



TURN180
ENVIRONMENTAL CONSULTANTS

REGISTRATION NUMBER: 2018/110720/07

**DRAFT SCOPING REPORT: UNDERTAKING OF MINING
ACTIVITIES INSIDE WATERCOURSES AND OTHER
SENSITIVE AREAS ON ZAND PLAATS 102/5,
VOGELSTRUISPAN 101, VOGELSTRUISPAN 98,
KLIPFONTEIN 99 AND BERGPLAATS 100, KIMBERLEY
DISTRICT, NORTHERN CAPE**

DMR REF: NC30/5/1/2/5/2/147MR

MAY 2019



ROOIPOORT
DEVELOPMENTS

Report prepared by:



EAP: Mr. Louis De Villiers

Address: Suite 221

Private Bag X01

Brandhof

9324

Tel: 072 967 7962

E-mail: louis@turn180.co.za

Abbreviations:

BA	: Basic Assessment
BAR	: Basic Assessment Report
BV / BV Plant	: Bouvestnik Plant
CA	: Competent Authority
DBCM	: De Beers Consolidated Mines
DMR	: Department of Mineral Resources
DMS	: Dense Medium Separator
EA	: Environmental Authorization
EAP	: Environmental Assessment Practitioner
EIA	: Environmental Impact Assessment
EMP	: Environmental Management Plan
EMPr	: Environmental Management Programme report
I&AP	: Interested and Affected Parties
IWUL	: Integrated Water Use License
IWULA	: Integrated Water Use License Application
MR	: Mining Right
MPRDA	: Minerals and Petroleum Resources Development Act (Act 28 of 2002)
MWP	: Mining Works Programme
NEMA	: National Environmental Management Act (Act 107 of 1998)
NEM:WA	: National Environmental Management: Waste Act (Act 59 of 2008)
NHRA	: National Heritage Resources Act (Act 25 of 1999)

NCPHA : Northern Cape Provincial Heritage Agency

NWA : National Water Act (Act 36 of 1998)

PPP : Public Participation Process

RD or Applicant : Rooipoort Developments (Pty) Ltd

SAHRA : South African Heritage Resource Agency

SLP : Social and Labour Plan

S&EIR : Scoping and Environmental Impact Assessment

WULA : Water Use License Application

WUL : Water Use License

EXECUTIVE SUMMARY

Background

RD has an existing MR (i.e. NC 147) which was transferred from DBCM in terms of Section 11 of the MPRDA. The existing mining areas, with an extent of 20 721 hectares, are situated on the farms Zand Plaats 102/5, a Portion of Vogelstruispan 101, a Portion of Vogelstruispan 98, Klipfontein 99 and Bergplaats 100 (“**Study Area**”) located towards the north east of Schmidtsdrift in the Northern Cape. Refer to **Annexure 2** for the Locality Map.

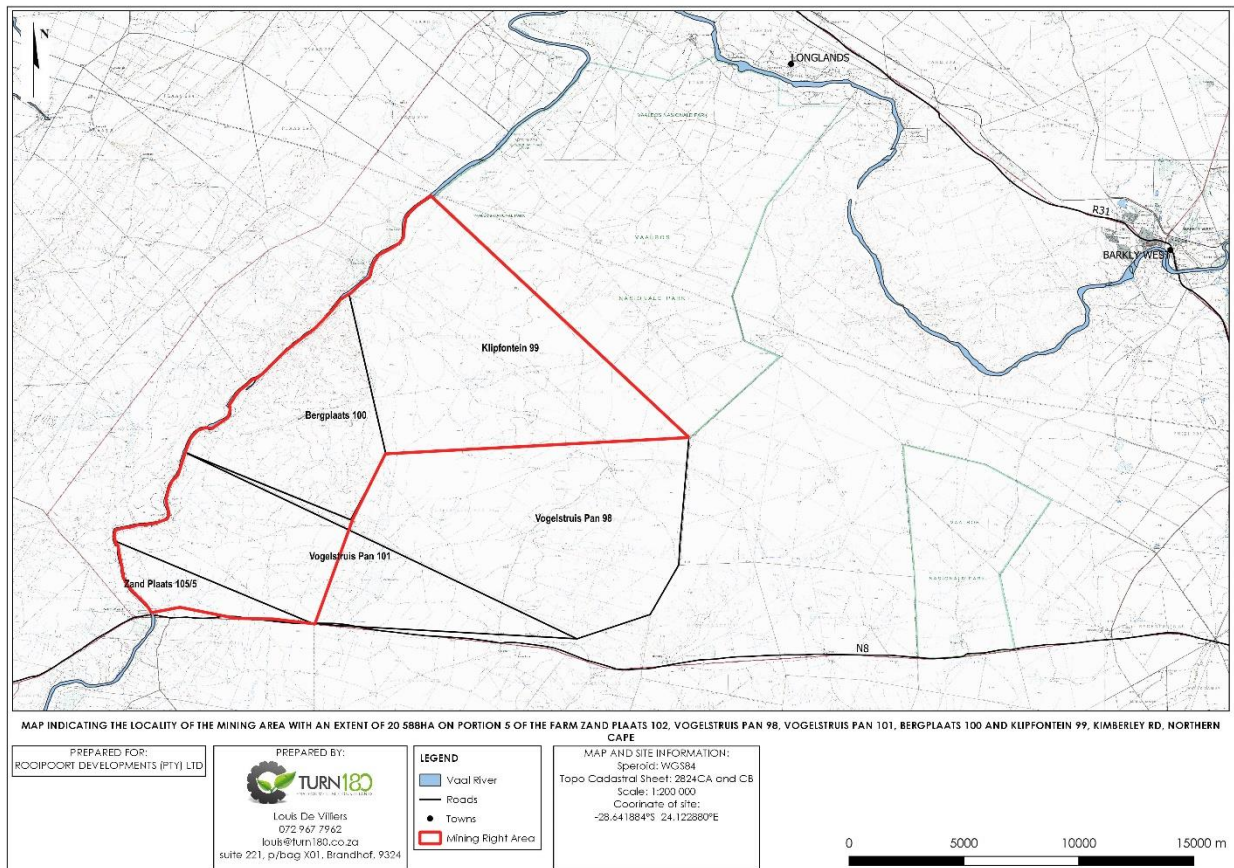


Figure 1: Locality Map of the Rooipoort Developments (Pty) Ltd mining right area

This Study Area is situated within a larger conservation area approximately 42 000 hectares in total, namely the Rooipoort Nature Reserve Pan which extends over 8 farms in total (Revised Environmental Management Programme, 2014).

The diamond bearing gravel is processed through an alluvial diamond processing and recovery plant (Integrated Water and Waste Management Plan, 2018) and the current mining operation entails the following:

- Stripping of topsoil and overburden and stockpiling it separately.
- Excavation of gravel from open voids/pits.

- Separation of gravel through a DMS process and a BV Plant to isolate the diamond bearing gravel.
- The fine gravel suspended in water is discharged to the first excavation where gravel was excavated (“**First Cut**”) and the coarse material is transported back to open voids to rehabilitate them.
- Water is recovered from the First Cut and reused in the processing plant.
- Water is also abstracted from the Vaal River for use in the plant. No chemicals or additives are used in the process.

A WUL was issued by the DWS in terms of Section 21 of the NWA on the farm Zand Plaats 102/5 on 19 November 2015 for:

Section 21(a): The abstraction of water from the Vaal River;

- (i) Section 21(g): The disposal of water containing waste (fine material suspended in water) into the First Cut; and
- (ii) Section 21(e): Dust suppression with water recovered from the First Cut.

As the operation has since relocated to Vogelstruispan 101, Vogelstruispan 98 and Bergplaats 100, and in future will relocate to Klipfontein 99 an additional WULA has been submitted to DWS in June 2017 to authorise the same water uses on the remainder of the study area. This water use license included the following additional water uses:

- Section 21(a): Abstraction of water from the Vaal River on all 5 properties applicable to the Mining Right area.
- Section 21(a): Abstraction of groundwater from two boreholes for domestic use at the plant and the site offices.
- Section 21(b): Storage of water in the First Cut and the process water dam (“**PWD**”).
- Section 21(c) and (i): The establishment of roads /”driveways” through watercourses in the study area.
- Section 21(c) and (i): The undertaking of mining within 100m from watercourses within the mining area.
- Section 21(e): Spraying of water from the PWD on roads for dust suppression.
- Section 21(g): “Disposal” of water containing waste into the First Cut and the PWD.
- Section 21(g): Backfilling of material from the process plant and screens into voids during rehabilitation.

This amended WUL was issued by the DWS on 22 February 2019. Refer to **Annexure 4** attached to this document for copies of the existing authorisations applicable to this application.

Scope of work

RD is applying for EA and an amendment to the existing MR in terms of Section 102 of the MPRDA and for a WUL in terms of Section 21(c) and (i) of the NWA for the undertaking of mining activities inside watercourses, including the Vaal River bordering the Study Area to the west and within the 100m buffer zone from watercourses in the study area. Due to the location it is expected that there are high volumes of diamond bearing gravel within the areas inside the Vaal River and interior watercourses. The mining of these areas will also be conducted in order for RD to sterilise the Study Area in order to return it to its end land use and to ensure that the Study Area will not be disturbed by future mining activities.

Vaal River:

Mining of the areas inside the Vaal River will occur by making diversion channels inside the Vaal River diverting the flow of water in the river and drying the bed and banks of the river. Mining will occur on sections of approximately 1,5 km in length inside the Vaal River and will occur mainly in the dry season (between April and December) when the water level inside the Vaal River is low. Only one diversion channel is to be constructed and operational at any given time to minimise the risk of contamination of the river system.

The diversion channels will be constructed to consist of the following:

- A transitional zone where the natural river channel is diverted towards the new constructed diversion channel,
- The diversion channel with an embankment on the right flank to separate the natural river channel from the diversion channel, and
- A transition zone that allows the flow back to the natural river channel.

It was recommended by the Civil Engineer that the Diversion Channels be constructed to allow for flow of 50m³/s. This was determined by analysing the flows at gauging station C9H024 in the Vaal River. Based on the flow data it was determined that the maximum monthly flood sizes in the Vaal River was experienced during the months of January to March. Although the data indicated that the flow was greater than 50m³/s during December it was recommended that no Diversion Channels will be operated during December breaks. Diversion channels will therefore be constructed and operated during April to November. However, there is still a moderate risk of flooding during April months if the Diversion Channels are constructed to cater for a flow of 50m³/s. It is therefore recommended that weather patterns and current flow be monitored during this month and the risks of flooding be assessed prior to construction during April months. It is advised that the appointed Civil Engineer be consulted prior to construction of each of the diversion channels.

As mentioned above each Diversion Channel will be designed with a length of 1.5km. The berm inside the river downstream of the transition zone and downstream of the diversion channel will be approximately 3.5m in height including the freeboard of 0.8m. The purpose of the berm will be to reduce and /or prevent the risk of sedimentation downstream in the Vaal River and to divert the flow into the diversion channel to prevent contamination. However, this berm might be higher but will never exceed a height of 4.5m. Due to the fluctuating width of the Vaal River over the study area each diversion channel will be designed separately to include the structure width. It is however expected that the entire diversion channel and river bed area will have a width of approximately 50m. Due to the location of the mining activities it is not expected that the mining activities will exceed a depth of 3m.

Mining inside interior watercourses:

The entire study area contains approximately 434 seasonal (non-perennial) streams where mining is proposed. The largest amount of these watercourses is mainly found close to the Vaal River. The mining method to be used during the mining of the interior watercourses will involve the strip-mining method where topsoil and vegetation will be stripped from the surface and stockpiled. Overburden will be removed and stockpiled separately where after the diamond bearing gravel will be excavated from the void and transported to the process plant. Gravels will be returned from the process plant and will be used to fill the void where after overburden and topsoil will be returned to complete rehabilitation. Before replacing the topsoil layer, the area will be sloped to allow watercourses to drain to the Vaal River. The banks of the watercourse will then be revegetated. The main focus will be to prevent ponding and/or erosion from occurring inside the watercourses and the banks of these watercourses. The mining activities will occur in the following order:

- Mining of the catchment outside a 30m buffer from watercourses,
- Rehabilitation of the catchment until a manner of natural vegetation has established,
- Mining of interior watercourses,
- Rehabilitation of the interior watercourses,
- Mining of the banks (i.e. 100m from active channel) of the Vaal River,
- Rehabilitation of Vaal River banks,
- Construction of Diversion Channels and mining inside the Vaal River, and
- Rehabilitation of the Vaal River mining areas and Diversion Channel.

Although the construction of the diversion channels and the excavation of the gravel will occur inside the river and interior watercourses the existing process plant will be used which is located

further than 100m from any watercourse. Activities inside the watercourses will be limited to excavation, loading and hauling and backfilling of material from the process plant. No material storage, toilet facilities, vehicle maintenance and repair, plant or any other structure, infrastructure and/or activities will occur within watercourses apart from construction of diversion channels, excavation and loading and hauling. The existing DMS plant as described below will be used for the processing of gravels.

In addition to the Section 102 application a new EA is applied for to authorise the additional listed activities in terms of the 2014 EIA Regulations as amended in 2017. A S&EIR in terms of the NEMA EIA Regulations, 2014 as amended in 2017 is currently underway. The objectives of the Scoping Report include the identification of potential impacts as well as undertake a PPP with identified I&APs.

TABLE OF CONTENTS

A.	Definitions	2
1.	The methodology applied to conduct scoping,.....	3
1.1	Name the communities as defined in the guideline, or explain why no such community was identified.	3
1.2	State whether or not the Community is also the landowner.	3
1.3	State whether or not the Department of Land Affairs been identified as an interested and affected party.	3
1.4	State specifically whether or not a land claim is involved.....	3
1.5	Name the Traditional Authority identified by the applicant.	3
1.6	List the landowners identified by the applicant. (Traditional and Title Deed owners).....	4
1.7	List the lawful occupiers of the land concerned.	6
1.8	Explain whether or not other persons' (including on adjacent and non-adjacent properties) socio-economic conditions will be directly affected by the proposed prospecting or mining operation and if not, explain why not.	6
1.9	Name the Local Municipality identified by the applicant.	7
1.10	Name the relevant Government Departments, agencies and institutions responsible for the various aspects of the environment, land and infrastructure which may be affected by the proposed project.....	8
1.11	Confirm that evidence that the landowner or lawful occupier of the land in question, and any other interested and affected parties including all those listed above, were notified, and has been appended hereto.....	8
2.	A description of the existing status of the cultural, socio-economic and biophysical environment, as the case may be, prior to the proposed mining operation:	8
2.1	Confirm that the identified and consulted interested and affected parties agree on the description of the existing status of the environment.	9
2.2	Describe the existing status of the cultural environment that may be affected.	10
2.3	Describe the existing status of any heritage environment that may be affected.	10
2.4	Describe the existing status of any current land uses and the socio-economic environment that may be directly affected.....	11
2.5	Describe the existing status of any infrastructure that may be affected.....	12
2.6	Describe the existing status of the biophysical environment that will be affected, including the main aspects such as water resources, flora, fauna, air, soil, topography etc.....	12
2.7	Provide any relevant additional information.	19

3.	Identification of the anticipated environmental, social or cultural impacts, including the cumulative impacts, where applicable.	20
3.1	Provide a description of the proposed project including a map showing the spatial locality of infrastructure, extraction area, and any associated activities.	20
3.2	Describe any listed activities (in terms of the NEMA EIA regulations) which will be occurring within the proposed project.	22
3.3	Specifically confirm that the community and identified interested and affected parties have been consulted and that they agree that the potential impacts identified include those identified by them.	1
3.4	Provide a list and description of potential impacts identified on the cultural environment.	1
4.	Land use or development alternatives, alternative means of carrying out the proposed operation, and the consequences of not proceeding with the proposed operation.	5
4.1	Provide a list of and describe any alternative land uses that exist on the property or on adjacent or non-adjacent properties that may be affected by the proposed mining operation.	5
4.2	Provide a list of and describe any land developments identified by the community or interested and affected parties that are in progress and which may be affected by the proposed mining operation.	6
4.3	Provide a list of and describe any proposals made in the consultation process to adjust the operational plans of the mine to accommodate the needs of the community, landowners and interested and affected parties.	6
4.4	Provide information in relation to the consequences of not proceeding with proposed operation.	6
4.5	Provide a description of the most appropriate procedure to plan and develop the proposed mining operation. The applicant must: -	7
5.	A description of the process of engagement of identified interested and affected parties, including their views and concerns.	8
5.1	Provide a description of the information provided to the community, landowners, and interested and affected parties to inform them in sufficient detail of what the prospecting or mining operation will entail on the land in order for them to assess what impact the prospecting will have on them or on the use of their land.	8
5.2	Provide a list of which of the identified communities, landowners, lawful occupiers, and other interested and affected parties were in fact consulted.	8
5.3	Provide a list of their views in regard to the existing cultural, socio-economic or biophysical environment, as the case may be.	8

5.4	Provide a list of their views raised on how their existing cultural, socio-economic or biophysical environmental potentially will be impacted on by the proposed prospecting or mining operation.....	9
5.5	Provide a list of any other concerns raised by the aforesaid parties.	9
5.6	Provide the applicable minutes and records of the consultations.....	10
5.7	Provide information with regard to any objections received.	10
6.	Describe the nature and extent of further investigations required in the environmental impact assessment report, including any specialist reports that may be required.	10
6.1	Processes during the EIA Phase	11
B.	IDENTIFICATION OF THE REPORT	1

LIST OF ANNEXURES

- Annexure 1 – EAP CV and Experience
- Annexure 2 – Maps and Plans
- Annexure 3 – Public Participation Process
- Annexure 4 – Existing Permits and Licenses
- Annexure 5 – Additional Information and Studies



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: ROOIPOORT DEVELOPMENTS (PTY) LTD

REFERENCE NUMBER: NC30/5/1/2/5/2/147MR

SCOPING REPORT

SUBMITTED WITH DUE REGARD TO

**CONSULTATION WITH COMMUNITIES AND
INTERESTED AND AFFECTED PARTIES**

AS REQUIRED IN TERMS OF REGULATION 49 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT (ACT 28 OF 2002), AND IN ACCORDANCE WITH THE STANDARD DIRECTIVE FOR THE COMPILATION THEREOF AS PUBLISHED ON THE OFFICIAL WEBSITE OF THE DEPARTMENT OF MINERAL RESOURCES.

A. Definitions

‘consultation’ means a two way communication process between the applicant and the community or interested and affected party wherein the former is seeking, listening to, and considering the latter’s response, which allows openness in the decision making process.

‘community’ means a group of historically disadvantaged persons with interest or rights in a particular area of land on which the members have or exercise communal rights in terms of an agreement, custom or law: Provided that, where as a consequence of the provisions of the Act negotiations or consultations with the community are required, the community shall include the members or part of the community, directly affected by prospecting or mining, on land occupied by such members or part of the community.

‘Interested and affected parties’ include, but are not limited to; -

- (i) Host Communities
- (ii) Landowners (Traditional and Title Deed owners)
- (iii) Traditional Authority
- (iv) Land Claimants
- (v) Lawful land occupier
- (vi) The Department of Land Affairs
- (vii) Any other person (including on adjacent and non-adjacent properties) whose socio-economic conditions may be directly affected by the proposed prospecting or mining operation.
- (viii) The Local Municipality
- (ix) The relevant Government Departments, agencies and institutions responsible for the various aspects of the environment and for infrastructure which may be affected by the proposed project.

STANDARD DIRECTIVE

All applicants for, mining rights, in terms of the provisions of Section 29 (a) and in terms of Regulation 49 (4) of the Mineral and Petroleum Resources Development Act, directed to submit report strictly in accordance with the following format and subject headings, and as informed by the guideline posted on the Departments Official Website, within 30 days of notification by the Regional Manager of the acceptance of such application.

1. The methodology applied to conduct scoping,

- 1.1 Name the communities as defined in the guideline or explain why no such community was identified.

The communities identified by RD during the consultation process include the following:

- **Schmidtsdrift Communal Property Association**

- 1.2 State whether or not the Community is also the landowner.

The identified communities are not the landowner.

- 1.3 State whether or not the Department of Land Affairs been identified as an interested and affected party.

The Department of Rural Development and Land Reform has been notified and consulted for any land claims applicable to the study area. Refer to Annexure 3 attached to this document for proof of consultation with this department.

- 1.4 State specifically whether or not a land claim is involved.

A land claim on Rooipoort Nature Reserve has been registered by the Rooipoort Community in 2005 (Social Impact Assessment, 2007). The Department of Rural Development and Land Reform indicated in a letter dated 5 August 2012 that the land claim does not satisfy requirements as set out in Section 2 and 11 of the Land Rights Act 22 of 1994 (refer to Annexure 5 for this letter). The DRLR was notified of the proposed project and further communication will be included in all future reports.

A letter was received from the Rooipoort Community Development Trust wherein they formally objected the application for the Water Use License as they claimed to have a legitimate land claim pending since 23 December 1998. Mr. Vernon Mostert, the chairman of the Rooipoort Community Development Trust was registered as an I&AP.

A letter was received on 21 May 2019 by the Northern Cape Department of Agriculture and Rural Development (Commission on Restitution of Land Rights) indicating land claims on the farm Zand Plaats 102/5, Vogelstruispan 101 and Vogelstruispan 98. It is unclear who made the land claims. This matter will be further investigated through the Scoping and EIA phase.

- 1.5 Name the Traditional Authority identified by the applicant.

No Traditional Authority has been identified that will potentially be affected by the proposed amendment of the existing mining operation.

1.6 List the landowners identified by the applicant. (Traditional and Title Deed owners)

No Traditional landowner has been identified. Refer to Table 1 below for a list of landowners (Title Deed owners) that have been identified during the consultation process.

Table 1: Identified landowners and their interest

Adre Els Safaries CC (Adjacent Landowner)	Zand Plaats 102/3 Zand Plaats 102/14	083 451 1007 (C) Email: adreels@yahoo.com
Schmidtsdrift Communal Property Association (Contact – Mr. Ezekiel Molelekwa) (Adjacent Landowner)	Schmidtsdrift 248/RE	082 427 0008 (C) Schmidtsdrift CPA P.O. Box 688 Kimberley 8300
Mr. Adriaan Jacobus Steenkamp (Adjacent Landowner)	Doornlaagte 97/RE	Email: boeta.steenkamp@yahoo.com
Grootdam Trust (Adjacent Landowner)	Ferny Hoek Flat 108/1	Not reached
Corne Anderson Piet Oosthuizen (De Beers consolidated mines Pty Ltd) (Adjacent Landowner)	Grasrandt 109/RE Randt Plaats 96/RE	Email: Corne.Anderson@debeersgroup.com Email: Piet.Oosthuizen@debeersgroup.com
Koos Van Staden and Johan van Staden	Mosesberg 6/3	Koos: 082 326 7657 (C) koos@douglas.co.za Johan: 081 013 3560 (C)

Paalsewerf Boerdery CC (Adjacent Landowner).		cjvanstaden1@gmail.com
Regal Royal Development Pty Ltd (Adjacent Landowner)	Mosesberg 6/14 - 18	Not reached
Mr. William Kenneth Shaw (Adjacent Landowner)	Mosesberg 6/19	084 561 1939 (C) PO Box 486 Kimberley 8300
Mr. Duncan Clifford Shaw (Adjacent Landowner)	Mosesberg 6/21	072 463 5604 (C) 7 Buster Bowden Rhodesdene 8301 PO Box 1100 Kimberley 8300
Danie Kuhn (Adjacent Landowner)	Zand Plaats 102/15	082 524 8567 (C) Email: ddk@wam.co.za
Sol Plaatjies Local Municipality (Adjacent Landowner)	Drooge Veldt 292/RE	Mr. G. Akharwaray (Municipal Manager) Tel: 053 830 6100 Email: gakharwaray@solplaatje.org.za Private Bag X5030 Sol Plaatje Drive Kimberley 8300
Bosman Estate	Farm 293/2 Farm 293/RE	Not reached
Adjacent landowner		charleskros@vodamail.co.za
Adjacent landowner		hsadup@lantic.net

Adjacent landowner		Deon.joubert@sanparks.org nico@africantrophysafaris.com koketso.kotsoe@sanparks.co.za
Rooipoort Community Development Trust	Land Claim	Vernon Mostert (Chairman) Email: Vernon@xcelentproperties.co.za P.O. Box 110025 Hadison Park Kimberley 8306
Rooipoort Trust (Mr. Richard Hoogstander)	Land Claim	073 210 4644 (Cell) rooipoorttrust@webmail.co.za
Romance (Pty) Ltd Mr. L. Kock	Farm Harrisdale 2/226	082 820 3393 (Cell) 053 531 9701 (Fax) louis@wildeklawer.com

1.7 List the lawful occupiers of the land concerned.

RD is the holder of the MR and therefore also the lawful occupiers of the following farms:

- **Zand Plaats 102/5,**
- **Vogelstruispan 101,**
- **Vogelstruispan 98,**
- **Bergplaats 100, and**
- **Klipfontein 99**

DBCM is the landowner of the above listed properties. This land also forms part of the Rooipoort Nature Reserve used for game farming and tourism by DBCM.

1.8 Explain whether or not other persons' (including on adjacent and non-adjacent properties) socio-economic conditions will be directly affected by the proposed prospecting or mining operation and if not, explain why not.

RD has an existing operation and is mining on the study area under an existing MR. This MR was initially granted to DBCM in terms of Section 23 of the MPRDA after which it was transferred to RD in terms of Section 11 of the MPRDA.

Having commenced operation in 2011, the projected life of mine for Rooipoort Mine at that time was 10 years (Amended SLP, September 2013). An application for an amendment of the existing MR was made to include mining of potential high-grade diamond bearing gravel within 100m from a watercourse (including the riparian zones and watercourses) that were previously excluded from the MWP, although it falls within the existing MR area. Should the amendment be considered for approval, the life of mine would possibly be extended which is expected to have a direct positive influence on the socio-economic conditions of the employees of the mine and also an indirect positive influence on the economy of the local communities.

The current mining operation co-exists with the Rooipoort Nature Reserve within which it is situated. This reserve is a commercially-operated game farm providing job opportunities to the local communities. The natural areas outside the current operational areas are conserved and managed as part of the nature reserve, although entrance for the public and tourists are not permissible within the MR area. Concurrent rehabilitation is implemented throughout the operation to limit potential environmental impacts and the main objective is to have the reserve declared a Protected Area after mining and also to promote tourism.

The land use of the area surrounding the study area includes livestock, especially game farming as well as extensive diamond prospecting and mining operations to the north and south along the Vaal River, while the area to the south (inland of the Vaal River) and east is dominated by game farming and commercial hunting (Revised Environmental Management Programme, 2014). As the amendment application of the existing MR will not result in the extension of the boundaries of the existing mining right, the proposed project is not expected to influence the socio-economic status in respect of the current land use of the surrounding area.

The objectives of RD in terms of the Social and Economic aspects are to enhance benefits through job creation and economic opportunities within the local municipal area, as well as minimise negative socio-economic impacts for local residents and businesses through appropriate mitigation.

1.9 Name the Local Municipality identified by the applicant.

Regional setting:

Frances Baard District Municipality

Sol Plaatjie Local Municipality

1.10 Name the relevant Government Departments, agencies and institutions responsible for the various aspects of the environment, land and infrastructure which may be affected by the proposed project.

The following stakeholders have been identified and consulted during the Scoping Phase:

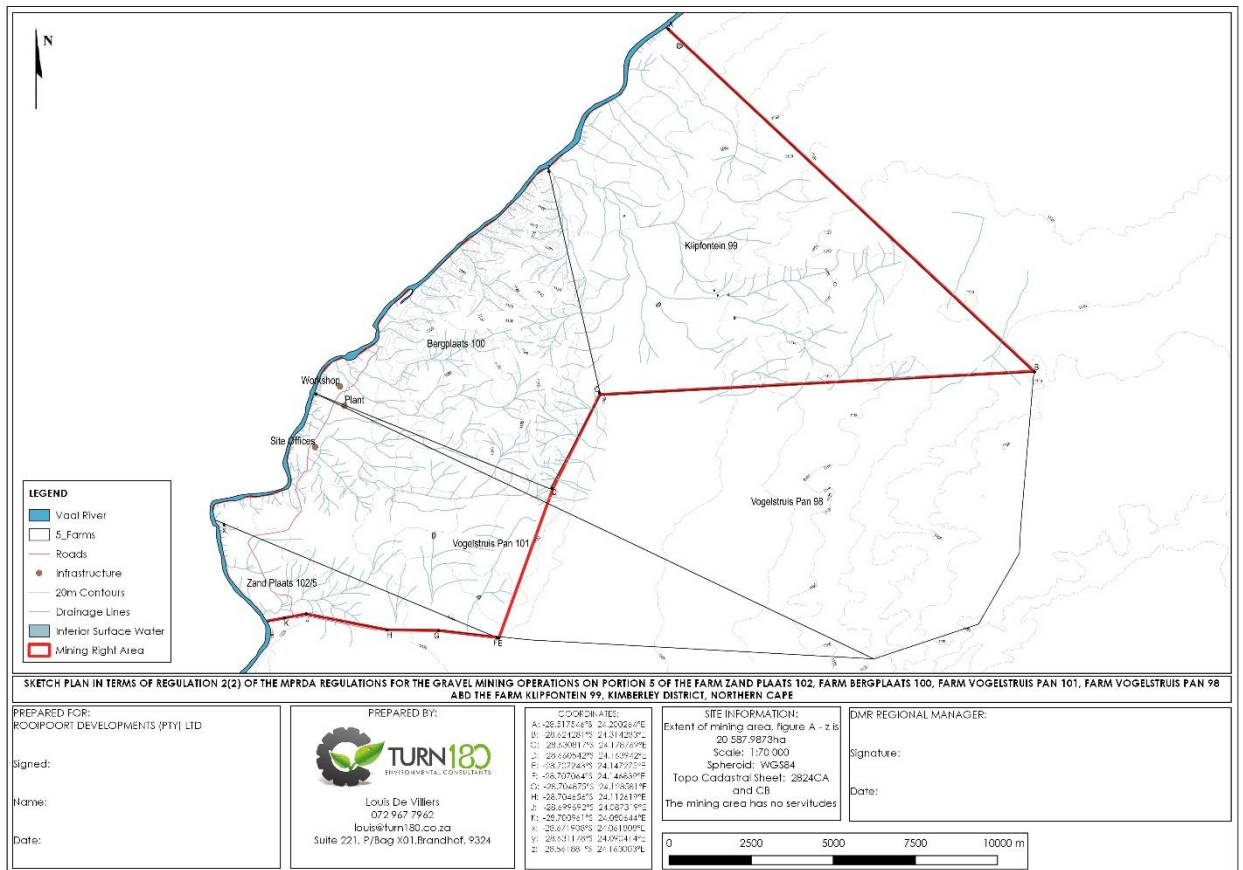
- **Department Mineral Resources**
- **Department of Environment and Nature Conservation**
- **Department Agriculture, Forestry and Fisheries**
- **Department Water and Sanitation**
- **South African Heritage Resources Agency**
- **Northern Cape Provincial Heritage Agency**
- **Department of Rural Development and Land Reform**
- **Frances Baard District Municipality**
- **Sol Plaatjie Local Municipality**

1.11 Confirm that evidence that the landowner or lawful occupier of the land in question, and any other interested and affected parties including all those listed above, were notified, and has been appended hereto.

Refer to Annexure 3 attached hereto for the list of potential identified I&AP together with proof that they were notified of the proposed operation and provided with the opportunity to comment.

2. A description of the existing status of the cultural, socio-economic and biophysical environment, as the case may be, prior to the proposed mining operation:

As previously indicated, Rooipoort Mine is an existing mining operation and the study area applicable to the amendment application comprises of the 5 farms applicable to the existing Mining Right of Rooipoort Mine, namely Zand Plaats 102/5, Vogelstruispan 101, Vogelstruispan 98, Bergplaats 100 and Klipfontein 99. Refer to the map attached in Annexure 2 for the regional setting of the study area.



The status of the cultural, socio-economic and biophysical environment of the study area is based on available information and is described in the sections below.

2.1 Confirm that the identified and consulted interested and affected parties agree on the description of the existing status of the environment.

The I&AP identified were consulted during the Scoping Phase. The Public Participation Process to date included the following:

- **Advertisement in 2 local newspapers (i.e the Diamond Field Advertiser and the Volksblad)**
- **Onsite notices at Rooipoort Mine placed at the entrance from the N8, the main entrance gate of the mine and on site.**
- **Written notifications together with a Background Information Document (BID) to identified stakeholders and I&APs**
- **Meetings with the Competent Authorities (i.e. DWS and DMR).**
- **Distribution of the Draft Scoping Report to registered parties and stakeholders for comment**

Comments have been received by the Department of Agriculture, Forestry and Fisheries relating to the biophysical environment. Please refer to their comments in Annexure 3 and Section 5.3 of this report.

2.2 Describe the existing status of the cultural environment that may be affected.

According to the Social Impact Assessment (SIA), 2007, a number of remains of human settlements are located within Rooipoort Nature Reserve. Burial grounds within or close to operational areas at M1/L2, Diamand Koppie and M6 were recorded during the SIA. Due to the lack of clear records of the family histories, deaths and burials it was difficult to identify and date graves. The Rooipoort Community claims to be descendants of the people that previously occupied the identified settlements. The community's concern was that disturbance to the graves due to mining activities would impact on their culture and historical association with the area. Indications are that the graves are older than 60 years and some may be older than 100 years (Social Impact Assessment, 2007). Also refer to Section 2.3 below.

The current policy of Rooipoort Mine is to exclude the burial grounds from the mining area. The policy will also be implemented during the proposed mining of the riparian zones and watercourses applicable to this amendment application. A detailed working relationship with the McGregor Museum Cultural Resources Management Unit is in place and assisted fieldwork programmes are being implemented within the Mining Right area.

2.3 Describe the existing status of any heritage environment that may be affected.

As mentioned previously, the existing mining operational areas at Rooipoort Mine include Diamand Koppie, M5, M6 and L2 situated on the farms Zandplaats 102/5, Vogelstruispan 101, Vogelstruispan 98, Klipfontein 99 and Bergplaats 100. A number of recorded sites (as defined and protected by the National Heritage Resources Act (NHRA), 1999 (Act 25 of 1999)), and recorded findspots (indicative of a general presence, but with little or no heritage value in terms of formal protection) have been identified during a Phase 1 surface survey and are evidence of a rich Historic and Stone Age presence over areas of the study area (Cultural Resources Management Impact Assessment, 2005). Surface occurrences vary in density and also in size. In some areas sub-surface components to the sites are also expected, but the depth is unknown.

Historic findspots displaying surface pot iron, metal, porcelain, earthenware and ceramic were found in development areas L2/M1, M5 and M6. The Historic

Sites located in development area M6 may relate to colonial or indigenous Historic occupation of the property and the structures probably predate 60 years and are therefore formally protected (Cultural Resources Management Impact Assessment, 2005).

A number of findspots and sites from the Later Stone Age (LSA) have been recorded in development areas L2/M1, M5 and M6. This is generally associated with the riverfront and is inferred to be of secondary nature. A number of LSA sites have also been identified outside the current operational areas. In addition to this, sites from the Middle Stone Age (MSA) have been recorded further away from the riverfront in the development areas of M5 and M6, as well as outside the current operational areas. According to the Cultural Resources Management Impact Assessment, 2005, these sites indicate a wide use of the landscape during LSA as well as MSA times.

A number of Earlier Stone Age (ESA) sites have been recorded within the development areas of M5 and M6 at Rooipoort Mine. These sites are associated with a rich flake and blade component which is characteristic of MSA technology (Cultural Resources Management Impact Assessment, 2005).

As a result of the limitation to the coverage of the initial Heritage studies a specialist will be appointed to conduct a study over the entire footprint of the Mining Right area as the intention of the application is to allow the applicant to mine any area of the Mining Right footprint.

- 2.4 Describe the existing status of any current land uses and the socio-economic environment that may be directly affected.

Rooipoort Mine is an existing operation situated within the boundaries of Rooipoort Nature Reserve. Cognisance is given to the regular functions of the reserve during all the phases of the mining operation. The current land use of the study area is agriculture and mining, both playing a crucial role in employment opportunities and in the economy of the surrounding region.

The land use of the area surrounding the study area includes stock farming as well as extensive diamond prospecting and mining operations to the north and west, while the area to the south and east is dominated by game farming and commercial hunting (Revised Environmental Management Programme, 2014). As the amendment application of the existing Mining Right will not result in the extension of its mining right area boundaries, the proposed project is not expected to influence the current land use of the surrounding area.

2.5 Describe the existing status of any infrastructure that may be affected.

Existing mine infrastructure within the study area include the following:

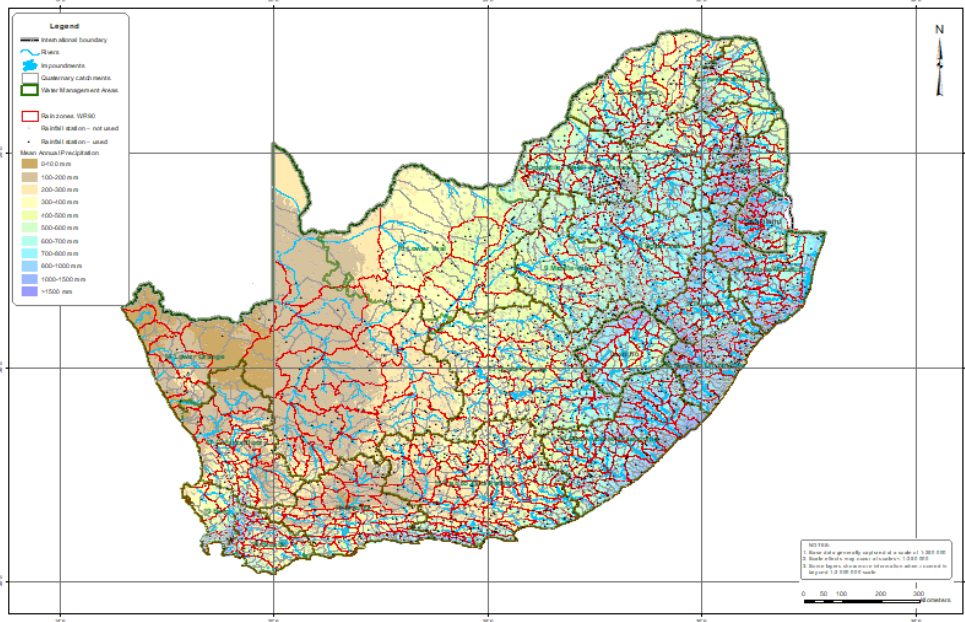
- **Access and service roads:** The existing mining operation is reached via a private gravel road extending from the N8.
- **Haul roads:** An internal network of gravel roads connects the operational areas, plant and site offices. These roads are maintained by Rooipoort Mine.
- **Site offices (Temporary facilities)**
- **Waste management facilities:** septic tanks at the site offices and chemical toilets at the plant and excavation areas.
- **On-site workshop and store**
- **Off-site workshop and store**
- **Off-site contractor camp / Staff accommodation facilities**
- **Water pipelines**
- **PWD:** A plastic lined dam with a capacity of 3 200m³ used to contain water pumped from the Vaal River and water recovered from the First Cut for use in the Process Plant.
- **First Cut:** This unlined dam is formed from the first excavation from which gravel was excavated. The First Cut is separated into 2 sections by a wall/screen made from oversized material. Fine material is allowed to settle in the first part and water seeps through the screen into the second part from where the water is recovered and reused in the process plant.
- **Processing Plant:** Two DMS units and the BV where gravel is screened and processed.

2.6 Describe the existing status of the biophysical environment that will be affected, including the main aspects such as water resources, flora, fauna, air, soil, topography etc.

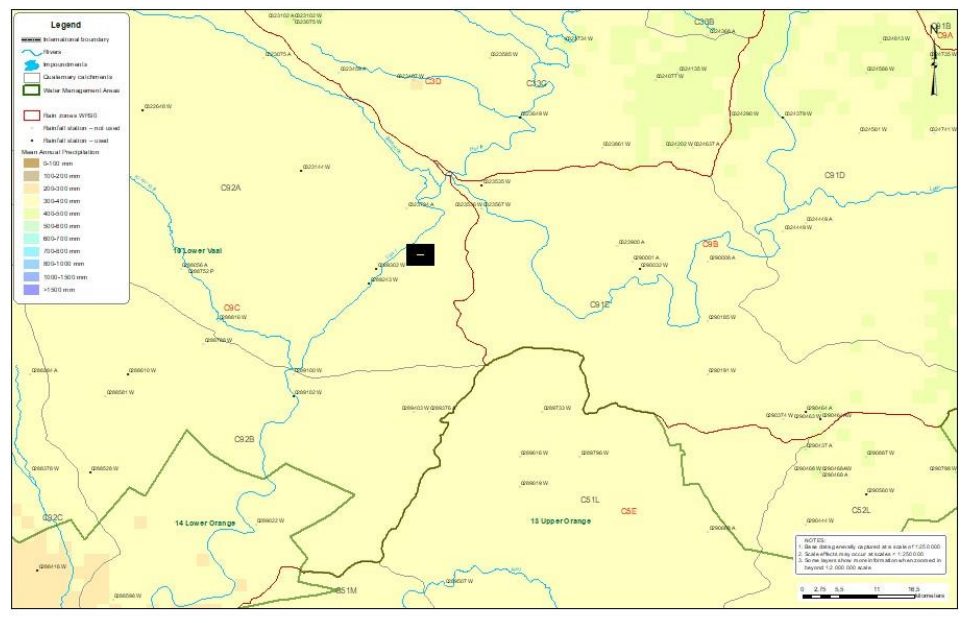
General climate

The site is located in rainfall zone C9C which is a low rainfall, semi-arid region with an average rainfall of between 300 - 400 mm per annum which occurs largely as thunderstorms between October and March. Rooipoort is located on the border between evaporation zones 7A and 9B with a mean annual evaporation between 2 200 to 2 600 mm/annum (Water Resource Council of South Africa, 2005). The surface water runoff in the area is therefore typically restricted to very high rainfall events.

The average storm water runoff volumes are thus relative low, but it would be necessary to manage storm water during high rainfall events. The runoff in the area is between 5 – 10 mm/annum. However, this is probably due to the low rainfall.



Water Research Commission **Figure 1: Rainfall** Water Resources of South Africa 2005 Date: April 2005



Water Research Commission **Figure 1: Rainfall** Water Resources of South Africa 2005 Date: April 2005

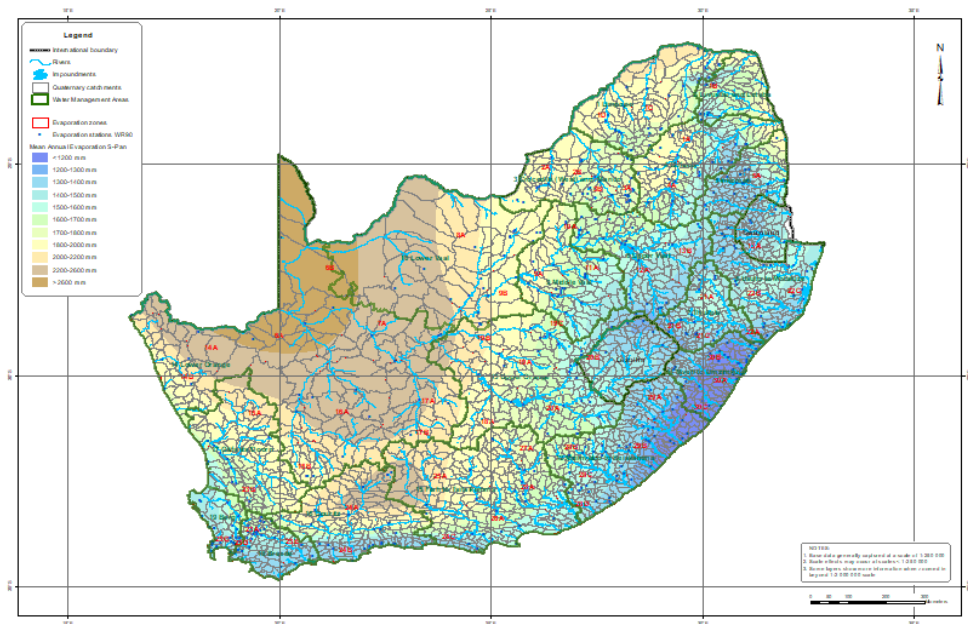


Figure 2a : Evaporation (WR90 S-pan)

Water Resources of South Africa 2005

Date: April 2008

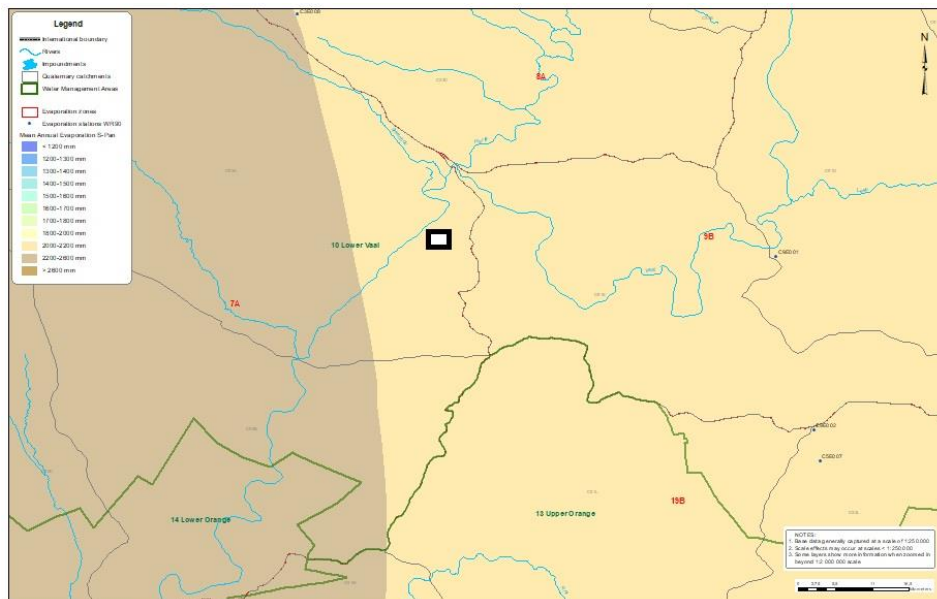
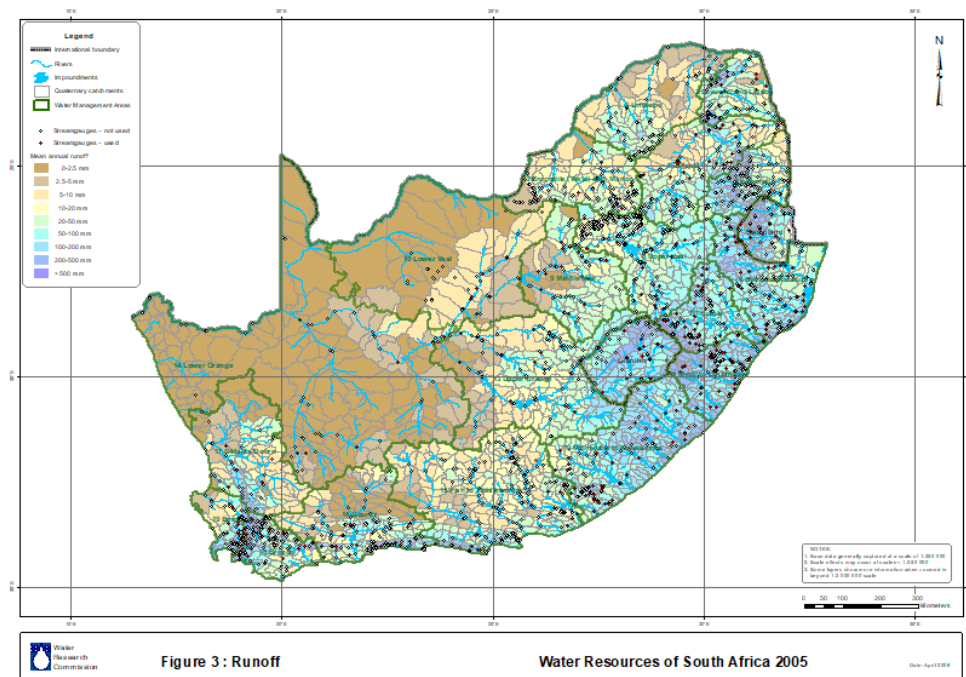


Figure 2a : Evaporation (WR90 S-pan)

Water Resources of South Africa 2005

Date: April 2008



Topography

The topography of the entire site is low with few steep slopes and is classified as a plain that slopes towards the Vaal River in the west. However, over the entire mining right area there are several low-lying hills where there are some slopes with a steeper gradient. The area is located between 1130 and 1011 m above sea level. The area was used for game farming which did not alter the topography. However, recent mining activities have had an impact on the topography of the areas where mining activities took place.

There are numerous waterways at Rooipoort which drains into the Vaal River. Closer to the river in the flood plain area, drainage features have developed where storm water is collected and discharges along defined waterways into the Vaal River. Due to the low rainfall, these waterways are mainly seasonal.

Geology and soil

The oldest and predominant rock type on the Rooipoort Nature Reserve is the Archaean (2.7 Ga) Andesitic lavas of the Allanridge Formation, Ventersdorp Supergroup. Quartzites and slates of the Paleo-proterozoic Vryburg Formation, Griqualand West Sequence occur to a lesser extent and rest unconformably on the Ventersdorp lavas. Also resting unconformably on the Ventersdorp lavas are Carboniferous Dwyka Group glacial deposits of the Karoo Supergroup, however, these are preserved mostly in the vicinity of the Vaal River and in

adjacent pre- Karoo valleys. Many of these lithologies are covered by recent red Hutton sands.

Cretaceous kimberlites have intruded the Ventersdorp volcanics and Karoo rock types on Rooipoort, but from previous exploration results are not deemed to be of any economic value.

Cainozoic gravels of the Paleo-Vaal and its related tributaries also occur on Rooipoort. These gravel deposits, laid down in a series of terraces, contain diamonds (MWP, J. Kilham, 2014).

Fauna and flora

The study area is located within the Savanna Biome and the vegetation types occurring in the study area consists of Highveld Salt Pans (AZi 10), the Schmidtsdrift Thornveld (SVk 6) on the west (including the western parts of Vogelstruispan 101, Vogelstruispan 98, Klipfontein 99 and the whole of Zand Plaats 102/5 and Bergplaats 100), the Kimberley Thornveld (SVk 4) on the east comprising of the remainder of the farms (IWULA, June 2017). According to the National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004), these vegetation types are considered to be of Least Concern (LC) and it is not currently subjected to any pronounced transformations or development measures. Refer to the Wetland Assessment, 2017 attached hereto in Annexure 5 for detailed information regarding the vegetation and species occurring within the study area. A summary of the assessment is included in this section of this report.

The study area consists of natural vegetation of which the ecological function is largely intact. As already indicated, portions of the study area have been subjected to mining activities, but concurrent rehabilitation of the disturbed areas is likely to restore ecological functions to some degree (Wetland Assessment, 2017). Although no extensive infestation by exotic weeds and invader plants occur in the study area, the disturbance from existing mining activities promote the establishment of pioneer weeds and exotics. Several exotic weeds are also found along the banks of the Vaal River as this system is subjected to a natural disturbance regime as a result of annual flooding.

The study area contains a well developed tree layer that may be quite dense in some areas, while low or no tree cover exists in the north eastern portion of the study area where grassland dominates. Small portions of dwarf karroid shrubs are also present throughout the study area. Vegetation along the streams area

readily identified as riparian vegetation and tree species along these streams are characteristic of watercourses in these arid areas. These species include *Vachellia karroo* (Sweetthorn), *Ziziphus mucronata* (Buffalo Thorn), *Searsia lancea* (Karree) and *Diospyros lycioides* (Bluebush) (Wetland Assessment, 2017). The rare living stone plant, *Lithops sp.* may occur in the area and would be a species of conservation importance.

Habitat diversity within the mining area is considered to be moderate. The different vegetation communities within the study area and varied habitats associated with the Vaal River and its floodplain contribute to species diversity. The natural fountain in the northern portion of the study area is considered a unique habitat and contributes to both habitat and species diversity (Wetland Assessment, 2017). It also performs a unique ecosystem function. The riparian zone along the Vaal River plays an important role as habitat for animals as there is food and water. According to the Wetland Assessment, 2017, there is a likelihood that animal species of conservational importance may occur in the study area.

The Vaal River and its associated floodplains are considered a fifth order watercourse partly due to the river being a large lowland river (Wetland Assessment, 2017). Large containment dams in the Vaal River upstream of the study area alter the flooding regime and the ecological functioning and habitat of the river and floodplains. According to an Index of Habitat Integrity (IHI) conducted within the study area along the Vaal River the Instream IHI of the river is rated as category C: Moderately Modified; and a Riparian IHI of category C/D: Moderately to Largely Modified. The EI&S of the floodplains associated with the Vaal River has been rated to be Moderate: Floodplains that are considered to be ecologically important and sensitive on a provincial or local scale. The biodiversity of these floodplains are not usually sensitive to flow and habitat modifications and play a small role in moderating the quantity and quality of water of major rivers.

Water resources

The study area is located in quaternary catchments C92B and C92B of the Lower Vaal Water Management Area. There are a number of non-perennial watercourses, drainage lines and pans located on the study area while the Vaal River forms the western boundary of all 5 farms to which this application is applicable. It was determined using GIS and the 1:50 000 Topographical Maps

of South Africa that the study area contains approximately 434 non-perennial drainage lines.

According to the Wetland Assessment, 2017, the streams and drainage lines within the study area are considered to be largely natural with limited impacts on them. Currently these watercourses are free of any artificial impoundments except dirt access roads in some areas which may lead to some flow retardation. The upper reaches of the streams and drainage lines do not contain any wetland conditions due to the arid climate and limited runoff. In the event of heavy rainfall, these watercourses are characterised by flash flooding resulting in relatively large volumes of water in a relatively short period through these systems which is not conducive to wetland conditions. The lower gradient in the lower reaches of some of these watercourses flowing into the Vaal River do contain wetland conditions as a result of an increase in water volumes and the prolonged soil saturation (Wetland Assessment, 2017).

A natural pan, considered to be a depression wetland, is situated within the study area. The pan has a diameter of approximately 120m and several riparian trees occur along the border thereof. It is unlikely that the pan contains wetland species, although this could not have been identified due to a drought during the time of the Wetland Assessment during November 2016.

A natural, perennial fountain associated with quartzite outcrops occurs within the study area. It is considered a unique system of exceptionally high conservation value and wetland species occur at the site due to its perennial nature (Wetland Assessment, 2017).

The groundwater table of the study area is relatively deep and the general geology and relief of the area is not conducive for the formation of any fountains or for the recharge of surface water features from groundwater. Based on the low MAR in the area, recharge to the groundwater aquifers is very low and estimated to be 3% (Storm Water Management Plan, 2018).

According to the Storm Water Management Plan, 2018, storm water in the area occurs as sheet flow that converges in more definable water-ways closer to the Vaal River.

Rooipoort Mine currently has a Water Use License to abstract 248 000 m³/annum surface water from the Vaal River for use in the Process Plant. Water from the First Cut is recovered and pumped to the PWD for re-use in the Process Plant and for dust suppression. This recovery together with the introduction of

a BV Plant has reduced the volume of water required from the Vaal River significantly.

Water for domestic use at the plant and site offices are extracted from the borehole at the site office on the farm Vogelstruispan 101.

Water quality and quantity

Rooipoort Mine has an existing water monitoring programme (Refer to Annexure 5) being implemented on the mine. This programme includes water quality monitoring at: (i) The boreholes used for domestic use; (ii) Vaal river up- and downstream of mining operations; and (iii) First Cut. Refer to the results contained in the Groundwater Monitoring Programme (GWMP, 2018) in Annexure 5.

According to the GWMP, 2018 the results of the chemical testing of the Vaal River as well as for the First Cut indicated that all units tested for have been found to fall within the recommended levels for drinking water. However, due to industrial activities upstream in the Vaal River microorganisms were identified in the water in the Vaal River. These includes e.coli. Water from the Vaal River is therefore not suitable for human consumption.

Air quality

The main activities at the existing mining operation influencing the air quality are excavation and loading of gravel at operational areas and the screening of gravel at the Plant. The impact is mostly limited to the immediate area. A dust fallout monitoring programme is implemented, and dust fallout is measured every 30 days. Due to the area not being known for heavy industrial activities and plants the ambient air quality is good. However, diamond mining in the area results in dust emissions into the atmosphere.

2.7 Provide any relevant additional information.

Information available at this time is limited to the current operation. The amendment application to include mining activities within 100m of watercourses as part of the existing MR is currently in the Scoping Phase. As part of this phase, the feasibility of the project in terms of the socio-economics and environmental aspects will be considered by identifying the potential impacts of the inclusion of mining of all watercourses within the study area. By identifying the potential impacts and risks, further investigation will be undertaken during the EIA Phase to determine the significance of these impacts

which will again inform the specific operational target areas, “no-go” areas as well as management measures and alternatives (if any) to be implemented during all phases of the proposed operation.

3. Identification of the anticipated environmental, social or cultural impacts, including the cumulative impacts, where applicable.

3.1 Provide a description of the proposed project including a map showing the spatial locality of infrastructure, extraction area, and any associated activities.

The proposed project entails an application for amendment of the existing MR by including mining within 100m of the watercourses within the study area. Mining within the 100m buffer area and watercourses were previously excluded from the MWP. It is however expected that these areas potentially have high grade alluvial diamond deposits which may be feasible for mining.

Mining over most of these areas will be conducted by means of the current open cast alluvial mining method. This entails the strip mining method with excavators, front-end loaders and dumper trucks. The areas to be mined will be surveyed and a survey base line will be established across the working area of each resource. The size of the strips within the riparian zones and within watercourses will be limited to minimise potential environmental impacts.

One block at a time will be opened for each deposit, but three blocks will be open at any given time. One block will be stripped from overburden, gravel will be removed from a second block and a third block will be backfilled and rehabilitated. Any topsoil from these blocks will be removed and stockpiled on the high ground side of the excavation. Overburden will also be removed and kept separate from the topsoil.

This mining method will also apply within dry non-perennial watercourses within the study area, but mining of the areas inside the Vaal River will occur by making diversion channels inside the Vaal River diverting the flow of water in the river and drying the bed and banks of the river. Mining will occur on sections of approximately 1,5 km in length inside the Vaal River and will occur mainly in the dry season (between April and December) when the water level inside the Vaal River is low. Only one diversion channel is to be constructed at any given time to minimise the risk of contamination of the river system.

The diversion channels will be constructed to consist of the following:

- **A transitional zone where the natural river channel is diverted towards the new constructed diversion channel,**
- **The diversion channel with an embankment on the right flank to separate the natural river channel from the diversion channel, and**
- **A transition zone that allows the flow back to the natural river channel.**

The gravels excavated from the diversion channels in the Vaal River and from the inland watercourses will be processed through the same DMS plant used at the inland operation. No processing will occur within 100 m from a watercourse. The bed of the river will be excavated and gravel will be loaded onto trucks and hauled to the existing process plant. Fine material will be discharged into the First Cut in order to rehabilitate the void. Oversized material and gravel from the process plant will be hauled back to the mined section in the Vaal River and will be used to rehabilitate the bed of the river before removing the berm to allow for natural flow of water. The Vaal River will not be completely blocked at any time.

Diversion channels will be constructed in a manner to achieve the current flow conditions of the river to minimise the sediment load to prevent an increase in the sediment load in the diversion channel.

The banks of the river will be mined by clearing all vegetation and topsoil and stockpiling thereof at an area not prone to erosion (i.e. not on steep slopes). Oversized material and overburden will be removed and stockpiled separately. Excavation of gravel will occur and the gravel will be transported to the process plant located further than 100 m from any watercourses. After processing of the gravel it will be returned to the void and backfilled. The overburden and oversized material will be backfilled after which the site will be levelled using the topsoil and vegetation.

The gravels extracted from each block will be transported to the DMS plant by haul trucks where it will be screened through rotary barrel screens to <75mm. The remaining <75mm material will be scrubbed and screened to -32mm, +2mm, where after it will be processed through the DMS plant and the final recovery section.

Once processed, the Plant tailings and oversize material will be hauled back to the excavation and deposited in the same trench from which it was extracted. During the processing of the material, the grits and fine material will be pumped to the First Cut on site where the suspended fines will settle. Clean water is pumped from the First Cut to the processing plant for re-use in the plant.

Having mined out a designated block, an adjacent block to the one mined previously will be opened and the same process, as detailed above, followed.

- 3.2 Describe any listed activities (in terms of the NEMA EIA regulations) which will be occurring within the proposed project.

Refer to Table 2 below for an indication of the proposed activities that have not previously been included in the MWP but are herewith applied for as part of the application for amendment of the existing Mining Right of Rooipoort Mine.

Table 2: Proposed activities listed in terms of the NEMA EIA Regulations, 2014 as amended to be undertaken as part of the proposed project

Proposed project activity	Applicable NEMA EIA 2014 (as amended) Listing notice	Activity description
<p>A temporary river diversion is proposed as part of the proposed mining activities within the Vaal River. In order to ensure safe mining, the working areas identified along the survey base line along the river will have to be laid dry before excavation of gravel from a strip can be commenced with.</p> <p>The extent of the temporary river diversion will be determined during the design thereof, but it is expected to exceed 100m².</p>	<p>NEMA EIA Regulations, 2014 as amended: Listing Notice 1, No. 12 of GNR 327</p>	<p>The development of—</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs—</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</p> <p>excluding—</p> <p>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such development occurs within an urban area; [or]</p> <p>(ee) where such development occurs within existing roads, [or] road reserves or railway line reserves; or</p> <p>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</p>

Proposed project activity	Applicable NEMA EIA 2014 (as amended) Listing notice	Activity description
<p>Rooipoort Mine is of the intention to extend the existing mining activities within the study area to include the 100m buffer zones from watercourses, as well as mining of gravel within the watercourses. Although this activity falls within the ambit of activity 21 of Listing Notice 1 and given the fact that the mine has an existing Mining Right, the proposed activities will include the installation of a temporary river diversion in the Vaal River which will be moved depending on the working area along the river. This may include dredging and/or depositing of material within the river.</p>	<p>NEMA EIA Regulations, 2014 as amended: Listing Notice 1, No. 19 of GNR 327</p>	<p>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan; [or]</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>
<p>The existing haul roads will be extended as the operation proceeds to new working areas.</p>	<p>NEMA EIA Regulations, 2014 as amended: Listing Notice 1, No. 56 of GNR 327</p>	<p>The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre—</p> <p>(i) where the existing reserve is wider than 13,5 meters; or</p> <p>(ii) where no reserve exists, where the existing road is wider than 8 metres;</p> <p>excluding where widening or lengthening occur inside urban areas.</p>
<p>Proposed clearance of protected trees.</p>	<p>NEMA EIA Regulations, 2014 as amended: Listing Notice 1, No. 30 of GNR 327</p>	<p>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>The proposed mining within the 100m buffer zones of the watercourses within the study area will require the clearance of vegetation, which includes clearance of protected trees in some cases of high density populations.</p>	<p>NEMA EIA Regulations, 2014 as amended: Listing Notice 2, No. 15 GNR 325</p>	<p>The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for –</p> <p>(i) The undertaking of a linear activity; or</p>

Proposed project activity	Applicable NEMA EIA 2014 (as amended) Listing notice	Activity description
		(ii) Maintenance purposes undertaken in accordance with a maintenance management plan.
<p>Note that Rooipoort Mine has an existing Mining Right and this forms part of an application for amending this authorisation to include mining activities within 100m of the watercourses within the study area which was previously excluded from the MWP.</p>	<p>NEMA EIA Regulations, 2014 as amended: Listing Notice 2, No. 17 GNR 325</p>	<p>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—</p> <p>(a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource; or</p> <p>(b) the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing;</p> <p>but excluding the secondary processing of a mineral resource, including the smelting, beneficiation, reduction, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.</p>
<p>The existing haul roads will be extended as the operation proceeds to new working areas.</p>	<p>NEMA EIA Regulations, 2014 as amended: Listing Notice 3, No. 18 of GNR 324</p>	<p>The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometer.</p> <p>g. Northern Cape</p> <p>i. In an estuary;</p> <p>ii. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding disturbed areas;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(dd) Sites or areas identified in terms of an international convention;</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p>

Proposed project activity	Applicable NEMA EIA 2014 (as amended) Listing notice	Activity description
		<p>(ff) Core areas in biosphere reserves;</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve, excluding disturbed areas; or</p> <p>(hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined; or</p> <p>iii. Inside urban areas:</p> <p>(aa) Areas zoned for use as public open space;</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.</p>

- 3.3 Specifically confirm that the community and identified interested and affected parties have been consulted and that they agree that the potential impacts identified include those identified by them.

Refer to Annexure 3 attached hereto for proof of consultation with the identified communities, stakeholders and I&APs. The comments received to date are included in this draft report which will be made available to registered parties for a period of at least 30 days for comment as well as to ensure that any concerns raised during this phase of the project have been addressed.

- 3.4 Provide a list and description of potential impacts identified on the cultural environment.

- **Potential damage or disturbance of burial grounds and graves.**

A detailed working relationship with the McGregor Museum Cultural Resources Management Unit is in place to assist in limiting any potential impact. The current policy of Rooipoort Mine is to exclude the burial grounds from the mining area. The policy will also be implemented during the proposed mining of the riparian zones and watercourses applicable to this amendment application.

The significance of the potential cultural impact of the proposed project will be assessed during the EIA Phase.

- 3.4.1 Provide a list and description of potential impacts identified on the heritage environment, if applicable.

- **Potential damage to, or loss of, cultural heritage resources and associated context information.**

Considering the mining method of the operation at Rooipoort Mine, the impact on the cultural environment will be destructive to identified surface and unidentified sub-surface sites as defined and protected by the NHRA, 1999 (Act 25 of 1999) if such identified areas are not excluded from the mining area (Cultural Resources Management Impact Assessment, 2005).

Cognisance should be taken of the fact that the existing operational areas of Rooipoort Mine, namely Diamand Koppie, M5, M6 and L2 situated on the farms Zandplaats 102/5, Vogelstruispan 101, Vogelstruispan 98, Klipfontein 99 and Bergplaats 100 have already been impacted upon by current mining activities. However, the

application for amendment to the existing Mining Right will include the riparian zones and watercourses within the study area which were previously excluded from the Mine Works Programme. As a number of findspots and sites have been identified especially in close proximity of the Vaal River, potential loss or destruction of cultural artefacts is possible.

A detailed working relationship with the McGregor Museum Cultural Resources Management Unit is in place and assisted fieldwork programmes are being implemented within the Mining Right area. This programme should be continued with and include the proposed mining areas applicable to this amendment application of the existing Mining Right in order to conserve the archaeological, historical and cultural heritage and resources of the area.

The significance of the potential heritage impact of the proposed project will be assessed during the EIA Phase.

- 3.4.2 Provide a list and description of potential impacts identified on the socio-economic conditions of a person on the property and on any adjacent or non-adjacent property who may be affected by the proposed prospecting or mining operation.

Rooipoort Mine is an existing operation of which the potential impacts have been described and assessed in the Amended EMP, 2014. This section will focus on the potential impacts on the socio-economic conditions expected to be associated with the proposed mining within 100m of a watercourse.

- **Optimisation of the economic benefit in the region (also refer to Section 3.4.3 below).**
- **Potential conflict with land use and activities on Rooipoort Nature Reserve and surrounding properties.**
- **Potential that the risks in crime will increase.**
- **Potential alteration of the visual landscape.**
- **Potential noise pollution.**
- **Potential negative impact on the water quality and quantity for downstream users.**
- **Disturbance and damage to burial grounds and graves.**

- **Potential damage to, or loss of, cultural heritage resources and associated context information.**

The significance of the socio-economic effect of the proposed project will be assessed during the EIA Phase.

- 3.4.3 Provide a list of potential impacts (positive & negative) on: employment opportunities, community health, community proximity, and links to the Social and Labour Plan.

- **Direct economic effect**

As mentioned previously, the continuation of mining of potential high grade diamond bearing gravel within 100m from a watercourse will possibly extend the life of mine. This will: (i) sustain existing jobs for longer and possibly create new opportunities; (ii) result in operating expenditure and sales (SA, 2007), therefore having a direct positive influence on employment and community health. This will also allow the mine to exploit the potential economic gain during mining of potential high diamond bearing gravel.

- **Indirect economic effect**

According to the SIA, 2007, it is expected that an expansion of mining activities at the operation and the increase in capital and operational expenditure as a result, will have a ripple effect. This will lead to an increase in sales for industries that supply goods and services to the mine, thus resulting in a positive local economic benefit.

The significance of the potential impact on employment opportunities and community health as a result of the proposed project will be assessed during the EIA Phase.

- 3.4.4 Provide a list and description of potential impacts identified on the biophysical environment including but not be limited to impacts on: flora, fauna, water resources, air, noise, soil etc.

Rooipoort Mine is an existing mining operation with an existing Mining Right. Reference to the approved and revised EMP, 2014 of the mine can be made for potential impacts associated with the current mining operation.

The potential impacts identified during the Scoping Phase to be associated specifically with the proposed mining within 100m of the watercourses in the study area include the following:

- Clearance of riparian vegetation and potential loss of sensitive biota.
- Potential disturbance of the riverbank stability of watercourses, especially the Vaal River.
- Potential disturbance to the ecological functions of the defined waterways in the floodplain of the Vaal River.
- Change in natural storm water flow paths due to excavation and a temporary river diversion in the Vaal River. This may again affect the water quantity in a specific catchment and to downstream water users.
- The clearance of vegetation may limit natural retention abilities and therefore have an effect on the flow rate of runoff as well as the natural infiltration rate during a rain event.
- Potential impact on wetlands associated with river systems (if any are present).
- Potential erosion and the creation of deep erosion gullies along the flood plain of the Vaal River. Erosion will also result in the loss of topsoil.
- Negative impact on the water quality of the Vaal River as a result of a potential increase in suspended solids into the river with clearance of riparian vegetation.
- The riparian zone of the watercourses in the study area likely creates important natural habitat for animals as well as corridors during migration. The proposed mining activities within the riparian zone will have an impact on these aspects.
- Potential increase in nuisance dust generation during operation and rehabilitation.

The significance of the potential impacts of the proposed project on the biophysical environment will be assessed during the EIA Phase.

- 3.4.5 Provide a description of potential cumulative impacts that the proposed operation may contribute to considering other identified land uses which may have potential environmental linkages to the land concerned.

As mentioned previously, Rooipoort Mine is situated within Rooipoort Nature Reserve and currently co-exists with the general management of the reserve. The potential cumulative impacts of the proposed project include:

- The loss of high value biodiversity (especially the floodplain habitat and DK floral diversity.**
- The extension of mining activities within the Mining Right area into the watercourses and its associated buffer zones may compromise the end land use objective of proclaiming Rooipoort Nature Reserve as a protected area.**
- The loss or damage to cultural/heritage resources.**
- The impact on the river system.**
- The impact of the water quality and quantity to downstream water users.**
- The visual impact and potential affect on the overall “sense of place”.**
- Limit or reduce the opportunity for Government to meet its conservation and protected area targets.**

4. Land use or development alternatives, alternative means of carrying out the proposed operation, and the consequences of not proceeding with the proposed operation.

4.1 Provide a list of and describe any alternative land uses that exist on the property or on adjacent or non-adjacent properties that may be affected by the proposed mining operation.

Rooipoort Mine is an existing mining operation with the only alternative option being “no mine”. The “no mine” option applicable to this amendment application would be not to proceed with mining within 100m of the watercourses within the study area (i.e. existing Mining Right area). The alternative for the landowner would be to implement the initiative to declare Rooipoort Nature Reserve as Protected Area under the Protected Areas Act.

The main features if the Rooipoort Nature Reserve is declared a protected area are:

- Avoiding the negative impacts associated with mining.**
- Securing high value biodiversity in the long term.**

- **The positive impact could be of high magnitude at a national scale, permanent and definite.**

4.2 Provide a list of and describe any land developments identified by the community or interested and affected parties that are in progress and which may be affected by the proposed mining operation.

No land developments have been highlighted by the community or any I&APs that are in progress and which may be affected by the proposed mining activities within 100m of a watercourse and in the riparian zones.

4.3 Provide a list of and describe any proposals made in the consultation process to adjust the operational plans of the mine to accommodate the needs of the community, landowners and interested and affected parties.

No proposals for adjustment to the proposed operational plans have been received during consultation with the community, stakeholders or I&APs to date.

4.4 Provide information in relation to the consequences of not proceeding with proposed operation.

As mentioned previously, the projected life of mine with the commencement of operations by Rooipoort Mine in 2011 was 10 years, accounting the life of mine until approximately 2021. The approval of the amendment application to include mining within 100m of watercourses is expected to extend the life of mine and with this also prolong the need for retrenchments in an area with an already high unemployment rate. If the proposed project is not continued with, the mine will possibly be downscaling operations within the next 2 years which will inevitably result in job losses.

It is expected that the areas within 100m of-, and within the watercourses of the study area are high diamond bearing gravel based on projections from prospecting and considering the concentration of alluvial diamond deposits in the area. If the proposed project is not undertaken, the opportunity to unlock the economic gain from these resources will be lost and as a result also the cascading effect to the economy of the local community.

Furthermore, the landowner intends to sterilise the Study Area to return it to its previous land use (i.e. game farming) and to include it in the Rooipoort Nature Reserve.

4.5 Provide a description of the most appropriate procedure to plan and develop the proposed mining operation. The applicant must: -

4.5.1 Provide information on its response to the findings of the consultation process and the possible options to adjust the mining project proposal to avoid potential impacts identified in the consultation process.

No comments have been received at this time.

Refer to the Comments and Response Report attached hereto in Annexure 3 for a list of comments received and the response/action taken during the Scoping Phase to address these comments. Also refer to Section 4.3 of this report.

4.5.2 Describe accordingly the most appropriate procedure to plan and develop the proposed mining operation with due consideration of the issues raised in the consultation process.

No comments have been received at this time. However, the following procedures will be considered and further investigated for implementation during the planning and development of the proposed project:

- **Screening during the Scoping Phase to identify potential environmental impacts.**
- **Consult with identified stakeholders and I&APs who may have additional information of potential sensitive environments within the study area to inform the EIA and specifically the management measures to be implemented.**
- **Undertake specialist studies to determine the sensitivity of the watercourse systems proposed for mining. This will also inform the EMP.**
- **Although the alternative to the proposed project is to “not extend mining activities within 100m of the watercourses”, alternatives in terms of mining methods within the river will be investigated as part of the EIA, e.g. pumping of gravel from the riverbed opposed to excavation through lying dry the riverbed.**
- **Assess the significance of the identified impacts, including those raised by I&APs, during the EIA Phase. This will assist in identifying fatal flaws to the proposed project and impacts that will require mitigation.**

- **An Environmental Management Programme will be developed to include management measures aimed at the prevention or limiting of the potential impacts that have been identified throughout all the phases of the EIA.**

5. A description of the process of engagement of identified interested and affected parties, including their views and concerns.

5.1 Provide a description of the information provided to the community, landowners, and interested and affected parties to inform them in sufficient detail of what the prospecting or mining operation will entail on the land in order for them to assess what impact the prospecting will have on them or on the use of their land.

The identified communities, landowners, stakeholders and I&APs were provided with a brief description of the proposed project via written notifications. This included information regarding the proposed amendment application of the existing Mining right to include mining within 100m of the watercourses within the study area. Refer to Annexure 3 for an indication of the notification and BID provided.

5.2 Provide a list of which of the identified communities, landowners, lawful occupiers, and other interested and affected parties were in fact consulted.

Refer to Annexure 3.

5.3 Provide a list of their views in regard to the existing cultural, socio-economic or biophysical environment, as the case may be.

The Department of Agriculture, Forestry and Fisheries made numerous comments on the BID regarding the biophysical environment (refer to Annexure 3):

- **Mining activities inside the Vaal River may negatively impact the riparian vegetation and protected tree species within the study area. Impacts on these protected species must be assessed and avoided. If these impacts cannot be avoided, application must be made for a Forest Act License. Impacts on trees can also affect bird habitats. The department recommended that a terrestrial fauna and flora impact study be done.**

Impacts on the fauna and flora were assessed during the Ecological Assessment (refer to Annexure 5). If any trees or bird nests will be disturbed, application will be made for the relevant license and/or permit.

- The study site must be overlaid on the Northern Cape Critical Biodiversity Area (CBA) Map. Impacts on CBA's and Ecological Support Areas (ESA's) must be avoided and if it cannot be avoided, the provincial conservation authority must be contacted to determine if a biodiversity offset is required.

The study site is located within a CBA and numerous watercourses in the study area is located within an ESA. The provincial conservation authority will be contacted to determine if a biodiversity offset is required.

- The rehabilitation of watercourses should include re-planting of indigenous riparian vegetation. It is recommended that seeds be harvested from affected plants prior to disturbance, to be used during rehabilitation.

During rehabilitation, indigenous riparian vegetation will be re-planted.

The South African Heritage Resources Agency (SAHRA) commented on the cultural environment (refer to Annexure 3). They requested that a Heritage Impact Assessment, which must include an archaeological and palaeontological component, be done. A Phase 1 Heritage Impact Assessment (HIA) and Palaeontological Impact Assessment (PIA) will be done for the areas proposed for inclusion within the amended Mining Right Area as part of the EIA phase and included in the EIA Reports.

- 5.4 Provide a list of their views raised on how their existing cultural, socio-economic or biophysical environmental potentially will be impacted on by the proposed prospecting or mining operation.

The Department of Agriculture, Forestry and Fisheries made numerous comments on the BID regarding the biophysical environment (refer to Annexure 3):

- Mining activities inside the Vaal River may negatively impact the riparian vegetation and protected tree species within the study area. Impacts on these protected species must be assessed and avoided. If these impacts cannot be avoided, application must be made for a Forest Act License. Impacts on trees can also affect bird habitats. The department recommended that a terrestrial fauna and flora impact study be done.

Impacts on the fauna and flora were assessed during the Ecological Assessment (refer to Annexure 5). If any trees or bird nests will be disturbed, application will be made for the relevant license and/or permit.

- The study site must be overlaid on the Northern Cape Critical Biodiversity Area (CBA) Map. Impacts on CBA's and Ecological Support Areas (ESA's) must be avoided and if it cannot be avoided, the provincial conservation authority must be contacted to determine if a biodiversity offset is required.

The study site is located within a CBA and numerous watercourses in the study area is located within an ESA. The provincial conservation authority will be contacted to determine if a biodiversity offset is required.

- The rehabilitation of watercourses should include re-planting of indigenous riparian vegetation. It is recommended that seeds be harvested from affected plants prior to disturbance, to be used during rehabilitation.

During rehabilitation, indigenous riparian vegetation will be re-planted.

The South African Heritage Resources Agency (SAHRA) commented on the cultural environment (refer to Annexure 3). They requested that a Heritage Impact Assessment, which must include an archaeological and palaeontological component, be done. A Phase 1 Heritage Impact Assessment (HIA) and Palaeontological Impact Assessment (PIA) will be done for the areas proposed for inclusion within the amended Mining Right Area as part of the EIA phase and included in the EIA Reports.

- 5.5 Provide a list of any other concerns raised by the aforesaid parties.

No comments have been received at the time of this report. Future comments will be included in all future reports.

- 5.6 Provide the applicable minutes and records of the consultations.

No consultations have been conducted. Minutes of any future meetings will be included in reports.

- 5.7 Provide information with regard to any objections received.

A letter was received from the Rooipoort Community Development Trust wherein they formally objected the application for the Water Use License as

they claimed to have a legitimate land claim pending since 23 December 1998. Mr. Vernon Mostert, the chairman of the Rooipoort Community Development Trust was registered as an I&AP.

Mr. Corné Anderson indicated in an email that he would like to register as an I&AP on the project.

6. Describe the nature and extent of further investigations required in the environmental impact assessment report, including any specialist reports that may be required.

6.1 Processes during the EIA Phase

6.1.1 Environmental authorisation process

Rooipoort Mine is applying for an amendment to the existing Mining Right for proceeding with mining activities within the 100m buffer zone from watercourses in the study area. Based on prospecting results it is expected that there is potential high diamond bearing gravel within these areas.

As part of this amendment application, a Scoping and Environmental Impact Assessment process in terms of the NEMA EIA Regulations, 2014 as amended has been commenced with. The application is currently in the Scoping Phase of which the main objectives are to inform identified stakeholders and I&APs of the proposed project as well as to identify the potential impacts expected to be associated with the proposed project in order to assess the significance of these impacts during the EIA Phase.

In assessing the significance and likelihood of the impacts occurring, environmental management measures can be developed to prevent and/or limit the impacts to the environment. The information from the specialist studies are also expected to indicate the potential presence of any high sensitive sites within the study area that might require exclusion from the proposed operational areas. The information and results from the assessment will be described in the Environmental Impact Assessment report and an Environmental Management Programme will be developed for implementation throughout all phases of the proposed project. This EMPr will include the environmental management measures aimed at preventing

environmental impacts, or where prevention is not possible, to limit and mitigate any impacts.

6.1.2 Public Participation Process

Public participation as described in Sections 39 – 44 of the NEMA EIA Regulations, 2014 as amended will be undertaken throughout all phases of the amendment application process. This will include further consultation with identified stakeholders, affected landowners, communities and I&APs who may be affected or have an interest in the proposed project by means of the following:

- Opportunity to registered parties and stakeholders to comment on draft reports.**
- Meetings with identified stakeholders to affirm the application processes and the way forward in terms of feasible solutions towards the environmental management of the proposed project.**
- Small group meetings with communities if considered necessary during the process.**
- Advertisements in the local newspaper.**
- Continuous communication with registered I&APs during the application process.**
- Recording of any comments and/or concerns raised by any I&AP together with the response to the comments by the consultant in a Comments and Response report. This report will be updated continuously and included in the draft and final EIA Report.**

6.1.3 Application for other environmental authorisations

This Scoping and EIA process is undertaken is part of the amendment application to the existing Mining Right of Rooipoort Mine. The proposed mining within 100m of a watercourse and associated activities will trigger other activities listed under other environmental authorisation. The applications will be undertaken parallel to this application during the EIA Phase and include:

- Amendment to the existing Water Use Licence for the application of a Section 21(c) & (i) in terms of the NWA, 1998 (Act 36 of 1998) for mining within 100m of a watercourse, as well as for the temporary river diversion. This will include the development of an Integrated Water and Waste Management Plan (IWWMP).**

- Application for the removal of protected trees in terms of Section 15(1) of the National Forests Act (NFA), 1998 (Act 84 of 1998).

6.1.4 Specialist studies

The following investigations, studies and reporting will be conducted during the Environmental Impact Assessment (EIA) phase of the project to determine the significance of the potential impacts that have been identified during the Scoping phase:

- **Mining Works Programme**: Amendment to the existing Mining Works Programme of Rooipoort Developments (Pty) Ltd to include the proposed operation within 100m of watercourses. This will include a description of the methodology to be followed, expected mineral resource, projected revenue, etc. This will also indicate the feasibility for the mine to proceed with mining of the proposed areas.
- **River diversion channel design**: A detailed investigation towards the diversion of watercourses, especially along the Vaal River, where mining is proposed will be commenced with. This investigation will include a practicable river diversion design and alternative options also considering the non-perennial waterways within the Mining Right area.
- **Heritage Impact Assessment**: A Phase 1 Cultural Resources Management Impact Assessment was undertaken by McGregor Museum CRM Unit in 2005. It is suggested that a Phase 1 Heritage Impact Assessment limited on the watercourses, riparian zones and associated buffer of 100m be undertaken for the areas proposed for inclusion within the amended Mining Right Area. Special focus should be given to sites of heritage resources that have been identified during previous studies and possibly falling within the perimeters of the proposed mining areas with the aim to determine its extent and conservation value.
- **Biodiversity Assessment**: An ecological assessment will be conducted by a specialist to determine the current ecological status of the areas proposed for mining.
- **Wetland delineation**: A wetland delineation will be conducted over the study area to identify any wetlands and if any, determine the extent of the wetland and the buffer zone that will be required.

- **Aquatic Assessment**: This assessment will include instream water sampling of the Vaal River, together with an aquatic biodiversity assessment (Habitat assessment, IHAS 2, IHIA, SASS 5). This will provide information on the Present Ecological State of the river and provide an indication if the proposed mining within the watercourse and the river diversion will have an impact on the overall ecological function and state of the river.

B. IDENTIFICATION OF THE REPORT

The report on the results of consultation must, at the end of the report include a certificate of identification as follows;

Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant in terms of the resolution submitted with the application, and confirm that the above report comprises the results of consultation as contemplated in Section 16 (4) (b) or 27 (5) (b) of the Act, as the case may be.	
Full Names and Surname	Pieter Nicolaas Meyer
Identity Number	870801 5075 0 88

- END -