E include residential (low to high income), mining (and closed mines) and mining related legacy issues such as slimes dams and dumps. There is also industrial development concentrated around Nigel, southern Springs, Dunnotar Airport; vacant and undeveloped agricultural land; as well as areas demarcated for conservation such as the Marievale Conservation Area .



Figure 17: Regional map of Ekurhuleni (EMM, 2015)

Demographic context

There are approximately 503 000 residents living within Region E, which makes the region the 3rd most populous in the municipality. About half of the inhabitants living here reside within the townships of Tsakane (155 000), KwaThema (103 000) and Duduza (75 000) (StatsSA,2016), all considered densely populated. Table 3 shows that the three wards within the MRA have a total population of 94 671 residents, with a population density ranging from 505 to 1 124 people per km². The average age in wards 85 and 99 is 25 to 27. Languages spoken are IsiZulu, Sesotho and Sepedi. Ward 105 differs in that 70% are white with many of the residents speaking Afrikaans.

Table 3: Table showing demographics of wards 82, 99 and 105

Category	CoE	Ward 82	Ward 99	Ward 105
Total population	3 379 104	28 765	43 871	22 035
Gender (%)				
Female	48.8	49	45	50
Male	51.2	51	55	50
Race (%)				
Black African	78.7	80	93	24
Coloured	2.7	18	6	2
Indian or Asian	2.1	0	0	3
White	15.8	2	1	70
Language (%)				
IsiZulu	28.6	45	33	7
IsiXhosa		5	9	
English	11.9	6		17
Afrikaans	11.8	20		60
Sepedi	11.3	6	10	
Sesotho	9.9	8	15	3
Other		12	18	2
Age (%)				
0 - 19	24.4	37	37	28
20 - 59	71.8	56	61	60
60 and above	3.8	6	3	11

Table shows that many of the residents within the MRA (>58.5%) have received their grade 12 qualification. In addition wards 82 and 105 show high instances of additional educational achievements post matric wherein just under half of those living in ward 82 have received higher education.

Table 4: Educational profile of wards 85, 99 and 105

Category	Gauteng	CoE	Ward 82	Ward 99	Ward 105
No schooling aged 20+	3.6	3.6	3	6	1
Grade 12/ Grade 12 aged 20+	39.7	35.4	79.1	58.5	86.4
Higher education aged 20+	10.9	14.6	49.4	27.3	64

The region is afflicted by limited economic opportunities which have led to hindered social development. This is evidenced by high levels of unemployment, in which only 55.59% of those able to work are doing so. There are many reasons as to why there is a low participation rate of the labour force, however one of the major drivers for this may be attributed to the need for more opportunities to be created or for better access to employment. Unemployment is worst in wards 99 and 82 which has 38.3% and 40.8% unemployment, respectively. The annual income in these two wards is between R14 600 and R57 500 per annum, where ward 105 has an annual income of R117 000, it also has a higher employment rate of 66,4% (StatsSA,2016).

The bulk of the region's economy stems from the already present manufacturing and community sectors. Here, the manufacturing sector is expected to have been the largest contributor toward the economy of Region E by 2017. This has been supported by development from PRASA as well as the nearby Dunnottar Airport.

Table 5: Region E Unemployment Levels

Indicator	Statistic
Working Age Population	331 000 people (2012)
Economically Active Population	184 000 people (2012)
Labour Force Participation Rate	55.59%
Total Employment (by Region E)	57 900 people
Formal Employment	Formal 51 000 people
Informal Employment	Informal 6 290 People
Unemployment	86 600 people (2012)

Local context

The MRA encompasses the boundaries of 4 farm: Witpoortje 117 IR, Rooikraal 156 IR, Glen Roy 132 IR and Withok 131 IR. The largest formal residential area within the MRA is that of Geluksdal. This area is host to its own clinic, library, metro police station, municipality complex and sports field. To the north of Geluksdal is the industrial suburb of Laborê, which makes up the bulk of the area's manufacturing capacity. Most of the land within the northern and eastern sections of the MRA comprise of farm plots, with mixed land uses such as residential, and small holding agricultural activities. Other surrounding residential areas include Tsakane to the south-east, KwaThema to the east, Dawn Park to the west and Sonneveld, Minnebron and Sunair Park to the north.

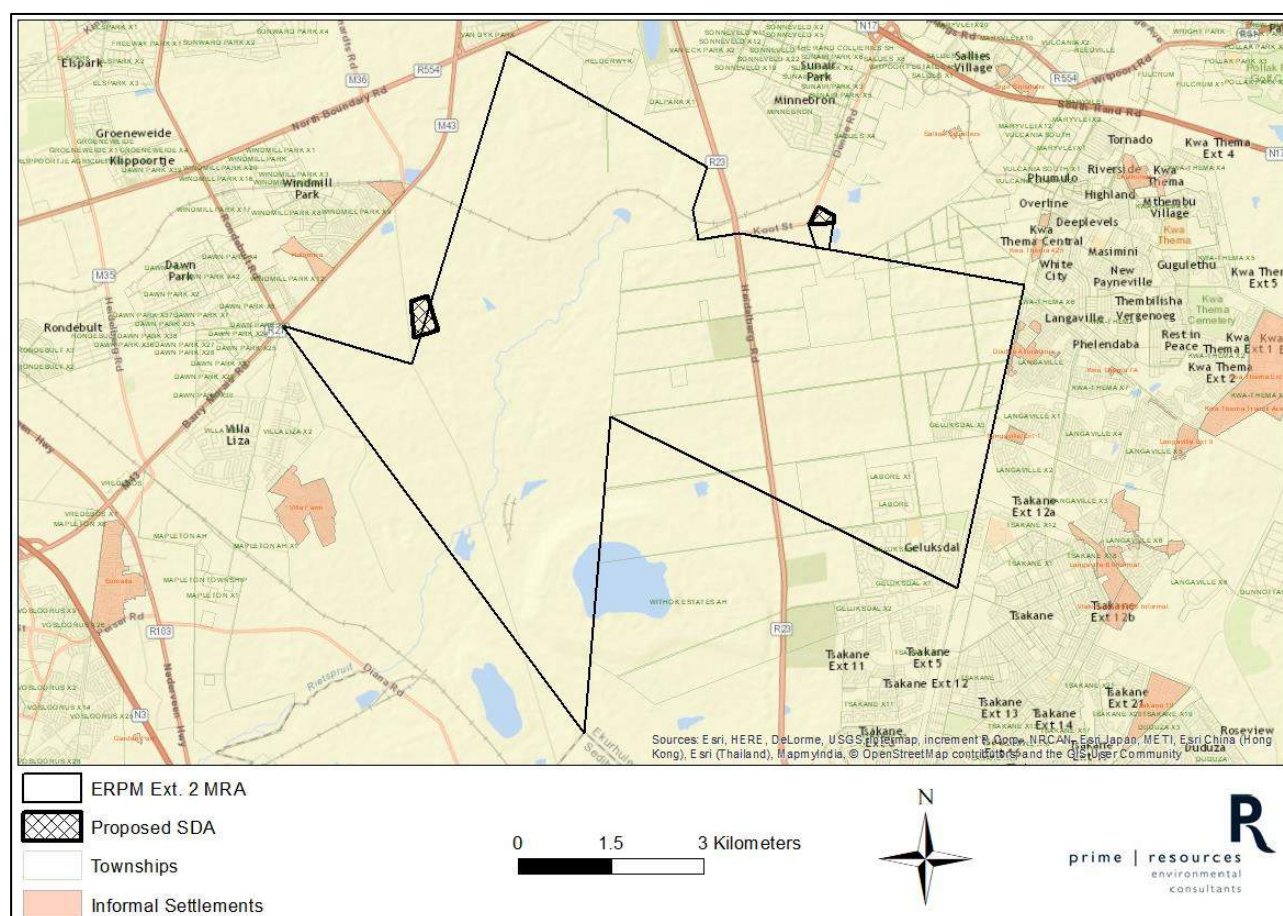


Figure 18: Location of ERP Ext. 2 relative to surrounding residential areas

ix) Visual Aesthetics



With regards to land use within the project area, there is evidence of historic mining in the area. Mine dumps and slurry pipelines are prolific within the landscape and can be seen in many parts of the MRA. There is also the Rooikraal landfill site. The character of the MRA and its proposed surface infrastructure can be defined as being mostly unclassified, surrounded by mining and industrial activities which are interspersed by small pockets of residential plots. Some inhabitants are involved with smallholder agricultural activities, in which some farmers have used the land for cash crops or grazing activities. The noise character at the site is typical of a semi-rural area dominated by noise primarily from pedestrians, animals, birds, and local road and air traffic. There are generally low ambient noise levels typical of suburban and semi-rural environments within the interest site.

The landscape quality of the proposed surface infrastructure area is considered low. It is significantly degraded by previous activities and surrounded at its closest boundaries by farm plots. The areas closest to the proposed surface infrastructure installations are mostly comprised of degraded grassland, and in some parts natural and artificial wetlands. Areas to the north of the MRA are wooded, with mostly alien hard woods. These are bordered by dirt roads used to access mining facilities such as the nearby mine dumps. The roads also follow the previously installed pipelines which transport slurry waste from the ERGO treatment plant to the nearby ERGO/Withok Tailings Complex, which dominates the south western horizon (ERPM, 2009). Much of the proposed service infrastructure area is accessible via dirt road, and is located for the most part on the outskirts of the residential/farm plots. This dirt road is a service road that follows the nearby railway line, and then follows the slurry pipelines. The majority of the proposed surface infrastructure area has limited visual sensitivity, but the FEV shaft is located alongside a residential suburb and may be considered to have a higher visual sensitivity.

b) Description of the current land uses

i) Description of specific environmental features and infrastructure on the site

Within the MRA there are a variety of land uses ranging from industry, smallholding agriculture, residential as well as a landfill site. Within the proposed surface infrastructure area there is a fragmented wetland as well as grazing land used by the local community.

	
Substation and mobile generator located on Witpoortje 117 Portion 35	Dirt road, pipeline and railway line, adjacent to the site








	
<p>Grazing activities taking place within the proposed surface infrastructure area.</p>	<p>Eggbert Eggs, Maye Serobe, laying farm, located on Rooikraal 156 IR, on Hamilton Road</p>
	
<p>Calcite Dump, located east of the proposed surface infrastructure area and within the area earmarked for future slimes dam development (Withok 131 IR Portion 9)</p>	<p>Mine dump, located north of the Calcite Dump.</p>
	
<p>Geluksdal cemetery, located far south of the MRA (Withok 131 IR 1615 Geluksdal Ext 1.)</p>	<p>Pipeline and dirtroad, corner of Koot Street and Denne Road, where the Witpoortje Vent Shaft will be re-opened and re-equipped</p>
	
<p>Pipeline and vegetation on the corner of Koot Street and Denne Road, where Witpoortje Vent Shaft will be re-opened and re-equipped</p>	

Figure 19. Photos of environmental features and infrastructure surrounding the project area

ii) Environmental and current land use map (Show all environmental, and current land use features)

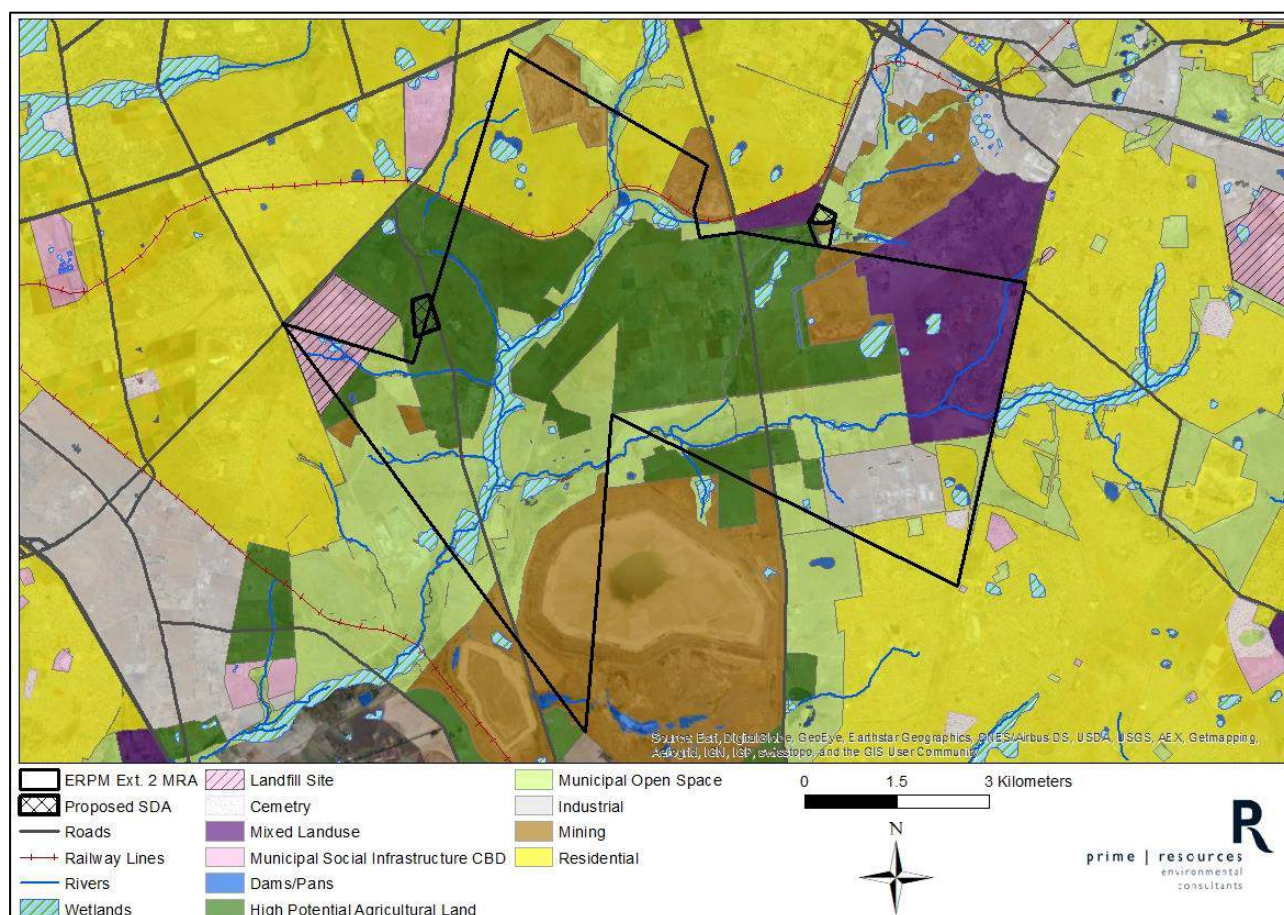


Figure 20. Location of ERP Ext. 2 relative to surrounding land use

c) 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 initial site layout is reflected in Figure 4 above. The potential positive and negative impacts, including cumulative impacts, of the project will be assessed during the EIA phase. From an initial high level assessment, the impacts (**prior to mitigation**) and associated significance are assessed in Table 2. The impacts will be updated after consultation with IAPs.

Windmill Shaft and Witpoortje vent shaft are located near residential area. The construction and development is likely to impact the residents in terms of noise and dust, while the operational activities are likely to be associated with noise impacts.

Table 2. Potential impacts of the project (preliminary assessment)

Activity	Potential impact	Magnitude	Scale	Duration	Probability	Significance	
Clearing of land (pre-stripping and surface preparation)	Air quality impacts due to dust	8	2	4	4	56	Med
	Introduction of alien vegetation through disturbance	8	1	5	4	56	Med
	Erosion from stormwater runoff	6	2	5	4	52	Med
	Impact or eradication of indigenous vegetation	6	1	4	3	33	Med
	Contamination of soils or groundwater from machinery	6	1	4	3	33	Med
Stockpiling of topsoil, subsoil,	Erosion from stormwater runoff	6	1	5	4	44	Med
	Air quality impacts due to dust	8	2	4	4	60	High
	Contaminated stormwater runoff (downstream sedimentation or contamination)	8	1	5	3	42	Med
Mining activities including underground mining and blasting, refurbishing historical shafts	Nuisance noise	8	3	4	4	60	High
	Blasting damage	8	2	4	3	42	Med
Construction of access roads / haul roads, river crossings, pipelines, powerlines	Air quality impacts due to dust	8	3	4	3	45	Med
	Removal of indigenous vegetation	8	2	5	5	75	High
	Degradation of sensitive environments / watercourses due to inappropriate construction	5	1	4	3	30	Med
	Erosion during construction	6	1	3	2	20	Low
Dust suppression	Excessive dust suppression may result in erosion	4	1	4	2	18	Low
Construction of infrastructure	Air quality impacts due to dust	8	3	4	3	45	Med
	Removal of indigenous vegetation	6	1	5	4	48	Med
Bulk fuel storage	Contamination due to spills	8	1	3	2	24	Low
Explosives handling	Risk to human safety	8	1	2	2	22	Low
Dewatering of groundwater for mining purposes	Impact on groundwater levels of surrounding water users	10	3	4	3	51	Med
Generation of employment	In-migration of job-seekers	10	3	4	5	85	High
Transfer of ore slurry via pipeline	Vandalism or pipe breaks could lead to contamination	10	2	4	3	48	Med

i) 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 Prime Resources (Pty) Ltd Impact Assessment Methodology and rationale was used to assess the significance of the potential impacts of the initial layouts on the surrounding biophysical and socio-economic environment.

The methodology encompasses an assessment of the nature, extent, duration, probability and significance of the identified potential environmental, social and cultural impacts of the mining operation. The significance of both positive and negative potential impacts will be determined through the evaluation of impact consequence and likelihood of occurrence.

The following risk assessment model has been used for determination of the significance of impacts.

SIGNIFICANCE = (MAGNITUDE + DURATION + SCALE) X PROBABILITY

The maximum potential value for significance of an impact is 100 points. Environmental impacts can therefore be rated as high, medium or low significance on the following basis:

- High environmental significance 60 – 100 points
- Medium environmental significance 30 – 59 points
- Low environmental significance 0 – 29 points

MAGNITUDE (M)	DURATION (D)
10 – Very high (or unknown)	5 – Permanent
8 – High	4 – Long-term (ceases at the end of operation)
6 – Moderate	3 – Medium-term (2-8 years)
4 – Low	2 – Short-term (0-1 years)
2 – Minor	1 – Immediate
SCALE (S)	PROBABILITY (P)
5 – International	5 – Definite (or unknown)
4 – National	4 – High probability
3 – Regional	3 – Medium probability
2 – Local	2 – Low probability
1 – Site	1 – Improbable

ii) 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)

The initial layout showing the proposed SDA is reflected in Figure 4. No site layout alternatives have been presented. The location of the Witpoortje vent shaft cannot be changed as the vent shaft is existing.

The advantages of the current SDA and site include:

- The site avoids known CBA / ESA / wetlands / sensitive areas. This will need to be confirmed by specialists.
- The site is located close to existing infrastructure so that less surface development is required to access these facilities (including roads, pipelines)

Disadvantages of the current project layout and site include:

- The site is surrounded by environmentally sensitive areas, so placement of infrastructure must be carefully undertaken.
- Windmill shaft is located close to the residential area of Windmill Park.

iii) 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)

An issues register will be compiled during the public participation process and relevant mitigations or alternatives will be considered in the final Scoping Report to be submitted to the DMR.

d) 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)

Additional mitigation measures or alternatives will be considered in the final layout, and presented in the final Scoping Report to be submitted to the DMR, following the public participation process.

i) Motivation where no alternative sites were considered

No site alternatives were considered as the proposed infrastructure is limited to the resource, adjacent mining right areas and historical / existing mine infrastructure as well as existing access roads and pipelines for the transport of ore slurry.

ii) Statement motivating the preferred site (Provide a statement motivation the final site layout that is proposed)

The proposed surface infrastructure area has been selected based on the location of existing infrastructure, and limited to extents that were less environmentally sensitive.

12) PLAN OF STUDY FOR THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

a) Description of alternatives to be considered including the option of not going ahead with the activity

Alternatives to the site layout within the selected SDA will be considered during the EIA process, and will be informed by the public participation.

The option of not going ahead with the activity will also be considered.

b) 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.)

The project activities to be assessed include:

- Clearing of land (pre-stripping)
- Stockpiling of topsoil
- Underground mining including blasting
- Construction of new twin shaft – Windmill shaft
- Construction of Windmill Shaft site infrastructure including refrigeration plant, pipeline and powerline connections (water and electricity), explosives handling area, bulk fuel storage, water treatment facility, pollution control facilities, offices, workshops, stores, salvage yard
- Refurbishment of Witpoortje vent shaft
- Dewatering for mining purposes

The findings of the EIA process will provide a detailed overview of the potential impacts (including direct, indirect, cumulative and latent impacts) of the proposed project on the biophysical and social environments.

c) Description of aspects to be assessed by specialists

It is anticipated that the following specialist studies will be undertaken during the EIA phase:

Specialist study	Scope
Air quality	Baseline and impact assessment
Aquatic ecology	Baseline and impact assessment
Archaeology	Phase 1 HIA
Blasting	Impact assessment
Hydrogeology	Baseline and impact assessment
Hydrology	Baseline and impact assessment
Noise	Baseline and impact assessment
Palaeontology	Phase 1 PIA (desktop)
Socio-economic	Baseline and impact assessment
Soil and land use	Baseline and impact assessment
Rock engineering	Dolomitic risk assessment
Terrestrial ecology	Baseline and impact assessment
Traffic	Baseline and impact assessment
Visual aesthetics	Baseline and impact assessment
Wetlands	Baseline and impact assessment

d) Proposed method of assessing the environmental aspects including the proposed method of assessing alternatives

The environmental aspects will be assessed in terms of the methodology described in Section c)i).

i) The proposed method of assessing duration significance

The Prime Resources (Pty) Ltd Impact Assessment Methodology and rationale as described in Section 1)c)i) above will be used to assess the significance of the potential impacts of the project on the surrounding biophysical and social environment. Refer to Section c)i).

ii) The stages at which the competent authority will be consulted

The Competent Authority (DMR) was formally notified of the project upon submission of the application for Environmental Authorisation on **21 February 2019**. The DMR acknowledged receipt of the application for Environmental Authorisation on 5 March 2019.

The Scoping Report was made available to the Competent Authority (DMR) during the 30 day commenting period (**8 March to 8 April 2019**). The Scoping Report will be updated with any comments received, and will be submitted to the Competent Authority by **18 April 2019**.

The EIAR and EMPr will be made available to the Competent Authority (DMR) during the 30 day commenting period for the EIA phase. The EIAR and EMPr will further be updated with any comments received and will be submitted to the Competent Authority at the end of the commenting period for consideration.

e) Particulars of the public participation process with regard to the Impact Assessment process that will be conducted

i) 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)

IAPs were notified about the project during the Scoping phase public participation process detailed under Section 10) above, including:

- Landowner notification was provided to the current landowners of the properties on which the proposed surface infrastructure will be located. Ms Suzanne Weitze could not be contacted at the time of finalising the Scoping Report. Ongoing efforts will be made to contact her.
- A media notice was published in two newspapers circulating in the area;
- Site notices were posted on site and at conspicuous locations within the surrounding areas;
- An IAP register has been compiled and representatives from all of the relevant State Departments, as well as any IAPs requesting to register, will be added to the database;

- BIDs were made available to State Departments (including the Competent Authority) via email and to adjacent landowners and occupiers by hand, email or registered mail (based on the contact details available);
- The Scoping Report was made available for comment to State Departments (including the Competent Authority) via email or hard copy as requested and placed within the public domain for review during the 30 day commenting period.

IAPs will be further engaged during the EIA phase as per the process described below.

ii) 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)

The EIA phase public participation process will comprise of the following:

- An EIAR and an EMPr will be compiled and made available for comment, in the public domain at the same locations as the Scoping Report, as well as made available to State Departments (including the Competent Authority) for a period of 30 calendar days.
- An SMS will be sent out to all registered IAPs notifying them of the localities where the EIAR and EMPr can be viewed, and the commenting period. IAPs will be given the opportunity to raise issues and concerns. The IAP database and Comments and Responses Report will be updated throughout the EIA phase public participation process and submitted, together with the EIAR and EMPr, to the Competent Authority for consideration after the 30 day commenting period has ended.

iii) 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)

Scoping phase

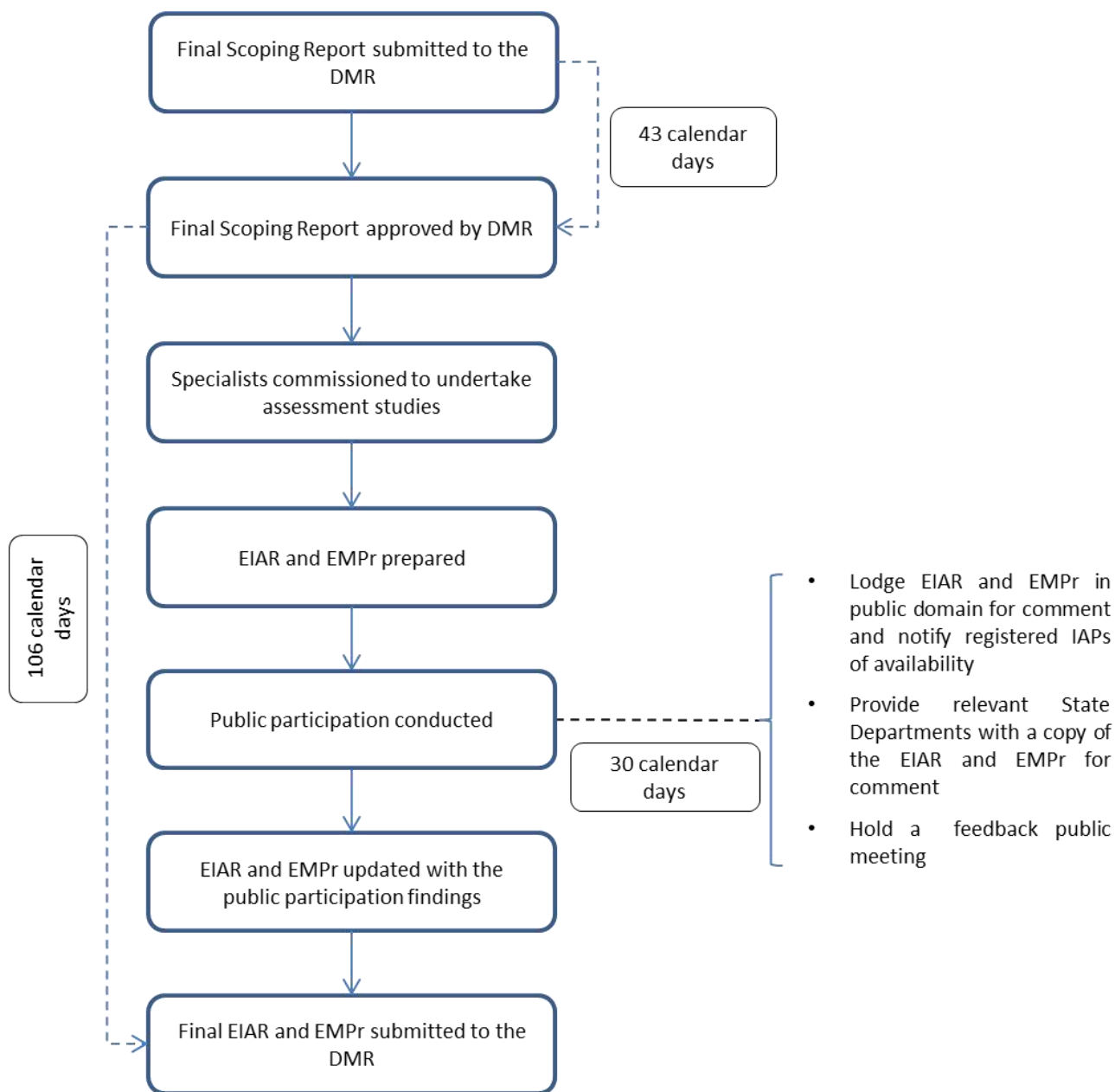
The information provided will consist of details of the project, including the proposed surface development area and description of project components; potential impacts of the project to be assessed during the EIA; the process to be followed for the Scoping phase; opportunities to participate; and where to obtain further information.

EIA phase

The information provided will consist of details of the project, including the layout and description of project components; specialist information relating to the baseline information of the site; potential impacts of the project as identified and assessed by the specialists and the EAP; proposed mitigation and management measures to avoid or minimise the impact; concerns / issues raised during the Scoping phase and responses thereto which will have been incorporated into a Comments and Responses Report; the process to be followed for the EIA; opportunities to participate; and where to obtain further information.

f) Description of the tasks that will be undertaken during the environmental impact assessment process

The tasks to be undertaken during the EIA phase are graphically represented in the following flow diagram:



g) 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

Activity	Potential impact	Mitigation type	Potential for residual risk
Clearing of land (pre-stripping and surface preparation)	Air quality impacts due to dust	<ul style="list-style-type: none"> Minimise the extent of land / vegetation cleared; keep to existing disturbed footprints where possible Implement dust suppression measures and monitor dust levels 	None foreseen
	Introduction of alien vegetation through disturbance	<ul style="list-style-type: none"> Implement an alien and invasive vegetation monitoring and eradication programme 	
	Erosion from stormwater runoff	<ul style="list-style-type: none"> Monitor erosion, implement prevention and maintenance measures Minimise the extent of land / vegetation cleared 	
	Loss of indigenous vegetation	<ul style="list-style-type: none"> Avoid demarcated sensitive areas Minimise the extent of land / vegetation cleared 	
	Contamination of soils or groundwater from machinery	<ul style="list-style-type: none"> Ensure machinery is in good working order Implement a spill management plan and clean up measures 	
Stockpiling of topsoil and subsoil	Erosion from stormwater runoff	<ul style="list-style-type: none"> Monitor erosion, implement prevention and maintenance measures Establish vegetation and stormwater management infrastructure on and around slopes 	None foreseen
	Air quality impacts due to dust	<ul style="list-style-type: none"> Implement dust suppression measures and monitor dust levels Minimise drop heights of materials to stockpiles to control the dispersion of materials 	
Mining activities including including blasting	Nuisance noise	<ul style="list-style-type: none"> Only conduct operations during specified hours Implement noise reduction measures as needed 	None foreseen
	Blasting damage	<ul style="list-style-type: none"> Comply with blasting specialist / blast engineer recommendations Establish safety perimeters Notify when blasting is to take place 	
Stockpiling of ore and waste rock	Air quality impacts due to dust	<ul style="list-style-type: none"> Implement dust suppression measures and monitor dust levels 	
	Contamination due to spills	<ul style="list-style-type: none"> Clean up spills as they occur Ensure spill kits are available and appropriate training has been provided in the use of spill kits 	

Activity	Potential impact	Mitigation type	Potential for residual risk
	Contaminated stormwater runoff	<ul style="list-style-type: none"> • Ensure that stormwater management in the separation of clean and dirty water is implemented • Ensure that drainage channels are kept clear of debris to prevent flow restriction and overflow from channels • Install suitably lined facilities depending on pollution potential 	
Construction of access roads / haul roads and river crossings	Air quality impacts due to dust	<ul style="list-style-type: none"> • Implement dust suppression measures and monitor dust levels 	None foreseen
	Removal of indigenous vegetation	<ul style="list-style-type: none"> • Maintain as small a footprint as possible • Ensure minimal compaction of adjacent soils and ensure no-go zones within wetland or riparian areas 	
	Degradation of watercourses due to inappropriate construction	<ul style="list-style-type: none"> • Construct roads and crossings in accordance with approved designs 	
Dust suppression	Excessive dust suppression may result in erosion	<ul style="list-style-type: none"> • Ensure areas are suitably watered as needed and monitor for erosion 	
Construction of infrastructure	Air quality impacts due to dust	<ul style="list-style-type: none"> • Implement dust suppression measures and monitor dust levels to ensure compliance with standards 	
	Removal of indigenous vegetation	<ul style="list-style-type: none"> • Maintain as small a footprint as possible • Ensure minimal compaction of adjacent soils and ensure no-go zones within wetland or riparian areas 	
Bulk fuel storage	Contamination due to spills	<ul style="list-style-type: none"> • Ensure fuel storage facility is in accordance with specified requirements, such as within a bunded facility. • Clean up spills as they occur • Ensure spill kits are available and appropriate training has been provided in the use of spill kits 	
Explosives handling	Risk to human safety	<ul style="list-style-type: none"> • Ensure explosives storage is within a access controlled facility and with appropriate signage • Explosives should only be handled by those with the necessary training and qualifications 	
Construction pipeline and powerlines	Erosion during construction	<ul style="list-style-type: none"> • Make use of silt fences and or other erosion protection measures • Meet specialist recommendations with regards to construction e.g. seasonal requirements for construction) where feasible 	None foreseen
	Air quality impacts due to dust	<ul style="list-style-type: none"> • Implement dust suppression measures during construction. 	

Activity	Potential impact	Mitigation type	Potential for residual risk
	Damage to natural environment (sensitive environments)	<ul style="list-style-type: none"> Maintain as small a footprint as possible, ensure minimal compaction of adjacent soils and ensure no-go zones within the wetland or riparian areas 	Inappropriate construction can result in long term and permanent damage to the natural environment
Dewatering for the purposes of mining	Draw down of groundwater levels may affect surrounding water users	<ul style="list-style-type: none"> Monitor groundwater levels in surrounding areas 	

13) OTHER INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

- a) 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:-**
- 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 an Appendix and confirm that the applicable mitigation is reflected herein)**

Directly affected persons include:

Landowners

The following properties will be affected by the proposed surface development:

Witpoortje 117 IR:

- Portion 5 of the Farm Witpoortje 117 IR
- Portion 19 of the Farm Witpoortje 117 IR

The affected land owners of portion 5 of Witpoortje 117 IR has been notified of the proposed project. Refer to Appendix 4.1.

The following properties will be affected by the proposed underground development:

Witpoortje 117 IR:

- RE of portions 4, 46, 47, 56 and 62
- Portions 5, 19, 35, 37, 38, 45, 58, 63, 251 and 283

Withok 131 IR:

- RE portion 2
- Portions 9, 64, 70, 71, 74, 76, 77, 78, 79, 80, 108, 114, 117 and 118

Agricultural holdings on Withok 131 IR:

- Geluksdal and Geluksdal Ext 1, Ext 2, Ext 3
- Laborê and Laborê Ext 1, Ext 2
- Withok Estates

Glen Roy 132 IR:

- RE, RE portion 1, and portion 2

Rooikraail 156 IR:

- RE portions 1, 2, 3, 4, 5 and 16
- Portions 6, 7, 9, 10, 11, 17, 18, 19, 20, 21, 22

Adjacent Landowners and Occupiers

Potential negative impacts on adjacent landowners and occupiers (all industrial) include:

- Dust may be generated during construction, operation and decommissioning activities
- Ambient noise levels may increase during construction, operation and decommissioning activities
- Construction, operation and decommissioning activities may impact on access to the properties for a short duration

Land Claimants

Land claim enquiries were submitted to the Office of the Regional Land Claims Commissioner: Gauteng Province. The following is the outcome of the enquiry for the above properties

- Farm Witpoortje 117 IR – A claim was lodged (portions not specified) between 1 July 2014 and 27 July 2016 (therefore considered a “new” claim).
- Farm Withoek 131 IR – Claims have been lodged (portions not specified) between 1 July 2014 and 27 July 2016 (therefore considered a “new” claim)
- Agricultural holdings on Farm Withoek 131 IR –
- Farm Glenroy 132 IR – No land claims have been lodged
- Farm Rooikraal 156 IR - No land claims have been lodged

According to the Regional Land Claims Commissioner, ERPM is not required to notify the claimant (and contact details of the claimant would not be made available) as section 11 (7) of the Restitution Act does not apply.

ii) Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act (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 an Appendix and confirm that the applicable mitigation is reflected herein)

Cultural heritage and palaeontology studies will be undertaken for the surface infrastructure areas, and the findings included in the EIA. Mitigation measures for chance finds will be included in the EMP.

- b) 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 an Appendix)**

The most suitable sites for surface infrastructure development have been identified in Figure 4. The EIAR will address the following requirements in terms of sections 24(4)(a) and (b) of the Act:

Section of NEMA	Contents	Description of how the aspect has been addressed thus far and will be further addressed during the EIA
Section 24(4)(a)		
24(4)(a)	Procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the environment – must ensure, with respect to every application for an environmental authorisation—	Refer to Section 12) for the plan of study for the EIA process.
24(4)(a)(i)	Coordination and cooperation between organs of state in the consideration of assessments where an activity falls under the jurisdiction of more than one organ of state;	The Scoping Report and EIAR will be made available to all the relevant organs of state: the CoE (relevant municipality); Department of Agriculture, Fisheries and Forestry (DAFF) (authority for agricultural land and forestry); Department of Water and Sanitation (DWS) for the activities requiring a WUL; GDARD as the authority regarding environmental matters; Provincial Heritage Resources Agency Gauteng (PHRAG) (via SAHRIS) as the authority regarding cultural heritage matters; Gauteng Department of Rural Development and Land Reform (DRDLR) as the authority regarding land affairs; Gauteng Department of Roads and Transport (Gautrans) as the road authority; and Eskom as the authority relating to electricity infrastructure - for comment during public participation processes. The DMR remains the Competent Authority. Refer to Section 10).
24(4)(a)(ii)	That the findings and recommendations flowing from an investigation, the general objectives of integrated environmental management laid down in this Act and the principles of environmental management set	The findings and recommendations of specialist investigations, and general objectives and the principles of environmental management, will be addressed in the EIAR and EMPr.

Section of NEMA	Contents	Description of how the aspect has been addressed thus far and will be further addressed during the EIA
	out in section 2 are taken into account in any decision made by an organ of state in relation to any proposed policy, programme, process, plan or project;	
24(4)(a)(iii)	That a description of the environment likely to be significantly affected by the proposed activity is contained in such application;	Refer to Section 1)a) for a detailed description of the baseline environment likely to be affected by the project.
24(4)(a)(iv)	Investigation of the potential consequences for or impacts on the environment of the activity and assessment of the significance of those potential consequences or impacts; and	Refer to Section 1)c) for an initial identification and assessment of the potential impacts. A detailed impact assessment will form part of the EIAR.
24(4)(a)(v)	Public information and participation procedures which provide all interested and affected parties, including all organs of state in all spheres of government that may have jurisdiction over any aspect of the activity, with a reasonable opportunity to participate in those information and participation procedures; and	Refer to Section 10) which details the Scoping phase public participation process. Further public participation will be conducted during the EIA phase. Refer to Section 12).
24(4)(A)	Where environmental impact assessment has been identified as the environmental instrument to be utilised in informing an application for environmental authorisation, subsection (4)(b) is applicable	Environmental impact assessment has been identified as the environmental instrument therefore (4)(b) is applicable.
Section 24(4)(b)		
24(4)(b)	Must include, with respect to every application for an environmental authorisation and where applicable—	
24(4)(b)(i)	Investigation of the potential consequences or impacts of the alternatives to the activity on the environment and assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity;	Alternatives have been investigated and assessed for the project thus far, including the option of not implementing the activity. The final layouts will be assessed during the EIA phase and, based on the outcome, recommendations will be made in terms of layout alternatives or further technological and design alternatives which may be required.
24(4)(b)(ii)	Investigation of mitigation measures to keep adverse consequences or impacts to a minimum;	Mitigation measures for potential impacts have been identified during the initial assessment. Refer to Section 1)c)iii). A detailed impact assessment will form part of the EIAR. Refer to Section 12) for the plan of study for the EIA process. Mitigation measures will also be recommended accordingly.

Section of NEMA	Contents	Description of how the aspect has been addressed thus far and will be further addressed during the EIA
24(4)(b)(iii)	Investigation, assessment and evaluation of the impact of any proposed listed or specified activity on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), excluding the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act;	The NHRA has been taken into account, and a heritage assessment has been undertaken. Refer to Section 5).
24(4)(b)(iv)	Reporting on gaps in knowledge, the adequacy of predictive methods and underlying assumptions, and uncertainties encountered in compiling the required information;	These have already been addressed to some extent in the specialist studies conducted (refer to various appendices). These will be further addressed and consolidated in the EIAR.
24(4)(b)(v)	Investigation and formulation of arrangements for the monitoring and management of consequences for or impacts on the environment, and the assessment of the effectiveness of such arrangements after their implementation;	Management and monitoring measures will be specified in the EMPr. Implementation and suitability of the EMPr will be audited every second year as required by Regulation 55 of the MPRDA as well as per the frequency indicated in the Record of Decision (ROD) as per Regulation 34 of the NEMA EIA Regulations, 2014.
24(4)(b)(vi)	Consideration of environmental attributes identified in the compilation of information and maps contemplated in subsection (3); and	Refer to Section 1)a) for maps indicating geographical areas, including the sensitivity, extent, interrelationship and significance of such attributes informed by maps compiled by relevant departments.
24(3)	The Minister, or an MEC with the concurrence of the Minister, may compile information and maps that specify the attributes of the environment in particular geographical areas, including the sensitivity, extent, interrelationship and significance of such attributes which must be taken into account by every competent authority.	
24(4)(b)(vii)	Provision for the adherence to requirements that are prescribed in a specific environmental management Act relevant to the listed or specified activity in question.	Listed activities have been identified. Refer to Section 1)a). Environmental impact assessment has been identified as the environmental instrument in terms of NEMA. An AEL is not required as per NEMAQA. Permits may be required as per NEMBA in the unlikely event that species of conservation concern are identified. The area does not fall within a protected area as per NEMPAA. A WUL is required.

14)UNDERTAKING REGARDING CORRECTNESS OF INFORMATION

I **Gené Main** 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 have been correctly recorded in the report.

Signature of the EAP
DATE:

15)UNDERTAKING REGARDING LEVEL OF AGREEMENT

I **Gené Main** 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:

16)UNDERTAKING UNDER OATH/ AFFIRMATION

I, **Gené Main** swear under oath / affirm that all the information submitted or to be submitted for the purposes of this Scoping Report is true and correct. Where information has been provided by external / independent specialists, the information received has been assumed as correct and has not been independently verified.

Signature of the EAP
DATE:

-END-

APPENDIX 1
EAP PROJECT TEAM CVS



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Gené Main – Principal Environmental Consultant, Pr. Sci. Nat.

Present Appointment	Principal Consultant
Professional Registration	South African Council for Natural Scientific Professions (SACNASP) registration 400370/13 (Environmental Science)
IAIAsa member	Membership number 5932
Date of Birth	23 May 1980
Nationality	South African
Education	BSc (Botany & Environmental Science), Rhodes University, 2002 BSc Hons (Environmental Science), Rhodes University, 2003 MSc (Botany), University of the Western Cape, 2006
Languages	English, Afrikaans

Synopsis	Gené has twelve years of experience working on environmental and social aspects of development projects related to mining, waste management and water management, including EIAs, EMPs, closure and rehabilitation plans, monitoring and auditing. She has also been project lead in several environmental due diligence and technical review projects, most of these in terms of the Equator Principles, IFC Performance Standards, and World Bank EHS Guidelines.
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Project History

Environmental and social assessments (including EIA¹, EMP², ESIA³, PFS⁴)

Project	Location	Year
ESIA for gold mine	Pakrut, Tajikistan	2008
PFS for shaft upgrade	Limpopo, SA	2008
EIA for Siyanda Coal, Koornfontein Mine	Mpumalanga, SA	2008 - 2009
EIA for T-Project Colliery	Kinross, Mpumalanga, SA	2008 - 2010

¹ Environmental Impact Assessment

² Environmental Management Plan

³ Environmental and Social Impact Assessment

⁴ Prefeasibility Study

Project	Location	Year
Order of Magnitude Study for iron ore mine	Zanaga Republic of Congo	2009
EIA Vlakvarkfontein Colliery	Mpumalanga, SA	2009 - 2010
Prospecting EMP for phosphate project	Cabinda, Angola	2010
PFS for phosphate project	Cabinda, Angola	2010
Prospecting EMP for De Beers Namaqualand Mines	Northern Cape, SA	2010
PFS for platinum mine	Tjate, Limpopo, SA	2011
PFS for nickel project	Araguaia, Brazil	2011 - 2012
PFS for iron ore project	Malelane, South Africa	2012
EIA for New Kleinfontein Goldmine	Gauteng, SA	2012
EIA for KaNgwane South Anthracite Mine	Mpumalanga, SA	2012
EIA for Modder North and Holfontein	Gauteng, SA	2014 - 2016
EIA for Ventersburg Gold Mine	Free State, SA	2016 - 2017
EIA for Cons Modder Gold Mine	Gauteng, SA	2017 - 2018
New Kleinfontein Goldmine	Gauteng, SA	Current

Rehabilitation and Closure Planning

Project	Location	Year
T-Project Colliery	Kinross, Mpumalanga, SA	2009 - 2010
Vlakvarkfontein Colliery	Mpumalanga, SA	2009 - 2010
New Kleinfontein Goldmine	Gauteng, SA	2012
Holfontein Project	Gauteng, SA	2014 - 2016
Ventersburg Gold Mine	Free State, SA	2016 - 2018
Cons Modder Gold Mine	Gauteng, SA	2017 - 2018
Annual update of Middelvlei Gold Mine	Gauteng, SA	2018
Annual update of Sekoko Resources, Perth Mine	Northern Cape, SA	2018
New Kleinfontein Goldmine	Gauteng, SA	Current

Water Use Licence Applications

Project	Location	Year
T-Project Colliery	Kinross, Mpumalanga, SA	2009 - 2010
Vlakvarkfontein Colliery	Mpumalanga, SA	2009 - 2010
New Kleinfontein Goldmine	Gauteng, SA	2012
Holfontein Project	Gauteng, SA	2014 - 2016
Ventersburg Gold Mine	Free State, SA	2016 - 2018
Cons Modder Gold Mine	Gauteng, SA	2017 - 2018

New Kleinfontein Goldmine	Gauteng, SA	Current
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Atmospheric Emission Licence Applications

Project	Location	Year
New Kleinfontein Goldmine	Gauteng, SA	2017
Ventersburg Gold Mine	Free State, SA	2018

Environmental audits

Project	Location	Year
Quarterly compliance audits for landfill sites	Gauteng, SA	2008 to 2017
Rustenburg Platinum Mines, Union Section	North West, SA	2009
Klipspringer Diamond Mine	Limpopo, SA	2013
Interwaste Hazardous Waste Transfer Facility	Germiston, Gauteng, SA	2011 to current
Interwaste Transfer and Recovery Facility	Bellville, Western Cape, SA	2011 to current
Vlakfontein Colliery	Mpumalanga, SA	2014

Due diligence / Technical review / Ongoing monitoring for compliance

Project	Location	Year
New Kleinfontein Goldmine	Gauteng, SA	2010
Kipoi Central RDFS's operations	Democratic Republic of Congo	2010
Anvil's Kinsevere Copper Mine	Democratic Republic of Congo	2010
Koidu Kimberlite Project's expansion project	Sierra Leone	2010 - 2011
Kalagadi Manganese Mine	Northern Cape, SA	2010 to current
Sekoko Resources	Limpopo, SA	2010, 2014
Bafokeng Rasimone Platinum Mine	North West, SA	2010
Blyvooruitzicht Gold Mine	Gauteng, SA	2011
Rand Uranium West Rand Operations	Gauteng, SA	2011
Harmony tailings storage facilities	Welkom, SA	2011 - 2012
Western Bushveld Joint Venture Project 1	North West, SA	2011 - 2014
Tharisa Platinum Mine	North West, SA	2011 to current
Pilanesberg Platinum Mine	North West, SA	2012
North River Resources, Lead and Zinc project	Namibia	2012
Steenkampskraal project	Northern and Western Cape, SA	2012 - 2013
Kudumane Manganese Mine	Northern Cape, SA	2012 - 2016
Kipoi Stage 2 Phase 1 project	Democratic Republic of Congo	2013
Beacon Hill Resources, Moatize Coal	Mozambique	2013 - 2014
Ghaghoo Diamond Mine	Botswana	2013 - 2015

Project	Location	Year
Maamba Colliery's expansion project	Zambia	2013 to current
Liqhobong Diamond Mine	Lesotho	2013 to current
Khoemacau Copper and Gold Mine	Botswana	2018
Bisha Mine	Eritrea	2018

Strategic Research Projects / Investigations

Project	Location	Year
Vaal Racecourse air quality investigations	Gauteng, SA	2017 to current
Alternatives to discharge of excess mine water	Gauteng, SA	2016 - 2017
Resettlement options for communities living near mining projects	Gauteng, SA	2017 - 2018



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Louise Jones – Senior Environmental Scientist | GIS Specialist

Present Appointment	Environmental Scientist, Prime Resources (Pty) Ltd
Period	February 2013 - Present
Nationality	South African (English Speaking)
Education	MSc Environmental Sciences, University of the Witwatersrand, 2013 BSc (Hons.) Applied Chemistry, University of the Witwatersrand, 2010 BSc, Environmental Science and Chemistry, University of the Witwatersrand, 2009

Synopsis

Louise has six years of experience in environmental consulting. She has experience in performance assessments, social and labour plans, financial liability assessments associated with mine closure and rehabilitation, environmental impact assessments and management programmes and environmental compliance auditing. Louise also has experience in Geographic Information Systems.

Project History

Environmental Authorisation Processes (Basic Assessments, EIA's, Stakeholder Engagement and EMP's)

- PAMDC, Prospecting Right Application, Northern Cape Province, South Africa
- Newshelf, Cons Modder Project, Gauteng Province, South Africa
- Gold One Africa, Ventersburg Project, Free State Province, South Africa
- Vale Fertil, Lucunga Phosphate Project, Angola
- Horizonte Minerals, Araguaia Nickel Project, Brazil
- Gold One International, Holfontein Project, Gauteng Province, South Africa
- Mbila Resources, Mbila Anthracite Mine, KwaZulu-Natal, South Africa
- Mbila Resources, Msebe Opencast Mining Activities, KwaZulu-Natal, South Africa
- ENCO Hlabisa, Kwa-Zulu Natal, South Africa
- Moongate Barberton Iron Ore, Mpumalanga, South Africa
- Anglo American Platinum, Amandelbult Chrome Recovery Plant, Limpopo, South Africa
- Samancor Chrome, Scheiding Chrome Mine, Limpopo, South Africa

Water, Waste Management and Compliance Auditing

- Integrated Water Use Licence and GN704 compliance audit for the Modikwa Platinum Mine, Limpopo Province, South Africa
- Water Monitoring, Ekurhuleni Metropolitan Municipality, Closed Landfill Sites, Gauteng Province, South Africa
- Water Monitoring, Ekurhuleni Metropolitan Municipality, Ekurhuleni Metropolitan Municipality, operational landfill sites, Gauteng Province, South Africa
- Environmental Compliance Auditing, Ekurhuleni Metropolitan Municipality, operational landfill sites, Gauteng Province, South Africa
- Environmental compliance auditing of the Marble Hall Landfill Site, Ephraim Mogale Local Municipality, Limpopo Province, South Africa
- Groundwater Monitoring and Environmental Compliance Auditing, Interwaste Klinkerstene Landfill Site, Mpumalanga Province, South Africa
- Groundwater Monitoring and Environmental Compliance Auditing, Interwaste F.G. Landfill Site, Gauteng Province, South Africa
- Bi-annual Environmental Compliance Audit, Interwaste Hazardous Waste Transfer Facility, Germiston, Gauteng Province, South Africa

Environmental Authorisation and Environmental Management Programme Compliance Auditing

- Environmental Control Officer and Environmental Compliance Monitoring for the Interwaste Klinkerstene Landfill Site, Delmas, Mpumalanga Province, South Africa

Soil and Agricultural / Land Capability Impact Assessment

- Newshelf, Cons Modder Project, Gauteng Province, South Africa
- Vale Fertil, Lucunga Phosphate Project, Angola
- Holfontein Project, New Kleinfontein Goldmine (Pty) Ltd, Modder East Operations, Gauteng, South Africa

Social and Labour Plans

- Newshelf, Cons Modder Project, Gauteng Province, South Africa
- Gold One Africa, Ventersburg Project, Free State Province, South Africa
- Mbila Resources, Msebe Opencast Mining Activities, KwaZulu-Natal, South Africa
- Jubilee Platinum, Tjate Platinum Mine, Mpumalanga, South Africa
- SAMDC, Mooiplaats Platinum Mine, Limpopo, South Africa

Due Diligence

- Review of Liqhobong Diamond Mine, Lesotho
- Review of Maamba Colliery's existing and proposed expansion project, Zambia
- Environmental and social baseline report (pre-feasibility) for the Horizonte Minerals, Araguaia Nickel Project, Brazil
- Review and gap analysis preparation for T-Project Colliery, Kinross, Mpumalanga Province, South Africa

Mine Closure Liability and Performance Assessments

- Care and Maintenance Plan for the Samancor Chrome, Western Chrome Mines, Lannex Mine, Limpopo Province, South Africa
- Closure Plans and Annual assessment of the Quantum for Closure-Related Financial Provision for the Modikwa Platinum Mine, Limpopo Province, South Africa
- Performance Assessment and Evaluation of the Quantum for Closure-Related Financial Provision, Mbila Resources and various Samancor^{Cr} prospecting right areas
- Annual Financial Liability Auditing, Shiva Uranium, Dominion Reefs Uranium Mine, North West Province, South Africa

GIS (Proficient with ArcGIS software (currently using ArcGIS 10.1))

- Mapping and spatial analysis of the mine layout, underground mine plan, farm portions and environmental information for various projects listed above
- High level environmental review to identify environmentally sensitive areas by mapping all available environmental information, ENCO Hlabisa, Kwa-Zulu Natal Province, South Africa
- Mapping and spatial analysis of newly mined, previously mined and rehabilitated areas for the annual financial liability audit, Shiva Uranium, Dominion Reefs Uranium Mine, North West Province, South Africa
- Mapping of boreholes forming part of the water monitoring network, Ekurhuleni Metropolitan Municipality, operational landfill sites and closed landfill sites, Gauteng Province, South Africa
- Mapping of boreholes forming part of the water monitoring network, Interwaste F.G. Landfill Site, Gauteng Province, South Africa



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Itumeleng Morosele – Environmental Scientist | GIS Technician

Present Appointment	Environmental Scientist, Prime Resources (Pty) Ltd
Period	March 2018 - Present
Nationality	South African
Education	BSc (Hons.) Geography <i>with distinction</i> , University of Johannesburg BSc Life and Environmental Sciences, University of Johannesburg

Synopsis

Itumeleng is an environmental scientist with experience in Geographic Information Systems (GIS). She has been involved with conducting environmental compliance audits, as well as assisting with Environmental Authorisation and Water Use Licence Applications, Due Diligence reporting, and Financial Liability Assessments associated with mine closure and rehabilitation.

Current Projects and Project History

Waste Management and Compliance Auditing

- Groundwater Monitoring and Environmental Compliance Auditing, Klinkerstene F.G. Landfill Site, Mpumalanga, South Africa
- Environmental Compliance Monitoring, Samancor Chrome Ferrometals, Mpumalanga, South Africa
- Groundwater Monitoring and Environmental Compliance Auditing, Interwaste F.G. Landfill Site, Gauteng, South Africa

Water Quality Assessments

- Water quality monitoring at Interwaste, Klinkerstene Landfill, Gauteng, South Africa
- Water quality monitoring at Interwaste, FG Landfill, Gauteng, South Africa

Environmental Authorisation Processes and Public Participation

- Environmental Authorization (including Scoping and EIAR / EMPr phases) for Middelvlei Mine, Gauteng, South Africa
- Environmental Authorization (including Scoping and EIAR / EMPr phases) for Gold One Modder East Operations, Gauteng, South Africa
- Basic Assessment, Prospecting Right for Portion 48 of the farm Middelvlei 255 IQ, Gauteng, South Africa
- Terms of Reference and Scoping Report for Lubambe Copper Mine, Copperbelt, Zambia
- Basic Assessment, Prospecting Right, Tawana Investment Holdings (Pty) Ltd, Northern Cape, South Africa

Water Use Licensing

- Water Use Licence Application and Integrated Waste and Water Management Plan for the proposed Cons Modder Gold Mine, Gauteng Province, South Africa
- Water Use Licence Application and Integrated Waste and Water Management Plan for the proposed Ventersburg Gold Mine, Free State, South Africa

Due Diligence

- Review of Snowden Maamba Colliery project, Zambia

Mine Closure Planning and Liability and Performance Assessments

- Annual Rehabilitation Plan for the Middelvlei Mine, Randfontein, Gauteng, South Africa
- Rehabilitation Plan for the proposed Cons Modder Gold Mine, Gauteng, South Africa
- Performance Assessment and Financial provision for Mbila and Msebe Mine, KwaZulu-Natal, South Africa
- Closure Plans and Annual assessment of the Quantum for Closure-Related Financial Provision for the Modikwa Platinum Mine, Limpopo, South Africa
- Assessment of the Quantum for Closure-Related Financial Provision for the Sebilo Manganese Mine, Northern Cape, South Africa

GIS (Proficiency with Esri ArcGIS software 10.1 – 10.5)

- Conversion of CAD files into GIS readable formats for various projects
- Performing different spatial analyses available in the ArcGIS package for the mapping of natural and man-made features including mine layouts, underground mine plans, farm portions and environmental information for projects listed above
- Experience with the SANBI BGIS database



Prime Resources (Pty) Ltd
The Workshop 70-7th Avenue Parktown North 2193
PO Box 2316 Parklands 2121
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www.resources.co.za



Claire Kennedy – Civil and Environmental Engineer

Present Appointment	Environmental Consultant - Prime Resources (Pty) Ltd
Period	July 2018 – Present
Nationality	South African & British
Education	BSc (Eng) Civil, University of Cape Town 2011 Msc Environmental Engineering, University of Strathclyde
Languages	English and Afrikaans

Synopsis	Claire Kennedy is a civil and environmental engineer that has 4 years work experience in design of components of water infrastructure projects including structural design and stability analysis. She also has experience in water use and waste licence applications for a multitude of facilities from mines, to waste disposal sites and stream crossings.
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Professional History	Candidate Civil Engineer at Department of Water and Sanitation from January 2012 – August 2016. She worked in the directorate Dam Design conducting designs and drawings for components of water infrastructure projects. Claire was part of the engineering review panel reviewing water use and waste licences submitted to the Department from 2012 to 2016.
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Project History

Water Quality Assessments

- Water quality monitoring results assessment and reporting at Interwaste, Klinkerstene Landfill, South Africa
- Water quality monitoring results assessment and trends analysis as part of a Waste Management Licence (WML) for a smelter, Mpumalanga, South Africa
- Collection of water samples from boreholes at waste disposal facilities (landfills)

Licence Auditing

- Water Use Licence audit and compliance report for Samancor Ferrometals, Mpumalanga, South Africa
- Waste Management Licence audit and compliance report for Interwaste FG Landfill, Gauteng, South Africa

Environmental Authorisation Processes and Public Participation

- Basic Assessment, Prospecting Right, Tawana Investment Holdings (Pty) Ltd, Northern Cape, South Africa
- Environmental Authorisation Application and Water Use Licence Application, Gold One , Modder East Operations, Gauteng, South Africa
- Basic Assessment, Prospecting Right, Middelvie Mine, Gauteng, South Africa
- Environmental Baseline Study for a copper mine expansion, Copperbelt, Zambia
- Developing Terms of Reference and Scoping Report for submission to competent authority, Copperbelt, Zambia
- Environmental Authorisation Application for an opencast gold mine, Gauteng, South Africa

Mining

- Liner selection review and WULA for the Samancor Chrome Haakdoornrdrift opencast Chrome Mine, Limpopo
- Provisions of applicable legislation to tailings deposition in South Africa for a Gold Tailings facility, Free State, South Africa

Mine Closure Planning and Liability and Performance Assessments

- Assessment of the Quantum for Closure-Related Financial Provision for the Sebilu Manganese Mine, Northern Cape, South Africa
- Preparation of Closure Plan and Provision of the Quantum for Closure Related Financial Provision for Samancor TC Smelters, North West, South Africa
- Determination of the Closure- Related Financial Provision in line with contractor rates for Far East Gold, Gold One, Gauteng, South Africa

- Assessment of the Quantum for Closure-Related Financial Provision for removal and rehabilitation of dumps for Sebilo Devon, Northern Cape, South Africa
- Preparation of end of life final rehabilitation and closure plan for opencast gold mine and calculation of financial provision in line with contractor rates (NEMA GN1228), Gauteng, South Africa

Due Diligence / Technical Review / Ongoing Monitoring for Compliance

- Biannual review for environmental performance for Maambe Colliery, Zambia
- Review of Pollution Control Facilities for chrome mines, Limpopo, South Africa
- Review of tailings design for a gold tailings facility, South Africa
- Review of capacity report assessment for a gold tailings facility, South Africa
- Review and edit of Integrated water and waste management plan (IWWMP) for a chrome mine, Limpopo, South Africa

Project Management / Proposals

- Preparation of Scope of Work for Proposal for Bid

APPENDIX 2

COMPANY PROFILE



Prime Resources (Pty) Ltd
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COMPANY PROFILE

Prime Resources (Pty) Ltd is a medium-sized group of consulting environmental engineers and scientists serving clients across a wide range of industries, although the majority of our project work is based around natural resources, waste and mining.

The company was established in Johannesburg in 2003. Our head offices are located in Parktown North, Johannesburg, South Africa.

Prime Resources employs a talented and innovative group of professional people. We also have an extensive network of specialist sub-contractors who, together with our team, provide specialist environmental and civil design services. We provide consulting services and solutions to clients in a wide range of fields including:

- Project Management and implementation of environmental solutions
- Environmental Social Impact Assessments (ESIA) and Environmental Management Programmes (EMPr)
- Public consultation and engagement with Interested and Affected Parties (IAPs)
- Water Use Licence Applications (WULA)
- Waste management strategies and licensing
- Mining Right Applications
- Mine closure and rehabilitation planning
- Social and Labour Plans (SLP)
- Environmental and social compliance auditing and performance assessments
- Geographic Information Systems (GIS) services
- Environmental / civil / geotechnical engineering solutions
- Geotechnical and tailings dam assessments
- Feasibility studies
- Environmental advisors on purchase and sale transactions – Independent Technical Advisors
- Environmental and social due diligence and risk assessments both in terms of national legislation and international best practice
- Advising on compliance with international best practice, most importantly the Equator Principles, IFC Performance Standards, and World Bank EHS Guidelines

KEY STAFF AND QUALIFICATIONS

PROFESSIONAL STAFF	ROLE	QUALIFICATIONS
Peter Theron	Company Director Environmental Engineer Project Manager	Professional Engineer (Pr. 950329) BSc Eng. (Civil) GDE Environmental Engineering, Tailings & Geotechnical
Jonathan van de Wouw	Project Manager Principal Environmental Scientist	BSc (Hons) Microbiology and Biotechnology
Gené Main	Project Manager Principal Environmental Scientist	Pr. Sci. Nat. (Environmental Science) MSc Botany BSc (Hons) Environmental Science
Louise Jones	Senior Environmental Scientist GIS Specialist	MSc Environmental Sciences BSc (Hons) Applied Chemistry
Stephan Geyer	Civil Engineer	BSc Eng. (Civil)
Claire Kennedy	Civil and Environmental Engineer	BSc Engineering (Civil) MSc (Environmental Engineering)
Itumeleng Morosele	Environmental Scientist	BSc (Life and Environmental Sciences) BSc (Hons) Geography
Fernanda Smook	Office Manager	Business Management courses

ASSOCIATES:

PROFESSIONAL STAFF	ROLE	QUALIFICATIONS
Dr Bronwyn Grover	Environmental Scientist Geochemistry	PhD Environmental Analytical Chemistry BSc Geology and Chemistry
Niel Scheepers	Civil Engineering Technician	B Tech (Civil)
Dr Walter Fourie	Principal Chemical Engineer	Ph.D. Environmental Engineering B Eng (Chemical) Engineering

PROJECT EXPERIENCE

Environmental aspects include due diligence and independent technical reviews; pre-feasibility and baseline studies; Environmental and Social Impact Assessments (ESIAs) and associated specialist environmental impact studies; Environmental Management Plans / Programmes (EMPs/EMPrs) and associated reporting including Environmental Awareness Plans, Emergency Preparedness and Response Plans and Closure and Rehabilitation Plans; compliance auditing and performance assessments. Social aspects include Social Impact Assessments (SIAs); public consultation processes; the compilation of Resettlement Action Plans (RAPs); Social and Labour Plans (SLPs); and Public Consultation and Disclosure Plans (PCDPs). Technical aspects include the technical review and design of mine waste facilities as well as geotechnical investigations.

We are further experienced with international best practice, most notably the Equator Principles, IFC Performance Standards, and World Bank Environmental, Health and Safety Guidelines.

Previous major projects, carried out since 2009, are summarised below. Additional project details are available upon request.

INTERNATIONAL PROJECTS

- **Itasca Africa Lubambe Extension Project, Zambia**
 - Review of environmental, social and legislative aspects for Pre-Feasibility Study
 - Compilation of an integrated environmental and social report
- **Araguaia Nickel Project, Brazil**
 - Detailed design of slag disposal facility for Feasibility Study
 - Site geotechnical investigations
 - Detailed design of cooling water dam and river abstraction pipeline
- **Lindi Jumbo Graphite Project, Tanzania**
 - Surface geotechnical study
 - Site selection for tailings storage facility
 - Pre-Feasibility Study design for tailings storage facility
 - Definitive Feasibility Study design for tailings storage facility
 - Terracing design for plant infrastructure
- **Cacata Phosphate Project, Angola**
 - Environmental licensing according to Angolan legislative requirements
 - Environmental and Social Impact Assessment process according to international best practice
- **Ganajur Gold Project, India**
 - Review of environmental aspects for Feasibility Study
 - Surface geotechnical study
 - Site selection for tailings storage facility
 - Feasibility Study design for tailings storage facility
- **Salamanca Uranium Project, Spain**
 - Feasibility Study design for lined surface waste disposal facilities
 - Feasibility Study design and detailing for an in-pit waste disposal liner system
- **Mpokoto Gold Project, Democratic Republic of Congo**
 - Surface geotechnical study
 - Site selection for tailings storage facility

- Pre-Feasibility Study design for tailings storage facility
- Bankable Feasibility Study design for tailings storage facility
- Terracing design for plant infrastructure
- **Lucunga Phosphate Project, Angola**
 - Environmental licensing according to Angolan legislative requirements
- **Veduga Gold Project, Russia**
 - Technical review of environmental and mine waste disposal aspects
- **Ghaghoo Diamond Project, Botswana**
 - Independent technical review of the environmental, social and permitting documentation according to the Equator Principles, IFC Performance Standards, and World Bank EHS Guidelines
 - Preparation of an Equator Principles environmental and social action plan
- **Debswana Diamond Projects, Botswana**
 - Peer review of environmental and mine waste aspects for Pre-Feasibility Studies
- **Liqhobong Diamond Mine, Lesotho**
 - Independent technical review of the environmental and social aspects, permitting, water management and residue management - according to the Equator Principles, IFC Performance Standards, and World Bank EHS Guidelines
- **Koidu Diamond Project, Sierra Leone**
 - Review of environmental, social, groundwater and tailings documentation for compliance with Equator Principles, IFC Performance Standards and EHS Guidelines
- **Araguaia Nickel Project, Brazil**
 - Environmental and social baseline report Pre-Feasibility Study
 - Preliminary design of slag disposal facility for Pre-Feasibility Study
- **Maminskoye Gold Project, Central Urals, Russia**
 - Environmental and social audit of the Pre-Feasibility Study
- **Cabinda Phosphate Project, Angola**
 - Social impact plan and Environmental Management Plan for prospecting
 - Environmental and social baseline report towards the Definitive Feasibility Study stage
- **Owere Gold Project, Ghana**
 - Independent technical review of the environmental, social and permitting documentation
- **Kinsevere Copper Project, Democratic Republic of Congo**
 - Review of tailings dam risks and opportunities for compliance with Equator Principles
- **Kipoi Copper Mine, Democratic Republic of Congo**
 - Review of environmental, social, heap leach and tailings of the Kipoi Central RDFS operations, Tiger Resources
 - Independent technical review of the environmental, social and permitting documentation according to the Equator Principles, IFC Performance Standards, and World Bank EHS Guidelines
- **Zanaga Iron Ore Project, Democratic Republic of Congo**
 - Environmental and social section of the order of magnitude study
- **Pakrut Gold Mine, Tajikistan**
 - Social and Environmental Impact Assessment process, baseline evaluations according to international best practice requirements

- **Lece Gold Mine, Serbia**
 - Tailings technical review and concept design work for a tailings retreatment project
- **Langer Heinrich Uranium Mine, Namibia**
 - Independent technical review of the tailings storage facility and storage strategy
- **Maamba Coal Mine, Zambia**
 - Independent technical review of the environmental, social, permitting, discard and water management according to the Equator Principles, IFC Performance Standards, and World Bank EHS Guidelines
- **North River Resources Lead Zinc, Namibia**
 - High level review of the environmental and social documentation according to Namibian legislative requirements
- **Minas Moatize Coal Expansion Project, Mozambique**
 - Independent technical review and due diligence of mine residue facilities (slurry and discard), water management, environmental and social aspects
- **Aquarius Shipping International, Warehouse and Container Depot, Beira, Mozambique**
 - Geotechnical investigation
- **Passendro Gold Project, Democratic Republic of Congo**
 - Independent peer review for tailings storage facility
- **Banro Twangiza Project, Democratic Republic of Congo**
 - Independent technical review of the environmental, social, tailings and water management aspects according to the Equator Principles

NATIONAL PROJECTS

Projects are all conducted in terms of relevant National legislation, including the National Environmental Management Act, No. 107 of 1998 (NEMA); the Mineral and Petroleum Resources Development Act, No. 28 of 2002 (MPRDA); the National Environmental Management: Waste Act, No. 59 of 2008; the National Water Act, No. 36 of 1998 etc.

- **Sebilo Resources – Perth Mine, Northern Cape**
 - Assessment of the quantum for rehabilitation-related financial provision
- **Samancor^{Cr} – TC Smelters, North West**
 - Closure, Decommissioning and Rehabilitation Plan
 - Assessment of the quantum for rehabilitation-related financial provision
- **Samancor^{Cr} – Ferrometals, Mpumalanga**
 - EMP performance assessment for decommissioning of the IC3 facility
 - Slag dump waste management licence compliance audit
 - Water use license compliance audit
- **Tawana Investment Holdings – Prospecting Right, Northern Cape**
 - Prospecting Right Application
 - Environmental Authorisation process incl. BAR, EMP and closure plan
- **Pan African Mineral Development Company – Prospecting Right, Northern Cape**
 - Prospecting Right Application
 - Environmental Authorisation process incl. BAR, EMP and closure plan

- **Newshelf – Cons Modder Project, Gauteng**
 - Social and Labour Plan
 - Environmental Impact Assessment and Environmental Management Programme
 - Water Use Licence Application
- **Imperial Cargo Solutions – Flammable Goods Store, Gauteng**
 - Environmental Impact Assessment and Environmental Management Programme
- **Gold One Africa – Ventersburg Project, Free State**
 - Social and Labour Plan
 - Environmental Impact Assessment and Environmental Management Programme
 - Waste Management Licence
 - Water Use Licence Application
 - Atmospheric Emission Licence
- **WRE – EJV Gold Project, Free State**
 - Site selection for tailings storage facility
 - Pre-Feasibility Study design for tailings storage facility
- **Rietvlei Mine, Mpumalanga**
 - Technical input on discard dump and pollution control dam design
- **Gold One Africa – Holfontein Gold Project, Gauteng**
 - Environmental Impact Assessment and Environmental Management Programme
 - Water Use Licence Application and water dam designs
- **New Kleinfontein Goldmine – Modder East Operations, Gauteng**
 - Environmental Impact Assessment and Environmental Management Programme and amendments thereto
 - Basic Assessment for a return water dam and Environmental Management Programme amendment
 - Water Use Licence Application and amendments thereto
 - Atmospheric Emission Licence application
 - Rehabilitation Strategy and Implementation Programme
 - Social and Labour Plan revision
 - Equator Principles and IFC compliance review
 - Alien invasive vegetation eradication plan
 - Emergency preparedness and response plan
 - Stormwater management plan
- **Interwaste – Various sites in Gauteng, Mpumalanga and Western Cape**
 - Environmental compliance auditing at various landfill sites and depots
 - Water quality monitoring and reporting
 - External environmental control officer for the Klinkerstene Landfill Site, Environmental Authorisation and construction Environmental Management Programme compliance auditing
- **Ekurhuleni Metropolitan Municipality – Various landfill sites in Gauteng**
 - Environmental compliance auditing at various landfill sites and transfer stations
 - Permit amendment application
 - Water quality monitoring and reporting

- **Royal Bafokeng Platinum, North West**
 - Annual assessment of the quantum for rehabilitation-related financial provision for Prospecting Rights
- **Samancor^{Cr} – Various sites in Limpopo**
 - Performance assessments and assessment of the quantum for rehabilitation-related financial provision for various Prospecting Rights
- **Modikwa Platinum Mine, Mpumalanga**
 - Water Use Licence compliance audit and action plan
 - Annual assessment of the quantum for rehabilitation-related financial provision
 - Annual Rehabilitation Plan
 - Final Rehabilitation Decommissioning and Closure Plan
 - Environmental Risk Assessment
 - Waste Management Licence Amendment
- **Coal of Africa – Vele Colliery, Limpopo**
 - Independent technical review of the environmental, social, tailings and water management aspects according to the Equator Principles and IFC Performance Standards
- **Canyon Springs Coal Mine, Mpumalanga**
 - Environmental Impact Assessment and Environmental Management Programme
 - Water Use Licence Application
 - Waste Management Licence application
 - High level bulk water supply assessment
 - External environmental control officer, construction Environmental Management Programme compliance auditing
 - Water Use Licence execution
- **Elsmore Pafuri Camp, Limpopo**
 - Environmental Authorisation amendment
- **Elsmore Luvuvhu Camp, Limpopo**
 - External environmental control officer, Environmental Authorisation and construction Environmental Management Programme compliance auditing
- **Bio-2-Watt – Biogas Plant, Gauteng**
 - External environmental control officer, construction Environmental Management Programme compliance auditing
 - Technical advice
- **Samancor^{Cr} – Scheiding Chrome Mine, Limpopo**
 - Environmental Impact Assessment and Environmental Management Programme
 - Water Use Licence Application
- **African Exploration Mining Finance Corporation – T-Project Colliery, Mpumalanga**
 - Environmental Impact Assessment and Environmental Management Programme
 - Water Use Licence Application
 - Closure and rehabilitation plan
 - Bulk water supply assessment
 - Equator Principles compliance review and gap analysis

- Stakeholder engagement plan and grievance mechanism
- Emergency preparedness and response plan
- Alien invasive vegetation eradication plan
- Water Use Licence execution
- **Mbila Anthracite Mine, KwaZulu-Natal**
 - Basic Assessment and Environmental Management Programme
 - Water Use Licence amendment
- **Msebe Opencast Anthracite Mine, KwaZulu-Natal**
 - Environmental Impact Assessment and Environmental Management Programme
- **Tjate Platinum Mine, Limpopo**
 - Environmental and social baseline report
 - Baseline environmental assessments and project management of the environmental inputs into the Pre-Feasibility Study
 - Social and Labour Plan update
 - Site selection and preliminary design for a tailings storage facility
- **Tharisa Platinum Mine, North West**
 - Due diligence for independent technical engineers report (ITE), review of the environmental, social and tailings documentation and reporting and annual updates thereto
- **Anglo American Platinum Limited – Rustenburg Platinum Mines, Limpopo**
 - The consolidation of existing approved Environmental Management Programmes and the alignment thereof with the requirements of the MPRDA
- **Kalagadi Manganese Mine, Northern Cape**
 - Review of environmental documentation to determine compliance with Equator Principles and international best practice, on behalf of Standard Bank
- **African Exploration Mining Finance Corporation – Vlakvarkfontein Colliery, Mpumalanga**
 - Water Use Licence Application
 - Closure and rehabilitation plan
 - The technical design, 3D modelling and detailing of the conceptual backfill plan for an opencast pit
 - Compilation of an alien invasive vegetation eradication plan
 - Social and Labour Plan amendment
 - Basic Assessment and Environmental Management Programme for a haul/ access road and above ground diesel storage area
- **Western Bushveld Joint Venture – Project 1, North West**
 - Review of environmental, hydrology and tailings dam documentation for compliance with Equator Principles, IFC Performance Standards and EHS Guidelines, on behalf of Standard Bank
- **Anglo American Platinum Limited – Amandelbult Chrome Recovery Plant, Limpopo**
 - Basic Assessment and Environmental Management Programme for a chrome recovery plant
 - Addendum to the existing Environmental Impact Assessment and Environmental Management Programme in terms of the MPRDA
- **Steenkampskraal Project, Western Cape**
 - Review of environmental, hydrology and tailings dam documentation for compliance for PEA Canadian NI 43-101 filing

- **Malelane Iron Ore Project, Mpumalanga**
 - Preliminary environmental and social baseline studies
- **Rand Uranium – Reclamation of Lindum Tailings Storage Facility, Gauteng**
 - Environmental Impact Assessment and Environmental Management Programme addendum
- **Hlabisa Coal, KwaZulu-Natal**
 - High-level, desktop environmental evaluation (sensitivity analysis)
- **Anglo American Platinum Limited – Kilken Tailings, Limpopo**
 - Independent technical review of the environmental and social aspects permitting and water management according to the Equator Principles, IFC Performance Standards, and World Bank EHS Guidelines
- **Mooiplaats Platinum Mine, Limpopo**
 - Social and Labour Plan
- **Rietkuil Coal Project, Mpumalanga**
 - Independent technical review and due diligence of environmental documentation
- **Evander Gold Mine, Mpumalanga**
 - Review of environmental, social and tailings dam documentation for compliance with South African Environmental and Social Standards
- **Holgoun Energy – Springbok Flats Coal Fields, Limpopo**
 - Competent Persons Report
 - High level bulk water supply assessment
 - High level environmental review for the Western Complex Project
- **Kudumane Manganese Mine, Northern Cape**
 - Independent technical review of the environmental and social aspects
- **ZYL Limited – KaNgwane Anthracite Mine, Mpumalanga**
 - Environmental Impact Assessment and Environmental Management Programme
 - Water Use Licence Application
 - Closure and rehabilitation plan
- **ZYL Limited – Southern Anthracite Project, Mpumalanga**
 - Environmental Impact Assessment and Environmental Management Programme
- **DRDGold – Blyvooruitzicht Mining Operation, Gauteng**
 - High level environmental review
- **Lonmin – Akanani Platinum Project, Limpopo**
 - Pre-Feasibility Study, review of the environmental and social documentation and reporting of high level risks and opportunities
- **Anglo American Platinum Limited – Dishaba Mine, Limpopo**
 - Environmental Impact Assessment and Environmental Management Programme
 - Water Use Licence amendment
- **Majuba Colliery, Mpumalanga**
 - Closure and rehabilitation plan
- **Rietfontein Prospect, Limpopo**
 - Geotechnical investigation
 - Environmental Management Programme amendment

- **Namaqualand Mines, Northern Cape**
 - Independent technical review of the environmental, social and tailings aspects according to the Equator Principles and IFC Performance Standards
- **Leeuwfontein and Blinkpan project areas, Mpumalanga**
 - Geotechnical investigation
- **Bafokeng Rasimone Platinum Mine, North West**
 - Preliminary closure and rehabilitation plan
- **Umtu (Manganese) Mine Project, Northern Cape**
 - Independent technical review of the environmental and social aspects according to the Equator Principles and IFC Performance Standards
- **Koornfontein Mines, Mpumalanga**
 - Environmental Impact Assessments and Environmental Management Programmes for the separate sections of the mining operations
 - Environmental Impact Assessments and Environmental Management Programmes amendment for the Leeuwfontein Block
 - Water Use Licence Applications for the separate sections of the mining operations
 - Identification of a suitable host area and conditions for resettlement and the compilation of the Resettlement Action Plan and agreement on timeframes and responsibilities
- **Bafokeng Rasimone Platinum Mine, North West**
 - Due diligence on environmental and tailings dam documentation for listing purposes on the JSE stock exchange
 - Competent Persons Report including environmental, social, hydrological and tailings aspects
- **Simmer & Jack Limited – Elandsdrift Heap Leach Pad, Mpumalanga**
 - Geotechnical and slope stability investigation
 - As built drawings for the Elandsdrift heap leach pad
- **Simmer & Jack Mines Limited Transvaal Gold Mining Estates, Mpumalanga**
 - Design, quality control/assurance manual, site support and part time project management for the design and construction of a heap leach dam extension
- **Afrikander Leases Gold Mine, North West**
 - Environmental Impact Assessment and Environmental Management Programme amendment
- **Grass Valley Platinum Project, Limpopo**
 - Update the environmental aspects in the Pre-Feasibility Study report
- **Lonmin PLC Western Platinum Mine, North West**
 - Basic Assessment and Environmental Management Programme for a hazardous waste storage facility
 - Waste Management Licence application

APPENDIX 3

PRE-APPLICATION WATER USE ENQUIRY

Claire Kennedy

From: Gené Main
Sent: Thursday, 21 February 2019 10:48
To: Louise Jones; Claire Kennedy
Subject: FW: Pre-Application Water Use Enquiry have been submitted to the department

----- Original message -----

From: [Ewulaas Do Not Reply@dws.gov.za](mailto:Ewulaas_Do_Not_Reply@dws.gov.za)
Date: 2019/02/21 10:36 (GMT+02:00)
To: miners@njovu.co.za
Subject: Pre-Application Water Use Enquiry have been submitted to the department

Dear Dr Le-Marlie Marais (Director)

A request for consultation for the following Pre-Application Water Use Enquiry have been submitted to the department:

ERPM Extension 2

Your request for consultation was submitted to:

Name : Mr K. Mudau (WULA Manager)
e-Mail : mudauK@dws.gov.za
Tel : +27123921360

Thank you,
e-WULAAS Team



In Production

DISCLAIMER: This message and any attachments are confidential and intended solely for the addressee. If you have received this message in error, please notify the system manager/sender. Any unauthorized use, alteration or dissemination is prohibited. The Department of Water and Sanitation further accepts no liability whatsoever for any loss, whether it be direct, indirect or consequential, arising from this e-mail, nor for any consequence of its use or storage.

APPENDIX 4.1
LANDOWNER NOTIFICATION



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07 March 2019

EGGBERT EGGS (PTY) LTD

PRIVATE BAG X 5
MONTANA PARK
GAUTENG
0159

Sent via email (hello@eggbert.co.za; grossouw@eggbert.co.za)

APPLICATION FOR MINING RIGHT ON VARIOUS PORTIONS OF THE FARMS WITPOORTJE 117 IR, WITHOK 131 IR, ROOIKRAAL 156 IR AND GLEN ROY 132 IR WITHIN THE EKURHULENI SOUTH EAST MAGISTERIAL DISTRICT, GAUTENG PROVINCE

Dear Directors

According to the latest information at the Deeds office, Eggbert Eggs (Pty) Ltd is the landowner of the following farm portions within the Gauteng Province:

- Portion 5 of the farm Witpoortje 117 IR.

ERPM Extension Area 1 (Pty) Ltd ("ERPM Ext 1") is a subsidiary of ERPM (Pty) Ltd ("ERPM"). ERPM Ext 1 holds a prospecting right (GP243PR) which it intends to convert into a Mining Right (submitted with reference number: GP 30/5/1/2/2 10078 MR). Since submission of the EA application, ERPM's contiguous mining rights - GP151MR and GP150MR - have been sold to ERPM Ext 1.

GP243PR is located to the south and adjacent to GP150MR. ERPM Ext 1 plans to consolidate the underground resources of GP243PR (referred to as ERPM Extension Area 2 or ERPM Ext 2), with those of GP150MR and GP151MR. The combined underground resources within these three areas justifies the large capital commitment to develop a long term, large-scale mining operation. The Far East Vertical (FEV) shaft and FEV vent shaft on GP151MR will be refurbished and used to access underground workings of GP151MR and GP150MR. An additional twin shaft (includes both access and vent shaft), termed Windmill Shaft, is proposed to be constructed on Portion 5 of the Farm Witpoortje 117 IR to allow access to the underground operations of the Ext 2 area and will include the development of the associated head gear. Ore that is mined below ground will be crushed and mixed with groundwater to form a slurry and will be brought to surface via a hydraulic hoist system and transported via existing pipelines to either the Knights Plant (via the Knight Plant Pipeline) to the north-west of the surface development area or the Ergo Plant (via the Ergo Plant Pipeline)

to the north-east of the surface development area. An existing vent shaft on Portion 19 of the Farm Witpoortje 117 IR (Witpoortje Vent Shaft) will also be re-opened and re-equipped for use.

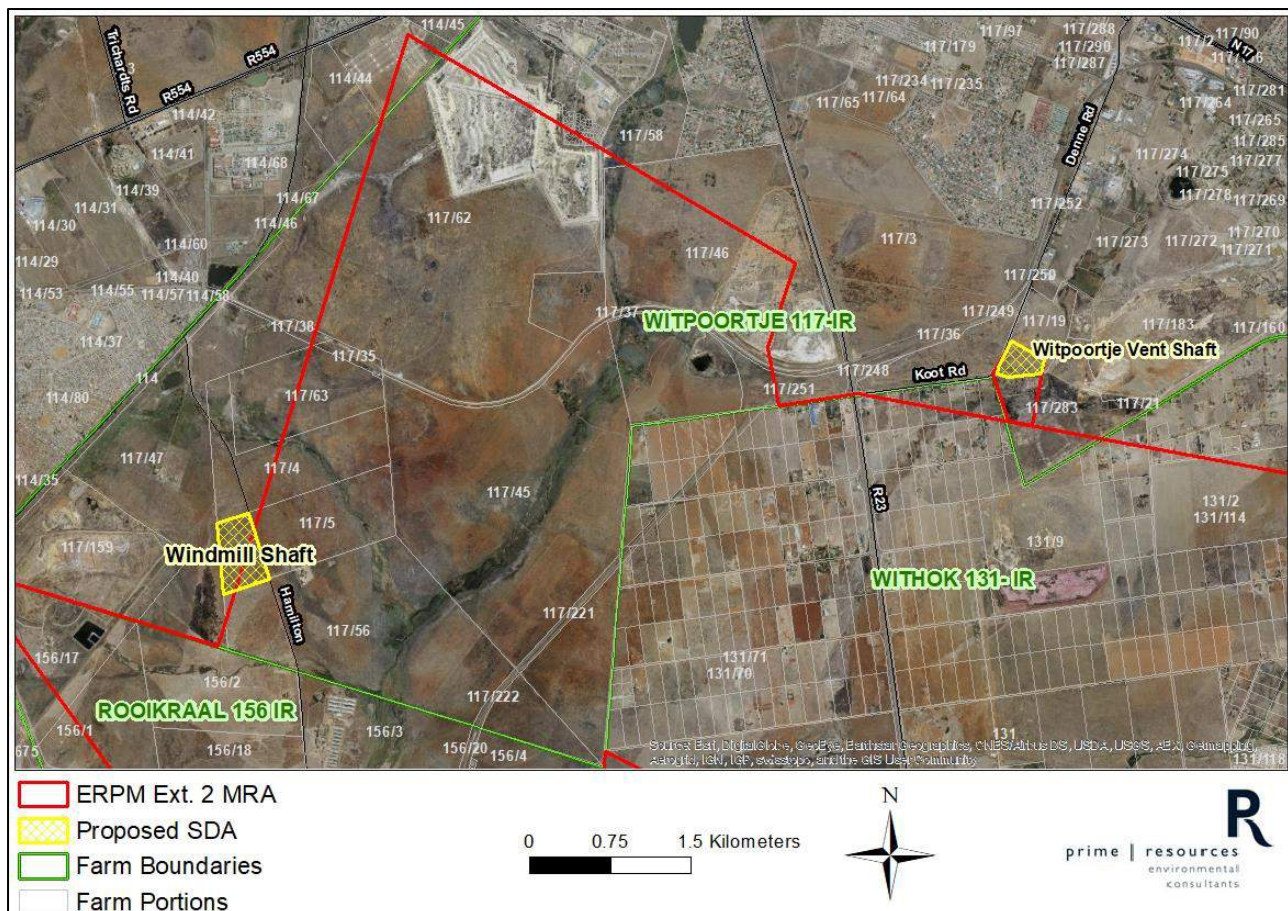
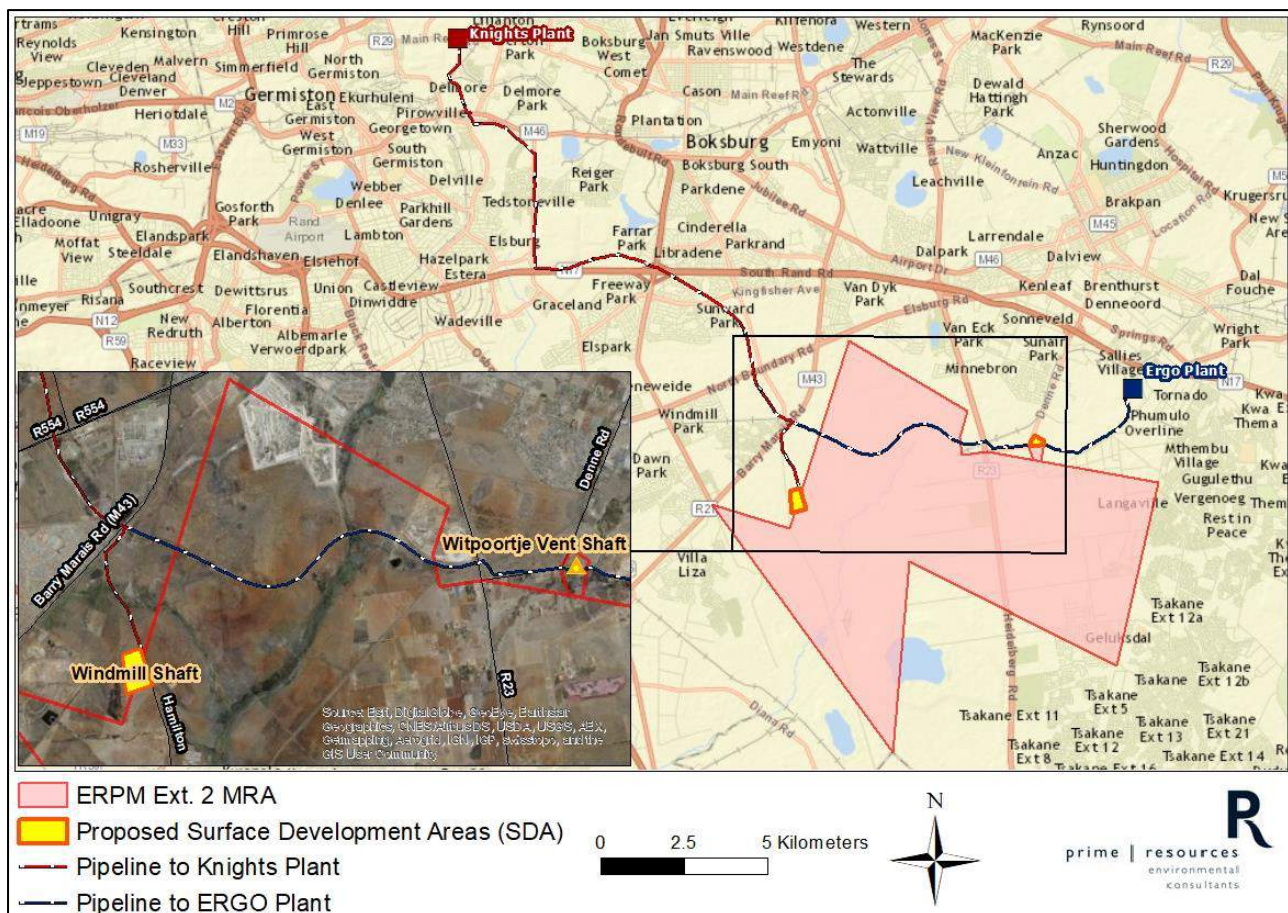
Surface infrastructure associated with the development of Windmill Shaft is to be developed within the proposed surface development areas (SDAs) of approximately 20 Ha. The surface infrastructure required for development is as follows:

- Twin shaft with headgear and winder and vent shaft;
- A refrigeration plant, that will allow for the cooling of underground mining operations;
- Change house, administrative buildings, workshops, salvage yard, and stores;
- A water treatment plant is potentially required for the treatment of underground water;
- Powerlines (power supply connection) will connect to existing power sources and water supply pipeline for both potable and service water supply from the municipal reticulation system;
- Stormwater and pollution control infrastructure, including diversion berms to divert clean run-off, dirty water storm water channels and a pollution control dam will be developed to catch run-off from the surface infrastructure area;
- A backup generator and a fuel supply tank within a bunded area;
- Explosives handling area;
- Existing access roads will be used as far as possible, however a small road network around the refrigeration plant and a parking area will be constructed; and
- A grout plant (backfill plant) will to provide material to support underground mine workings.

Ore and waste rock will be stored below ground. Waste rock will be used as backfill material. It is proposed that any excess water from below ground, not used as service water by ERPM Ext 1, will be transferred to DRD Gold for use in their operations. Topsoil will be used to create a berm upstream of the infrastructure area, and will further be vegetated to screen the residential areas from noise and visual impacts.

ERPM Ext 1 is therefore applying for Environmental Authorisation in terms of National Environmental Management Act, 1998 (NEMA) and the 2014 Environmental Impact Assessment (EIA) Regulations (*as amended*), and for a Water Use Licence (WUL) in terms of the National Water Act (1998), for the proposed mining and associated activities at the ERPM Extension Area 2. Affected farm portions include portions of Witpoortje 117 IR, Withok 131 IR, Rooikraal 156 IR and Glen Roy 132 IR, including the above mentioned farm portions. Prime Resources (Pty) Ltd has been appointed as the Environmental Assessment Practitioner to facilitate the Scoping and EIA process.

As the landowner of the affected property, the applicant (ERPM Ext 1) is required to notify you of the proposed project. Your contact details are included in the Interested and Affected Party (IAP) database, and the Scoping Report will be available to you for review and comment for a 30-day review period.



Should you wish to discuss the project, or associated regulated processes further, please feel free to contact us telephonically (011) 447 4888 or via email to louise@resources.co.za. We would be happy to meet with you during the public participation period in order to ensure that any comments you may have are incorporated into the final Basic Assessment Report to be submitted to the DMR.

Yours sincerely

Louise Jones
Senior Environmental Consultant
Prime Resources (Pty) Ltd

Louise Jones

From: Louise Jones
Sent: 07 March 2019 13:44
To: 'hello@eggbert.co.za'; 'grossouw@eggbert.co.za'
Cc: 'Gene Main (gene@resources.co.za)'
Subject: ERPM Extension Area 2 Mine- Landowner Notification
Attachments: Proposed ERPM Extension Area 2 Mine_Landowner notification_EGGBERT EGGS PTY LTD.pdf

Tracking:	Recipient	Delivery
	'hello@eggbert.co.za'	
	'grossouw@eggbert.co.za'	
	'Gene Main (gene@resources.co.za)'	Delivered: 07/03/2019 13:45

Good day

Attached please find notification of the proposed mining activities for the ERPM Extension Area 2 Mine on various portions of the Farms Witpoortje 117 IR, Withok 131 IR, Rooikraal 156 IR and Glen Roy 132 IR within the Ekurhuleni South East Magisterial District, Gauteng Province.

Kind Regards

Louise Jones
Senior Environmental Scientist

T: +27 11 447 4888
F: +27 86 604 2219
E: louise@resources.co.za



the workshop ▪ 70 - 7th avenue ▪ parktown north ▪ johannesburg ▪ 2193
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www.resources.co.za

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APPENDIX 4.2

IAP DATABASE

		Name	Department / Community / Property	Designation	Physical / Postal Address
Authorities	Mr	Henry Christopher Buitendacht	City of Ekurhuleni	Ward Councillor (Ward no 82)	
	Mrs	Precious Mduduzi Luvalo		Ward Councillor (Ward no 99)	
	Mrs	Stefanie Ueckermann		Ward Councillor (Ward no 105)	
	Mr	Jamie Moodley		Acting HOD: Risk Management	
	Ms	Kgothatso Cokoto		Secretary to HOD: Risk Management	
	Mr	Caiphus Chauke		EMM Department of Economic Development	
	Mr	Sizwe Cele		HOD: Roads and Stormwater	
	Mr	Mduduzi Shabangu		HOD: Water and Sanitation	
	Ms	Nthabiseng Sereko		Secretary to HOD: Water and Sanitation	
	Mr	Sifiso Ndwandwe		Environmental Resource and Waste Management Department	Edenvale Civic Centre, Cnr Hendrik Potgieter Avenue and Van Riebeeck Street, Edenvale, 1610
	Ms	Cecilia Rakgoale		Department of Environmental Resource Management	
	Ms	Lilian Kwakwa			
	Ms	Nomvula Flara		Acting Division Head: Legislative Governance and Compliance Environmental Resource and Waste Management Department	Cnr Hendrick Potgieter and Van Riebeeck Avenue Edenvale Office no. 201/205/214 First Floor
	Mr	Sunday Mabaso	Gauteng Department of Mineral Resources	Regional Manager	Mineralia Building, Cnr De Korte and De Beer Street, BRAAMFONTEIN, 2017
	Ms	Carol Khanyile		Secretary	
	Mr	Musa Mangobe		Assistant Director	
	Mr	Jimmy Sekgale		Mineral Regulation	
	Mr	Steven Mukhola	Gauteng Department of Agriculture Rural Development (GDARD)	Director - Environment	Umntho house, 56 Eloff Street, Johannesburg, 2000
	Ms	Phyllis Maphakela	Department of Water and Sanitation	Catchment officer	15th Floor, Bothongo Plaza East, 285 Francis Baard Street, Pretoria, 0001
	Mr	Bashan Govender		Mine Water Management	
	Mr	Jurgo van Wyk			
	Ms	Phyllistas Mmakola	Department of Agriculture, Fisheries and Forestry (DAFF)	Land Use & Soil Management	Delpen Building (Room 211, 2nd floor) Cnr Annie Botha and Union Street, Riviera, Pretoria, 0084
	Ms	Cindy Benyane	Gauteng Department of Rural Development and Land Reform (DRDLR)	Office of the Regional Land Claims Commissioner: Gauteng Province	9 Bailey Lane, Arcadia, Pretoria
	Ms	Edith Mokgato			
	Mr	Solomon Maruma			
	Ms	Amukelani Hulskey Shiburi		Regional Land Claims Commission: Gauteng	
	Mr	Tebogo Molokomme	Provincial Heritage Resources Authority Gauteng (PHRAG)	Assistant Director	Surrey House, 35 Rissik Street, Johannesburg, 2000
	Mr	Phindile Mbanjwa	Gauteng Department of Economic Development	HOD	Umntho House, 56 Eloff Street, Johannesburg, 2000
	Ms	Mmatshapo Seabela		Personal Assistant to the HOD	
	Mrs	Yoliswa Makhasi	Gauteng Department of Community Safety	HOD	Game Building, 5th floor, 64 Pritchard Street, Johannesburg, 2001
	Mr	Sipho Maseko		Personal Assistant to the HOD	
	Mr	Zodwa Koalepe			
	Mr	Ernest Sibeko	Gauteng Department of Roads and Transport	Control Engineering Technician	45 Commissioner Street, Johannesburg, 2000
	Mrs	Gloria Legwabe			
	Mr	Patle Mohajane	National Nuclear Regulator	Manager: Naturally Occurring Radioactive Material (NORM)	Eco Glades Office Park, Eco Glades 2 Block G, 420 Witch-Hazel Avenue, Centurion, 0144
	Mrs	Malebo Makgale			

Organs of State	Mr	Jan Mitchell	Eskom	Land & Rights Officer	C/oKingsway and van Riebeeck Street/PO Box 727, Nigel, Gauteng, 1491
		Tobile Bokwe			
Landowners and occupants	Mr	Director - Charles Le Maitre Director - Jurjen Coenraad Kuipers	Eggbert Eggs (Pty) • RE Portion 4, Portion 5, RE Portion 56 and Portion 63 of the farm Witpoortje 117 IR; and • RE Portion 3 of the Farm Rooikraal 156 IR		PRIVATE BAG X 5 MONTANA PARK GAUTENG 0159
	Mr	Winza Marumo	Ekurhuleni Metropolitan Municipality, Real Estate Department • RE Portion 64 of the Farm Withok 131 IR (Agricukltural Holdings); and • Portion 17 of the Farm Rooikraal 156 IR	Real Estate Department	
	Ms	Tersia Visser		Real Estate Department	
	Ms	Levona Appls		Real Estate Department	
	Ms	Michelle Adams		Real Estate Department	
		Afrisam (SA) Pty Ltd	Hippo Quarries Pty Ltd • RE Portion 2 and Portion 18 of the Farm Rooikraal 156 IR	Works Manager	P O BOX 6367 WELTEVREDEN PARK 1715
			Holcim South Africa Pty Ltd • RE Portion 1, Portion 6 and Portion 7 of the Farm Rooikraal 156 IR		
		Director - Deon Duvenage Director - Hendrik Johannes Lamprecht	Portion 47 Inv Pty Ltd • RE Portion 47 of the Farm Witpoortje 117 IR		PO BOX 38114 GARSFONTEIN-EAST GAUTENG 0060
		Director - Peter Charles van der Merwe Director - Leon Shlomo Nafte	Purple Moss 19 Pty Ltd • RE Portion 62 of the Farm Witpoortje 117 IR		PO BOX 227 BRUMA 2023
		Director - Cornelius Johannes Swart Director - Marthinus Francis Swart	Robin Lowe & Co Pty Ltd • RE Portion 4 of the Farm Rooikraal 156 IR		P O BOX 722 HIGHLANDS NORTH 2037
	Mr	Marius Bosman	San Michele Home • Portion 114 of the Farm Withok 131 IR		266 Hannes Visage Road Withok Estates Brakpan
		Director - Hendrich Frederich Rudolph Schaefer Director - Petrus Johannes Badenhorst	Terra Argum Pty Ltd • Portion 45 of the Farm Witpoortje 117 IR		P O BOX 535 BENONI 1500
		Unknown	Withok Small Farms Pty Ltd • Portion 117 of the Farm Withok 131 IR		P O BOX 755 KEMPTON PARK 1620 and P O BOX 2329 KEMPTON PARK 1620
	Ms	Maureen Kunene	Transnet Ltd • Portion 35, Portion 37, Portion 38 and Portion 251 of the Farm Witpoortje 117 IR; • Portion 19; Portion 20; Portion 21 and Portion 22 of the Farm Rooikraal 156 IR; and	Freight Infrastructure Manager	
	Ms	Nomusa Zungu		Real Estate Management Department	
	Ms	Neo Mosebu		Real Estate Management Department	
	Mr	Nsumbulana Mtsenga		Real Estate Management Department	

Ms	Cynthia Nong	• Portion 2 of the Farm Glen Roy 132 IR	Senior consultan EIAs & EMS	
Mr	Ezekiel Monyamane		Senior Manager: Env and Sustainability	
Mr	Louis Kleynhans	DRD Gold (Ergo Mining Pty Ltd) • Portion 283 of the Farm Witpoortje 117 IR; • RE Portion 9, Portion 76, Portion 77, Portion 78, Portion 79, Portion 80 and Portion 108 of the Farm Withok 131 IR;		
Mr	Henry Gouws	• RE Portion 5, Portion 10, RE Portion 11 of the Farm Rooikraal 156 IR; and • RE and RE Portion 1 of the Farm Glen Roy 132 IR.		
Mrs	Kate Masabata Luvhimbi	Agricukltural Holdings • Portion 70 of the Farm Withok 131 IR		
Mr	Bernard Tshikhudo Luvhimbi	Agricukltural Holdings • Portion 71 of the Farm Withok 131 IR		
	Testnut Truse	• RE Portion 46 of the Farm Witpoortje 117 IR		
Mrs	Susanne Weitze	• Portion 19 of the Farm Witpoortje 117 IR; and • RE Portion 2 of the Farm Withok 131 IR		
	No Information Available	Agricukltural Holdings • Portion 74 of the Farm Withok 131 IR		
	Unknown	Geluksdal		
	Unknown	Geluksdal Ext 1		
	Unknown	Geluksdal Ext 2		
	Unknown	Geluksdal Ext 3		
	Unknown	• Portion 118 of the Farm Withok 131 IR		
	Unknown	Laboré		
	Unknown	Laboré Ext 1		
	Unknown	Laboré Ext 2		
	Unknown	Withok Estates		
Mrs	Vicky Lindeque	Unknown Plot within Block 14 in Witpoortje	Resident	unknown
Mr	Daniel Schoeman	Plot 56	Resident	
Mr	Titius Ramaphekela	Plot 156	Manager	
	Sarens SA Pty Ltd.			81 Koot str, Witpoortje, Brakpan
	The Elite Guys cc			83 Koot str, Witpoortje, Brakpan
	Hardy Plants			166 Coetzer str, Witpoortje, Brakpan
Mrs	Amelise Du Toit	Plot 199 Coetszer Str	Resident	Plot 199 Coetszer Str, WitPoortje, Brakpan
Mr	Nico Pool	Plot 164 Coetzer Str	Resident	Plot 164 Coetzer Str, WitPoortje, Brakpan
	Pieter Hansen	Plot 198 Coetzer Str	Resident	Plot 198 Coetzer Str, WitPoortje, Brakpan
Mr	Izak Smit	166 Coetzer Str	General Manger	166 Coetzer Str, WitPoortje, Brakpan
Mr	Kenneth Soijala	Plot 161 Coetzer Str	Resident	Plot 161 Coetzer Str, WitPoortje, Brakpan
Mr	Bongani Kunene	Plot 190 Coetzer Str	Resident	Plot 190 Coetzer Str, WitPoortje, Brakpan
Mr	D Kinsley	Plot 202 Coetzer Str	Resident	Plot 202 Coetzer Str, WitPoortje, Brakpan
	Lawrence	Plot 291 Withok Estate, Mans Str	Resident	Plot 291 Withok Estate, Mans Str, WitPoortje, Brakpan
Mr	Jabulani Dladla	Plot 399 Withok, Luka Stein Str	Resident	Plot 399 Withok, Luka Stein Str, WitPoortje, Brakpan
Mr	Johannes Hadebe	Rooikraal, Landfill	Operator	
Mr	Gawie Roussouw	Eggbert Eggs (Pty)	General Manger	
		Farmyard Butchery		234 Mans Rd, Brakpan
	Containers For You cc			122 Floors Rd, Withok Estates, Brakpan
	The Gr8 Place - Venue for Hire			129 Floors Rd, Withok Estate, Brakpan
Mr	Jimmy Swift	Nir Steel - Trading	Branch Manager	233 Joe Arison Rd, Brakpan
		Gereg Sewage & Water Equipment (Pty) Ltd		Cnr Joule and Newton St, Labore, Brakpan
Mr	Jan Ehlers	Heatrans Pty Ltd.	Managing Director	Cnr Lumen and Pascal Str, Labore, Brakpan
		Johnson Transport Pty Ltd		7 Lumen St, Labore, Brakpan
		Mario Meano Engineering Pty Ltd.		21 Joule Rd, Labore, Brakpan
		Enviro-cycle		31 Joule Str, Labore, Brakpan
Mr	Enock Silepe	Mr Fats CC	Director	9 Pascal Str, Labore, Brakpan
Mr	Thusi Silepe	Mr Fats CC	Assistant Director	9 Pascal Str, Labore, Brakpan
		Super Salvage Metal Reclaims cc		64 Ampere Rd, Labore, Brakpan
		Hinteregger SA (Pty) Ltd		2 Newton Str, Labore, Brakpan
		Rubber 2 Metal		Cnr Watt and Volt Str, Labore, Brakpan
		Rotapak Paper (Pty) Ltd.		4 Nebula Str, Labore, Brakpan
Mr	Mike	Arminel Industries (Pty) Ltd		166 Coulomb Str, Labore, Brakpan

	Mr	Bernie	Arminel Industries (Pty) Ltd		166 Coulomb Str, Labore, Brakpan
	Mr	Douglas Simpson	Planet Project		10 Lumen Str, Labore, Brakpan
			Windmill Park ext 12	Agent	Rondebult rd, Dawnpark, Boksburg
			Dep Social Servives, Child Welfare South Africa - Geluksdal/Tsakane		1526 Richard Muburgh Str, Geluksdal
			Geluksdal Library		Cnr Uittog Ave and Caledobia Str, Geluksdal,
			Geluksdal Clinic		1 Uittog Avenue, Geluksdal, Brakpan
Organization s/Companies					
	Ms	Mariette Lieferrink	Federation for a Sustainable Development (FSE)	CEO	

APPENDIX 4.3

MEDIA NOTICE

NOTIFICATION OF PUBLIC PARTICIPATION PROCESS

ERPM (Pty) Ltd (ERPM) is an underground mining operation, which was established more than 100 years ago on the Witwatersrand basin. ERPM currently owns two contiguous mining rights - GP151MR and GP150MR. Neither of the underground assets of GP150MR and GP151MR are economically robust on their own to justify long-term mining, nor do they allow for the optimal mining of the mineral resources in the area. Thus these two mining rights are currently non-operational and are in a care and maintenance phase.

ERPM Extension Area 1 (Pty) Ltd (ERPM Ext 1), a subsidiary of ERPM, holds a prospecting right (GP243PR) which it intends to convert into a Mining Right. GP243PR is located adjacent to GP150MR. ERPM Ext 1 plans to consolidate the underground resources of GP243PR (referred to as ERPM Extension Area 2 or ERPM Ext 2), with those of GP150MR and GP151MR, making use of the Far East Vertical (FEV) shaft and FEV vent shaft within GP151MR to access underground workings of all three mineral rights areas. The combined underground resources within these three areas justifies the large capital commitment to develop a long term, large scale mining operation.

ERPM Ext 1 is applying for Environmental Authorisation in terms of the National Environmental Management Act (1998) (NEMA), and for a Water Use Licence (WUL) in terms of the National Water Act (1998), for proposed mining and associated activities at the ERPM Extension Area 2, in the City of Ekurhuleni Municipality. The site is located approximately 10 km South-East of Boksburg Town and 8 km East of Vosloorus. Affected farm portions include portions of Witpoortje 117 IR, Withok 131 IR, Rooikraal 156 IR and Glen Roy 132 IR.

Environmental Authorisation is required for the following activities listed in terms of NEMA and the 2014 EIA Regulations (*as amended*): 2, 9, 10, 14, 16, 20, 25, 28 and 30 of Listing Notice 1 (*as amended* by GNR327 of 2017); 2, 4, 6, 7, 15, 17, 21 and 25 of Listing Notice 2 (*as amended* by GNR325 of 2017); and 4, 10, 12 and 15 of Listing Notice 3 (*as amended* by GNR324 of 2017). A Scoping and EIA process will be followed.

Prime Resources (Pty) Ltd has been appointed as the Environmental Assessment Practitioner to facilitate the above processes.

REGISTER AS AN INTERESTED AND AFFECTED PARTY (IAP)

Individuals and organisations can register as Interested and Affected Parties (IAPs) by submitting their contact details to Prime Resources. To register, submit your contact details (name, cell phone number, email address) and particular interest in the project via **SMS** to 066 283 3799 **OR e-mail** to prime@resources.co.za. Please use the subject line "**ERPM**".

PUBLIC COMMENT INVITED

The Scoping Report can be downloaded from <http://www.primeresources.co.za/downloads/> during the 30 day public commenting period, from **8 March to 8 April 2019**. The Scoping Report can also be viewed at the Vosloorus, Tsakane, Kwa-Thema, Geluksdal and Brakpan Public Libraries, or provided by email upon request. Please forward comments to Prime Resources by **8 April 2019**.

For more information, please contact Louise Jones or Itumeleng Morosele at Prime Resources.

(T) 011 447 4888 (F) 086 604 2219 (E) prime@resources.co.za (W) www.resources.co.za

APPENDIX 4.4
SITE NOTICE

NOTIFICATION OF PUBLIC PARTICIPATION PROCESS

PROPOSED ERPM EXTENSION 2 MINE

CITY OF EKURHULENI, GAUTENG

ERPM Extension Area 1 (Pty) Ltd ("ERPM Ext 1") is a subsidiary of ERPM (Pty) Ltd ("ERPM"). ERPM Ext 1 holds a prospecting right (GP243PR) which it intends to convert into a Mining Right (submitted with reference number: GP 30/5/1/2/2 10078 MR). Since submission of the EA application, ERPM's contiguous mining rights - GP151MR and GP150MR - have been sold to ERPM Ext 1.

ERPM Ext 1 plans to consolidate the underground resources of GP243PR (referred to as ERPM Extension Area 2 or ERPM Ext 2), with those of GP150MR and GP151MR. ERPM Ext 2 is located approximately 11 km South-East of Boksburg and 7 km East of Vosloorus. Affected farm portions include portions of Witpoortje 117 IR, Withok 131 IR, Rooikraal 156 IR and Glen Roy 132 IR.

The combined underground resources within these three areas justifies the large capital commitment to develop a long term, large scale mining operation. The Far East Vertical (FEV) shaft and FEV vent shaft on GP151MR will be refurbished and used to access underground workings of GP151MR and GP150MR. An additional twin shaft (includes both access and vent shaft), termed Windmill Shaft, is proposed to be constructed on Portion 5 of the Farm Witpoortje 117 IR to allow access to the underground operations of the Ext 2 area and will include the development of the associated head gear. Ore that is mined below ground will be crushed and mixed with groundwater to form a slurry and will be brought to surface via a hydraulic hoist system and transported via existing pipelines to either the Knights Plant (via the Knight Plant Pipeline) to the north-west of the surface development area or the Ergo Plant (via the Ergo Plant Pipeline) to the north-east of the surface development area. An existing vent shaft on Portion 19 of the Farm Witpoortje 117 IR (Witpoortje Vent Shaft) will also be re-opened and re-equipped for use.

Surface infrastructure associated with the development of Windmill Shaft is to be developed within the proposed surface development areas of approximately 20 Ha.

ERPM Ext 1 is applying for Environmental Authorisation in terms of the National Environmental Management Act (1998) (NEMA), for the following activities listed in terms the 2014 EIA Regulations (*as amended*): 16, 20, 25, 28 and 30 of Listing Notice 1 (*as amended* by GNR327 of 2017); 6, 7, 15, 17 and 21 of Listing Notice 2 (*as amended* by GNR325 of 2017); and 12 and 15 of Listing Notice 3 (*as amended* by GNR324 of 2017) and for a Water Use Licence (WUL) in terms of the National Water Act (1998), for proposed mining and associated activities at the ERPM Extension Area 2. A Scoping and EIA process will be followed.

Prime Resources (Pty) Ltd has been appointed as the Environmental Assessment Practitioner to facilitate the above processes.

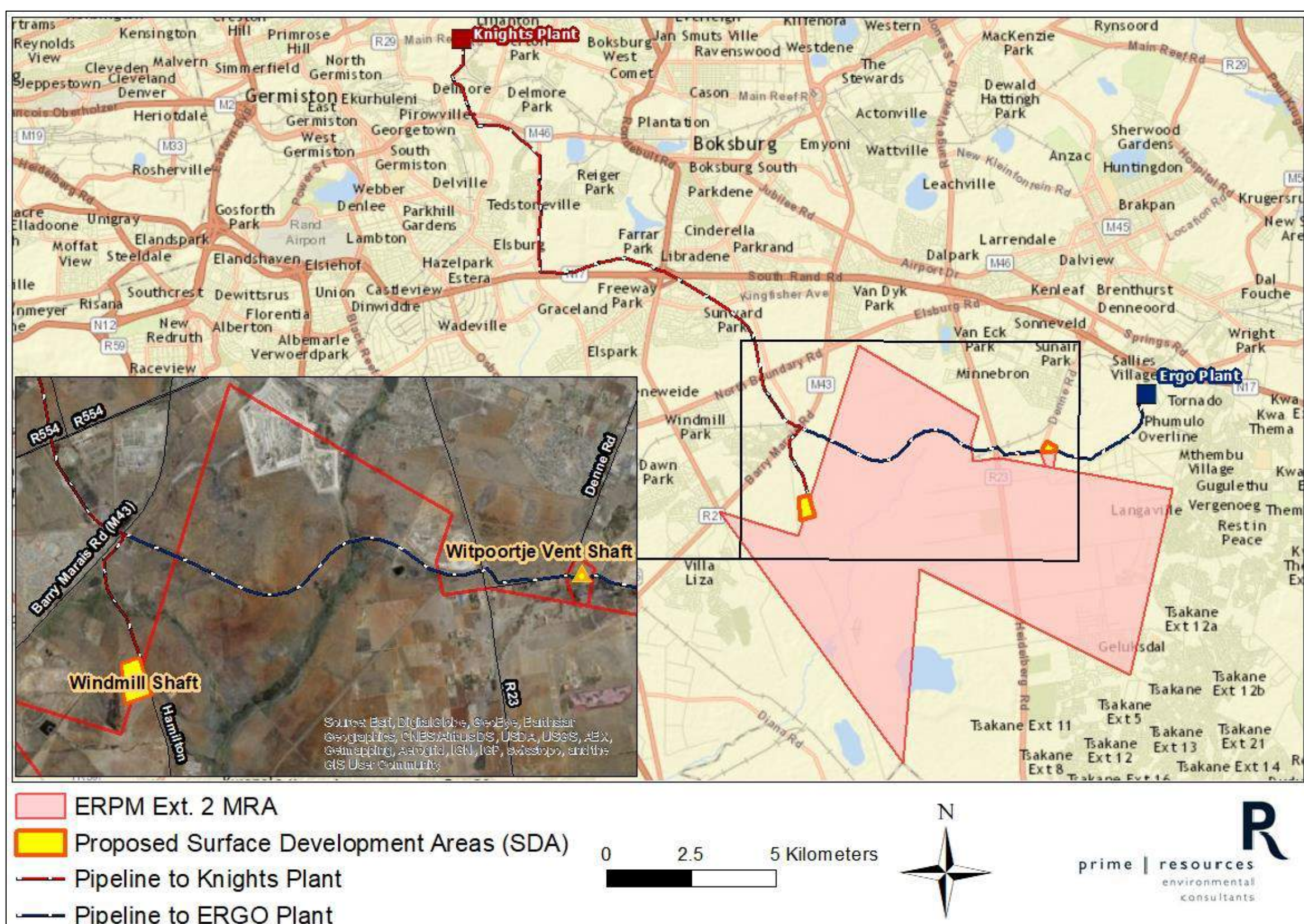
For more information, individuals and organisations can register on the Interested and Affected Party (IAP) database. Registered IAPs will be notified of further documentation available for comment. To register, submit your contact details (name, cell phone number, email address) and particular interest in the project via

- **SMS** to **066 283 3799** or
- **E-mail** to prime@resources.co.za

OPPORTUNITY TO PARTICIPATE

The Scoping Report can be downloaded from www.primeresources.co.za during the 30 day public commenting period, from **8 March to 8 April 2019**.

The Scoping Report can also be viewed at the Vosloorus, Tsakane, Kwa-Thema, Geluksdal and Brakpan Public Libraries, or provided by email upon request. Please forward comments to Prime Resources by **8 April 2019**.



Please contact Prime Resources with any questions, concerns or comments

Louise Jones / Itumeleng Morosele at **Tel:** 011 447 4888 or **E-mail:** prime@resources.co.za

Please use the subject line **"ERPM"**

APPENDIX 4.5
BACKGROUND INFORMATION DOCUMENT

Environmental Authorisation process for the

ERPM Extension Area 2 Mine Brakpan South, Gauteng

Proposed by
ERPM Extension Area 1 (Pty) Ltd

Scoping Phase Information Booklet

8 March – 8 April 2019

This document summarises the information currently available. Additional information will be included in the EIA Phase Information Booklet, which is anticipated to be made available in June / July 2019.

The Draft Scoping Report is currently available for public review and comment at **Vosloorus, Tsakane, Kwa Thema Public Library, Geluksdal** and the **Brakpan Public Library**. You are invited to review the Scoping Report and/or this Information Booklet and provide comments.

Please submit comments by 8 April 2019.

All comments submitted will be included into the final documentation to be sent to the Department of Mineral Resources.

Project description

ERPM Extension Area 1 (Pty) Ltd ("ERPM Ext 1") is a subsidiary of ERPM (Pty) Ltd ("ERPM"). ERPM Ext 1 holds a prospecting right (GP243PR) which it intends to convert into a Mining Right (submitted with reference number: GP 30/5/1/2/2 10078 MR). Since submission of the EA application, ERPM's contiguous mining rights - GP151MR and GP150MR – have been sold to ERPM Ext 1.

GP243PR is located to the south and adjacent to GP150MR, approximately 11 km South-East of Boksburg Town and 7 km East of Vosloorus. Affected farm portions include portions of Witpoortje 117 IR, Withok 131 IR, Rooikraal 156 IR and Glen Roy 132 IR.

ERPM Ext 1 plans to consolidate the underground resources of GP243PR (referred to as ERPM Extension Area 2 or ERPM Ext 2), with those of GP150MR and GP151MR. The combined underground resources within these three areas justifies the large capital commitment to develop a long term, large-scale mining operation. The Far East Vertical (FEV) shaft and FEV vent shaft on GP151MR will be refurbished and used to access underground workings of GP151MR and GP150MR. An additional twin shaft (includes both access and vent shaft), termed Windmill Shaft, is proposed to be constructed on Portion 5 of the Farm Witpoortje 117 IR to allow access to the underground operations of the Ext 2 area and will include the development of the associated head gear. Ore that is mined below ground will be crushed and mixed with groundwater to form a slurry and will be brought to surface via a hydraulic hoist system and transported via existing pipelines to either the Knights Plant (via the Knight Plant Pipeline) to the north-west of the surface development area or the Ergo Plant (via the Ergo Plant Pipeline) to the north-east of the surface development area. An existing vent shaft on Portion 19 of the Farm Witpoortje 117 IR (Witpoortje Vent Shaft) will also be re-opened and re-equipped for use.

Surface infrastructure associated with the development of Windmill Shaft is to be developed within the proposed surface development area of approximately 20 Ha and for the Witpoortje Vent Shaft within the proposed surface development area of approximately 7 Ha.

Please refer to the map on the final page

Legal process

South Africa's main environmental law is the **National Environmental Management Act, 1998 (NEMA)**. NEMA contains Regulations, which include lists of activities which have been identified as potentially harmful to the environment. These are referred to as "listed activities". Before undertaking any of these activities, a company is required to apply for Environmental Authorisation (EA) for these activities. Depending on the nature of these activities, a *Basic Assessment* (BA) or *Scoping and Environmental Impact Assessment* (EIA) process will be required to support the application for EA.

For the ERPM Mine, a **Scoping and EIA process is required**. The two phases - Scoping and EIA - each have a 30-day public participation period. The relevant listed activities (in terms of the NEMA Regulations of 2014 *as amended*) associated with the project include:

Notice No.	Activity No.	Applies to:
	16	The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100 cubic metres of treated water per day.
	20	Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).
	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 2000 cubic metres but less than 15000 cubic metres.
	28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998.
	30	Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).
Listing Notice 2 (GNR984 <i>as amended</i> by GNR325)	6	The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent
	7	The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods
	15	The clearance of an area of 20 hectares or more of indigenous vegetation.
	17	Any activity including the operation of that activity which

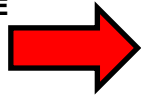
		requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).
	21	Any activity including the operation of that activity associated with the primary processing of a mineral resource including winning, reduction, extraction, classifying, concentrating, crushing, screening and washing but excluding the smelting, beneficiation, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.
Listing Notice 3 (GNR985 <i>as amended by</i> GNR324)	12	The clearance of an area of 300 square metres or more of indigenous vegetation
	15	The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, such land was zoned open space, conservation or had an equivalent zoning, on or after 02 August 2010.

The **Department of Mineral Resources (DMR)** is considered the Competent Authority for this process because the activities occur within a mining site. All of the information gathered during the Scoping and EIA phases and all comments made by the public are provided to the DMR for their consideration. The DMR will then decide whether to grant Environmental Authorisation for the activities to commence.

ERPM Ext 2 also requires a Water Use Licence for water uses in terms of Section 21 of the **National Water Act, 1998**. Project activities that require a WULA - include dewatering, abstraction, dust suppression, discharge and a pollution control dam.

ERPM Ext 1 will apply for a WUL online via the eWULAAS system.

**WE ARE
HERE**



**SCOPING
PHASE**

- Public notified via site notices, media notices and background information documents
- Registration of IAPs.
- Public consultation process 8 March to 8 April 2019
- All comments and concerns sent to DMR

**ENVIRONMENTAL
IMPACT ASSESSMENT
(EIA)**

- Registered IAPs notified of the EIA / EMPr and Closure Plans available for review and comment
- IAPs send comments to Prime Resources.
- All comments included in the final report to be sent to the DMR

**DECISION
MAKING**

- IAPs notified of the decision by the DMR (accept or reject application)
- IAPs informed of Appeals Process

Prime Resources has been appointed as the independent Environmental Assessment Practitioner (EAP) to conduct the regulated environmental processes for the project.

How will the project impact on the environment and the nearby communities?

Specialists have been appointed to undertake baseline and impact assessment studies for the project. The baseline information indicates the current conditions. The impact assessment determines the potential impacts on the baseline conditions. Specialists and EAPs have no vested interest in the project proceeding. They are paid for their scientific service only and sign a Declaration of Independence.

At the Scoping Phase, potential impacts are identified but the significance of these impacts is not yet known as the specialist studies have not been completed. The potential positive and negative impacts of the project are currently being assessed, and include (but are not limited to):

Potential negative impacts	Potential positive impacts
<ul style="list-style-type: none"> • Dust and noise, and associated health impacts • Erosion and compaction of soil • Destruction of fauna / flora habitat and potential proliferation of alien and invasive species • Impacts on the quality and quantity of groundwater • Contamination of soil and loss of agricultural potential • Negative economic impact on agricultural smallholdings in the vicinity of the mine • Damage to structures as a result of blasting • Reduced value of neighbouring properties • Increased traffic and decreased road safety as a result increase in vehicles • Influx of job seekers into the area • Reduced safety and security in the area as a result of in-migration of job-seekers 	<ul style="list-style-type: none"> • Employment opportunities • Skills development • Increased opportunities for SMMEs • Stimulation of growth in the local area

The assessment of potential impacts will be made available during the EIA phase of the project.

Opportunity to participate

The **Scoping Report is available for review** from 8 March to 8 April 2019. The Report will be available on the Prime Resources website (www.resources.co.za), at the Vosloorus, Tsakane, Kwa-Thema, Geluksdal and Brakpan Public Libraries, or provided via email upon request.

All comments regarding the proposed project are welcome. In particular we would like to invite comments or suggestions on:

- **How the project might affect you and your community**
- **Information on any environmental or social features that may have been overlooked**
- **Suggestions to lessen any anticipated environmental or social impacts**
- **Suggestions as to the standard you feel the site should be rehabilitated to**
- **Information about how your land is currently used (e.g. subsistence farming, business, residential) and if you are concerned that this will be impacted by the project**

All comments received during the Scoping Phase will be included in the final Scoping Report to be submitted to the DMR, and within the Comments and Responses Report (CRR) in the EIA.

Register as an Interested and Affected Party (IAP)

If you would like to register as an IAP, please submit your contact details to Prime Resources via SMS (to 066 283 3799) or email (prime@resources.co.za). Please include the subject line "**ERPM**" and indicate your interest if applicable [e.g. resident (please note the suburb)].

Submit comments or concerns

The Scoping Phase public consultation process runs from **8 March to 8 April 2019**. **Please ensure that you submit your comments or concerns to Prime Resources by 8 April 2019.**

- Email (prime@resources.co.za)
- Fax (+27 86 604 2219)
- Telephone (+27 11 447 4888)

