



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

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: Jagersfontein Developments (Pty) Ltd

TEL NO: 018 297 2090

FAX NO: 018 297 2083

POSTAL ADDRESS: P.O. Box 24, Jagersfontein, 9974

PHYSICAL ADDRESS: Jagersfontein Diamond Extraction Operations, Jagersfontein

FILE REFERENCE NUMBER SAMRAD: FS 30/5/1/1/3/2/1 (10505)EM

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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SCOPING REPORT

2) Contact Person and correspondence address

a) Details of: Louis De Villiers

i) The EAP who prepared the report

Name of The Practitioner: Louis De Villiers

Tel No.: 072 967 7962

Fax No. :

e-mail address: louis@turn180.co.za

ii) Expertise of the EAP.

(1) The qualifications of the EAP

(With evidence attached as Appendix 1).
Refer to Appendix 1

(2) Summary of the EAP's past experience.

(Attach the EAP's curriculum vitae as Appendix 2)
Refer to Appendix 2

b) Description of the property.

Farm Name:	Remainder, portion 1 and portion 16 of the farm Jagersfontein 14
Application area (Ha)	3853.78 ha
Magisterial district:	Fauresmith
Distance and direction from nearest town	The application area is located directly adjacent to the town of Jagersfontein
21 digit Surveyor General Code for each farm portion	F0110000000001400016 F0110000000001400001 F0110000000001400000

c) **Locality map**

(show nearest town, scale not smaller than 1:250000 attached as **Appendix 3**).
Refer to Appendix 3

d) **Description of the scope of the proposed overall activity.**

i) **Listed and specified activities**

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

Refer to Appendix 4

<p>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.)</p>	<p>Aerial extent of the Activity Ha or m²</p>	<p>LISTED ACTIVITY Mark with an X where applicable or affected.</p>	<p>APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)/NOT LISTED</p>
<p>Application for a prospecting right: The prospecting carried out by Jagersfontein Development (PTY) Ltd ("the Applicant") will involve the drilling of boreholes, trenching and bulk sampling over the entire property to prospect for minerals. It is expected that approximately 100 boreholes will be drilled over the entire area to prospect for minerals and trenches will be made to sample between 30 000 - 40 000 Tons/trench. It is however very difficult to indicate where the trenching and bulk sampling will occur as this will be dependent on the drilling. Listed activity 19 of GN. R. 325 of the 2014 EIA Regulations as amended on 7 April 2017 under the National Environmental Management Act 107 of 1998 ("NEMA") is hereby applied for and reads as follows: "The removal and disposal of minerals contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource [,] ; or (b) [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)] the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing;</p>	<p>3853.78ha Although this is the entire prospecting area it will only involve the drilling of approximately 100 boreholes and, depending on the results of the samples of the boreholes, will result in trenching/pitting. Trenches will be made to remove between 30 000 - 40 000 tons/trench. Trenches will be made to a width of 4m X7m deep. The length of the trench will be approximately 14m. However, trenches may be wider (i.e. 14m wide) and longer for better sampling.</p>	<p>Activity 19 of GN R. 325 (Refer to description in column 1)</p>	<p>GN R. 325</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."

The overall activities associated with the prospecting right will include the following:

- 1) Desktop studies and geological interpretation of all available geological data including any historic soil sampling data and any airborne geophysical and remote sensing data.
- 2) Target detection by means of geophysical surveying.
- 3) Desktop studies involving interpretation of the geophysical survey results in order to plan the next phase of work in detail.
- 4) Testing of targets
 - a) First state small diameter (up to 165mm) percussion exploratory drilling and/or minor pitting and/or minor trenching, aimed at testing targets identified as being of interest, with the aim of proving the presence of kimberlite.
 - b) Processing of drill or rock samples for the various types of test as required, such as petrography and physical roc properties.
- 5) Desktop studies involving interpretation of the initial drilling (or excavations) and testing in order to plan the next phase of work in detail.
- 6) Delineation and initial testing of kimberlite(s).
 - a) Detailed geophysical surveys over kimberlites, for delineation and borehole positioning purposes. This would be conducted using a variety of survey techniques such as magnetometry, electromagnetic methods and gravity.
 - b) Second stage small diameter (up to 165mm) percussion and core drilling and/or excavations. Aimed at determining the extend of any kimberlite discovered and whether it has the potential to host diamonds. This involves collecting material for testing, such as

<p>further petrographic examination, HMA and MiDA. This stage could include downhole geophysical logging.</p> <p>c) Processing of drill samples for the various types of test as required.</p> <p>7) Desktop studies involving interpretation of all drilling (or excavations) and test results, in conjunction with geophysical survey results, in order to plan the next phase of work in detail. Data available in this stage will be used to construct a Geological model to allow for size estimation. All the above, combined with the thickness of overburden, micro diamond analyses, petrographic interpretations and mineral chemistry analyses will be used to assess the potential of any discoveries and therefore justification of any further work.</p> <p>8) Bulk sampling (initial evaluation)</p> <p>a) Carry out a bulk sampling programme to test for the presence of macro-diamonds. This may take the form of trenching or pitting or large diameter (up to 450mm) drilling. The number of excavations and/or boreholes and quantity of material to be collected will be based on the size of the kimberlite(s) and their internal geology such facies variations.</p> <p>b) Processing of macro-diamonds samples to obtain a concentrate for diamond sorting in a dense media separation (DMS) sampling plant.</p> <p>c) Recovery of macro-diamond from the concentrate to obtain an initial grade estimate at the diamond recovery laboratory in Johannesburg.</p> <p>9) Based on a review of initial bulk sampling results and other information, the preliminary economic potential of the kimberlite(s) will be determined. Depending on the outcome of this, a larger bulk sampling exercise will be required to provide sufficient information for a pre-feasibility study.</p> <p>10) Bulk sampling (evaluation sampling)</p> <p>a) Carry out a bulk sampling programme in order to determine the economic potential of any kimberlite(s) discovered. This may take the form of trenching or pitting or large diameter (up</p>			
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<p>to 450mm) drilling. Again, the number of excavations and/or boreholes and quantity of material to be collected will be based on the size of the kimberlite(s) and their internal geology such as facies variations. This programme will determine the macro-diamond content and quality to evaluate the economic potential of any kimberlite(s) discovered.</p> <p>b) Processing of macro-diamond samples to obtain a concentrate for diamond sorting in a DMS sampling plant.</p> <p>c) Recovery of macro-diamonds from the concentrate and the classification of these diamonds (in terms of size and quality) at the diamond recovery laboratory in Johannesburg.</p> <p>11) Pre-feasibility study. Based on a review of bulk sampling results and other information such as the geological model and geotechnical information, the mineral resource will be defined and a decision made as to further work required.</p> <p>12) Mining feasibility studies. Depending on the value of the estimated resource determined in Phase 15, a mining feasibility study may be conducted by a multidisciplinary team. This would include all relevant socio-economic and environmental impact studies, with the aim being to define mineral reserves and in support of an application for a mining right.</p> <p>13) Supplementary drilling, sampling, geological modelling and more dressing studies may be required to obtain additional information in order to finalise the mining feasibility study.</p>			

ii) Description of the activities to be undertaken

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

- 1) Desk top studies and geological interpretation of all available geological data including any historic soil sampling data and any airborne geophysical and remote sensing data.
- 2) Target detection by means of geophysical surveying.
- 3) Desktop studies involving interpretation of the geophysical survey results in order to plan the next phase of work in detail.
- 4) Testing of targets
 - a) First state small diameter (up to 165mm) percussion exploratory drilling and/or minor pitting and/or minor trenching, aimed at testing targets identified as being of interest, with the aim of proving the presence of kimberlite.
 - b) Processing of drill or rock samples for the various types of test as required, such as petrography and physical roc properties.
- 5) Desktop studies involving interpretation of the initial drilling (or excavations) and testing in order to plan the next phase of work in detail.
- 6) Delineation and initial testing of kimberlite(s).
 - a) Detailed geophysical surveys over kimberlites, for delineation and borehole positioning purposes. This would be conducted using a variety of survey techniques such as magnetometry, electromagnetic methods and gravity.
 - b) Second stage small diameter (up to 165mm) percussion and core drilling and/or excavations. Aimed at determining the extend of any kimberlite discovered and whether it has the potential to host diamonds. This involves collecting material for testing, such as further petrographic examination, HMA and MiDA. This stage could include downhole geophysical logging.
 - c) Processing of drill samples for the various types of test as required.
- 7) Desktop studies involving interpretation of all drilling (or excavations) and test results, in conjunction with geophysical survey results, in order to plan the next phase of work in detail. Data available in this stage will be used to construct a
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Geological model to allow for size estimation. All the above, combined with the thickness of overburden, micro diamond analyses, petrographic interpretations and mineral chemistry analyses will be used to assess the potential of any discoveries and therefore justification of any further work.
- 8) Bulk sampling (initial evaluation)
 - a) Carry out a bulk sampling programme to test for the presence of macro-diamonds. This may take the form of trenching or pitting or large diameter (up to 450mm) drilling. The number of excavations and/or boreholes and quantity of material to be collected will be based on the size of the kimberlite(s) and their internal geology such facies variations.
 - b) Processing of macro-diamonds samples to obtain a concentrate for diamond sorting in a dense media separation (DMS) sampling plant.
 - c) Recovery of macro-diamond from the concentrate to obtain an initial grade estimate at the diamond recovery laboratory in Johannesburg.
- 9) Based on a review of initial bulk sampling results and other information, the preliminary economic potential of the kimberlite(s) will be determined. Depending on the outcome of this, a larger bulk sampling exercise will be required to provide sufficient information for a pre-feasibility study.
- 10) Bulk sampling (evaluation sampling)

a) Carry out a bulk sampling programme in order to determine the economic potential of any kimberlite(s) discovered. This may take the form of trenching or pitting or large diameter (up to 450mm) drilling. Again, the number of excavations and/or boreholes and quantity of material to be collected will be based on the size of the kimberlite(s) and their internal geology such as facies variations. This programme will determine the macro-diamond content and quality to evaluate the economic potential of any kimberlite(s) discovered.

b) Processing of macro-diamond samples to obtain a concentrate for diamond sorting in a DMS sampling plant.

c) Recovery of macro-diamonds from the concentrate and the classification of these diamonds (in terms of size and quality) at the diamond recovery laboratory in Johannesburg.

11) Pre-feasibility study. Based on a review of bulk sampling results and other information such as the geological model and geotechnical information, the mineral resource will be defined and a decision made as to further work required.

12) Mining feasibility studies. Depending on the value of the estimated resource determined in Phase 15, a mining feasibility study may be conducted by a multidisciplinary team. This would include all relevant socio-economic and environmental impact studies, with the aim being to define mineral reserves and in support of an application for a mining right.

13) Supplementary drilling, sampling, geological modelling and more dressing studies may be required to obtain additional information in order to finalise the mining feasibility study.

e) **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
Section 21(c) and (i) of the National Water Act 36 of 1998 (NWA)	Application made i.t.o. S21(c) and (i) if activities are within 100m from watercourse.
GN R. 325 and 326 of the 2017 NEMA EIA Regulations	An application is made for the prospecting right. Regulations as indicated in GN R. 326 will be followed to obtain Environmental Authorisation.
NEM: Waste Act 59 of 2008	Will be applied for if any product is regarded, or treated as waste product.
NWA Best Practice Guidelines	The Best Practices will be implemented throughout the project to ensure that activities which may have an impact on the environment will be limited/reduced.
National Dust Control Regulations under NEM: Air Quality Act 39 of 2004	Management of dust
National Heritage Resources Act 25 of 1999	Protection of heritage resources.

f) **Need and desirability of the proposed activities.**

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

Jagersfontein Developments (Pty) Ltd ("The Applicant") will perform the prospecting on the properties as indicated above to locate any remains of Kimberlite and/or gravel which may contain diamond which can be mined.

This will ensure that people from the local community will have jobs and will improve the socio-economic status in the community.

The prospecting of the diamonds at this stage will also ensure that, if any diamonds can be mined it can occur while the current tailings operation is in progress whereby the area can be rehabilitated more effectively for future land use.

g) Period for which the environmental authorisation is required

5 Years

h) 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.

i) Details of all alternatives considered.

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

- (a) the 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.

The following should be considered in terms of the alternatives:

Due to the nature of the activities to be undertaken (i.e. prospecting for diamonds) the applicant is limited to the area where the minerals may potentially be located. This is based on desktop studies according to geological maps and existing data of the area. Therefore the applicant cannot identify any location alternatives as the properties applied for are most likely to contain the mineral.

The activity is limited to the drilling of boreholes, trenching/pitting and bulk sampling. There are no alternatives to this activities as this is the only way to prospect for diamonds in order to locate the mineral to be mined.

Most of the prospecting will be conducted on areas where historic mining and/or disturbance during mining activities occurred and will also be limited to the areas where there is the highest potential to locate diamonds. However, the location of the trenching/pitting will only be confirmed after drilling of boreholes and sampling.

Technology to be used during prospecting is limited to the drilling of boreholes and excavations for trenching/pitting. This may also involve large diameter drilling to up to 450mm. The existing operation has an Dense Medium Separation (DMS) plant which will be used for the processing of the samples.

The option of not implementing the activity will result in the applicant not having the opportunity to prospect for diamonds on the properties. No further mining of diamonds will occur on the properties by the applicant which will result in job losses after completion of the current reprocessing of surface tailings. The applicant will remove all existing infrastructure after completion of the current activities and will rehabilitate the site.

ii) 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 following process will be undertaken during the Public Participation Process:

- * Site notices will be placed on the fence of the properties and on site to notify the public of the proposed prospecting,
- * Advertisements will be placed in the local newspapers,
- * A Background Information Document (BID) will be sent to all potential Interested and Affected Parties (I&AP) to notify them of the project and to request them to submit comments. The Potential I&AP will include the following:
 - Neighbours,
 - Stakeholders in the area,
 - Regulating Authorities,
 - Local and District Municipalities, including the Ward Councillor,
 - Competent Authority.

Comments received by I&AP will be logged in a comments and response register. Response letters will be sent to all comments received and all reports and information regarding the proposed project will be sent to the I&AP throughout the various phases of the project.

Summary of issues raised by I&As

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

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.	Date Comments Received	Issues raised	EAPs response to the applicant
<u>AFFECTED PARTIES</u>			
Landowner/s	X To be consulted		
Lawful occupier/s of the land	To be consulted		
Landowners or lawful occupiers on adjacent properties	X To be consulted		
Municipal councillor	X To be consulted		
Municipality	X To be consulted		
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA e	To be consulted		
Communities	To be consulted		
Dept. Land Affairs	To be consulted		
Traditional Leaders	N/A		
Dept. Environmental Affairs	To be consulted		

Other Competent Authorities affected		To be consulted		
<u>OTHER AFFECTED PARTIES</u>				
<u>INTERESTED PARTIES</u>				

iv) The Environmental attributes associated with the sites

(1) Baseline Environment

(a) Type of environment affected by the proposed activity.

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

*** Geology and Soil**

The farm Jagersfontein 14 is situated on the Karoo Supergroup, The geology is mainly of the Adelaide Subgroup of the Beaufort Group in the northeast of the farm and the Tierberg Formation of the Ecca Group southwest. Both of these lithologies are intruded by an extensive Karoo dolerite sill. The Adelaide Subgroup is made up of blue-grey and purple mudstone inter-bedded with yellow sandstone and siltstone, mudstone and sandstone. The Tierberg Formation is made up of blue-grey to dark grey shale with carbonate concretions, subordinate sandstone and siltstone in the upper part.

Two soil types are common in this area. The Hutton soil is common in the north while the Tierberg soil is more common in the south. This prospecting area is on an existing old mine, extensively mined up to 1972.

*** Climate**

Historical rainfall data received from the DWS indicates the Mean Annual Precipitation ("MAP") to be approximately 439mm / annum (DWS, 2018) at the Kalkfontein Dam, located approximately 19km north of the proposed area.

Wind data indicates that the prevailing wind direction in the area is from the northeast to the northwest.

*** Air Quality**

The Jagersfontein area has, save for the Tailings Operation, no major industrial facilities with atmospheric emissions, the overall air quality is good. The area is mainly associated with agricultural activities. A Dustfallout Monitoring Programme is implemented by the applicant for the current activities.

*** Surface and groundwater**

The geology of the Jagersfontein area consists mainly of sediments from the Karoo Supergroup. These are predominantly sandstone, shale and mudstones formations of the Dwyka-, Ecca- and Beaufort group, with intrusion of post Karoo dolerite sills and dykes along weak contact zones between different formations or fault zones.

The Karoo sediments are characterised by low permeability; groundwater movement mainly occurs along jointed and fractured zones caused by faults or on the contact zones with dolerite intrusions.

Based on the water levels of sources in the area (The Shaft and the boreholes) and the variability in water quality, it is evident that there are two aquifer systems in the study area. At the top is a shallow aquifer with a rest water level (water table level) of approximately 5m below ground level ("mbgl"). At the bottom is a deeper aquifer with a current drawdown water level at 417mbgl (5 March 2018) and a rest water level at approximately 160mbgl. The two aquifer systems are separated by an impermeable dolerite sill. This is based on early geological maps that indicate a dolerite sill from surface to depth of approximately 300m.

It is very likely that the dolerite sill is a major geological feature due to its thickness, the large area it covers over the Site and Operational Site and the important role it plays in the movement of groundwater in the study area.

The shallow aquifer will most probably be very recently recharged by rain water and will move along the weathered zone of the dolerite sill and / or fractures along the contact with the Karoo sediments that can be associated with the dolerite sill intrusion.

The aquifer systems are, to a large extent, independent of each other because of the impermeable sill that separates them. There may however be some isolated zones of connectivity between the two aquifer systems.

The surrounding groundwater users in the Jagersfontein Town abstract water from the shallow aquifer, as it is not feasible to drill boreholes to the depths required to abstract from the deeper aquifer. The shallow aquifer is not affected by the drawdown created in the deep aquifer. Abstraction from the deeper aquifer therefore has an insignificant impact on the shallow aquifer's water levels.

Jagersfontein is situated in the C51K quaternary drainage region of the Upper Orange Catchment.

The main surface water features on the Operational Site is Dam 10 with a capacity of 459, 126m³; Loskop Dam with a capacity of 52,698m³; and the watercourse that drains into Dam 10. However, the watercourse draining to Dam 10 is mostly dry. Surface water from the Operational Site drains into the Proses Spruit, which will drain into the Wolwas Dam. These are not located on the Operational Site.

* Land use

The land as indicated is used for the reprocessing of the surface tailings on it and forms part of the tailings operation and activities associated with it (i.e. ploughing, loading, transportaion of material, processing in the plant). The other areas include parts of the town of Jagersfontein. The area surrounding the tailings operation is mainly used for agriculture.

* Vegetation

The vegetation over the area consist of the Xhariep Karroid Grassland (Gh 3) and Besemkaree Koppies Shrubland (Gh 4) (Mucina Rutherford, 2006). The Gh4 sustains a faunal component which is distinct from the surrounding plains due to its topography, hydrology, soil properties, etc. These areas are mainly confined to dolerite capped hills and ridges on the site while the Xhariep Karroid Grassland is confined to the plains and is characterised by a strong dominance of grass species with dwarf karroid shrubs. Please refer to the attached Biodiversity Management Plan by Mr. D. Van Rensburg).

* Demographics

Jagersfontein population consists of 1 819 people. This includes the residents in Charlesville (490 residents) and the people residing on the Operational Site (40 people). There are 3, 910 people residing in Itumeleng.

(b) Description of the current land uses.

The land is currently used for activities associated with the diamond reprocessing operation where surface tailings are transported to the process plant for reprocessing. The towns of Jagersfontein, Charlesville and Itumeleng is also located adjacent to the tailings operation. The largest parts of the surrounding areas are mainly used for agriculture, especially towards the north, south and west.

(c) Description of specific environmental features and infrastructure on the site.

The proposed site for prospecting has the following environmental features and infrastructure:

* Infrastructure relating to the tailing operation:

The tailings operation consist of a process plant which processes the surface tailings dumps located on the Remainder, Porion 16 and Portion 1 of the farm Jagersfontein 14. Furthermore, there are numerous conveyors located on the properties to transport tailings from the surface tailings dumps to the processing plant. The process plant area also contains the offices, workshop and the employee houses.

A Fine Tailings Storage Facility is also located on the proposed area. This is the structure where the fine tailings suspended in water (i.e. Paste) is stored. The walls of this facility is constructed with coarse tailings.

The tailings operation has a balancing dam of 0.75ha located directly south of the process plant and a Process Water Dam of 0.33ha located at the plant.

* Water features:

The Kalkfontein - Fauresmith water pipeline crosses the proposed area. This pipeline transports water from the Kalkfontein Dam to Fauresmith and Jagersfontein.

The proposed prospecting area has 2 surface water features (i.e. Dam 10 and Loskop Dam) and a non-perennial watercourse which drains into Dam 10.

The proposed area also has numerous boreholes where water is either abstracted to be used in the process plant, for domestic use and monitoring of groundwater.

* Agriculture / Vacant land:

The largest part of the proposed prospecting area consist of vacant land which is used for agriculture (i.e. grazing). Furthermore, the area also has some dolerite capped hills and ridges.

* Powerlines:

There are Eskom powerlines located on the proposed land which provides electricity to the tailings operation.

* Town infrastructure:

A portion of the proposed prospecting area includes the town infrastructure of Jagersfontein.

*Roads:

The proposed prospecting area has a road network consisting of gravel roads used on the tailings operation. The portion of the prospecting area located outside the tailings operation has tarred roads.

(d) Environmental and current land use map.

(Show all environmental, and current land use features)

Refer to the attached map.

v) 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 following potential impacts were identified:

- * Loss of topsoil and vegetation,
- * Loss of animal life,
- * Pollution of surface and groundwater,
- * Littering,
- * Change in land use,
- * Noise pollution,
- * Impact on air quality,
- * Socio-economic impact,
- * Loss of heritage and/palaeontological artefacts.

- vi) 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).

Please refer to the attached methodology.

- vii) 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)

It should be noted that the site layout only comprises of the entire prospecting area. Boreholes can only be drilled after desktop studies have been completed and points can be identified. Trenching / pitting and bulk sampling can only commence in specific places as identified during the drilling of boreholes. Therefore, the site layout cannot indicate the specific sites where these activities will occur.

- viii) 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).

No comments were received from the I&APs regarding the impact of the prospecting on the environment as the Public Participation Process have not been completed. However, the following mitigation measures will be implemented in order to minimize potential impacts on the environment:

- Surface and groundwater quality and quantity:
 - * Storm water management measures will be implemented to divert clean storm water around the prospecting area and to contain any "dirty water" on the operational area.
 - * Comply with all conditions of the National Water Act (Act 36 of 1998) and submit all required Water Use License Applications.
 - * Any spill of potentially hazardous substances (e.g. oil, grease, diesel, etc.) should be cleaned and the spill managed immediately.
 - * Storm water mitigation measures will be implemented to ensure that clean run-off water is not contaminated by any activities related to the proposed prospecting.
- Ambient Air Quality:
 - * The existing dust fallout monitoring programme will continue to monitor dust emissions from the operation.
 - * If dust becomes problematic, further management of the dust must be implemented.
 - * The speed of trucks and other vehicles on the roads should be limited to 40 km/hour to avoid dangerous conditions, excessive dust or excessive deterioration of the road being used.
 - * A complaints register will be kept on site to log any complaints from adjacent landowners.
- Noise Levels:
 - * Machines should be equipped with silencers.
 - * Machines should be maintained in a good condition to prevent excessive noise.
 - * A complaints register will be kept on site to log any complaints from adjacent landowners.
- Waste:
 - * Non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., shall be disposed and stored in a suitable container at a collecting point and collected on a regular basis and disposed of at an authorized waste disposal facility in the area. Specific precautions shall be taken to prevent refuse from being dumped on or in the vicinity of the prospecting site.
 - * Suitable covered receptacles shall be available at all times and conveniently placed for the disposal of waste for general and hazardous waste.

- * Spills of any product such as paint, oil, cleaning agents etc. should be cleaned up immediately by removing the spillage together with the polluted soil and by disposing of it at a recognised facility.
- * All used oils, grease or hydraulic fluids, paints, thinners etc. that cannot be re-used shall be placed in a hazardous waste container for disposal at a suitable waste disposal facility.
- * Existing toilet facilities will be used by employees throughout the project lifetime.
- Loss Of Vegetation:
 - * It is not anticipated that the vegetation on adjacent property will be influenced due to the proposed mining activities as these activities will be carried out on a specific site (i.e. the prospecting area).
 - * No open fires will be allowed on site as the site will be treated as a fire-free zone to protect the loss of vegetation.
 - * A permit must be obtained to transplant protected / red data species to other areas where it will not be disturbed. However, it is not anticipated that there are any of these species which will be disturbed.
 - * Only areas where prospecting activities occur will be cleared of vegetation.
 - * The entire prospecting area will be rehabilitated and revegetated after prospecting to ensure the re-growth of vegetation. This will be relevant on areas where no future mining will occur.
- Loss of animals:
 - * No animals will be harmed or killed on the proposed site.
 - * The site will be rehabilitated in such a manner to promote habitat establishment for animals on the site.
- Soil loss:
 - * Topsoil, if available, will be removed and stockpiled to preserve the soil for re-use during rehabilitation.
 - * Measures will be implemented to protect topsoil stockpiles from erosion. This includes covering of the soil with vegetation and making berms at the highest part of the stockpiles to divert water around them.
 - * Topsoil stockpiles will not be made on steep slopes.
 - * Topsoil will not be sold or used for any other purposes.
- Safety:
 - * No employee at the prospecting area will be allowed to wander on adjacent land without consent from that landowner.
 - * No animals in the surrounding area will be injured or killed.
 - * Employees will cook food and eat at home and will not be allowed to gather food from the environment surrounding the proposed site.
 - * Only qualified personnel will be allowed to operate machinery.
 - * Machinery and vehicles will be serviced as needed to ensure safety of personnel.
- Archaeology and Palaeontology:
 - * Should any artefacts be unearthed on the site the mining should cease and a specialist and the SAHRA should be contacted to investigate the finding.

ix) 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)

Refer to Appendix 1.

x) Motivation where no alternative sites were considered.

The project is for the prospecting for minerals (i.e. diamonds). Due to the nature of the project the prospecting can only occur in specific areas where the mineral is most likely to be found. The project is therefore very site specific. This area was identified by geological maps and desktop studies in the area. Furthermore, the proposed area has already been disturbed by the existing tailings operation.

xi) Statement motivating the preferred site.

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

Please refer to the above.

(i) Plan of study for the Environmental Impact Assessment process

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

The following should be considered in terms of the alternatives:

Due to the nature of the activities to be undertaken (i.e. prospecting for diamonds) the applicant is limited to the area where the minerals may potentially be located. This is based on desktop studies according to geological maps and existing data of the area. Therefore the applicant cannot identify any location alternatives as the properties applied for are most likely to contain the mineral.

The activity is limited to the drilling of boreholes, trenching/pitting and bulk sampling. There are no alternatives to this activities as this is the only way to prospect for diamonds in order to locate the mineral to be mined.

Most of the prospecting will be conducted on areas where historic mining and/or disturbance during mining activities occurred and will also be limited to the areas where there is the highest potential to locate diamonds. However, the location of the trenching/pitting will only be confirmed after drilling of boreholes and sampling.

Technology to be used during prospecting is limited to the drilling of boreholes and excavations for trenching/pitting. This may also involve large diameter drilling to up to 450mm. The existing operation has an Dense Medium Separation (DMS) plant which will be used for the processing of the samples.

The option of not implementing the activity will result in the applicant not having the opportunity to prospect for diamonds on the properties. No further mining of diamonds will occur on the properties by the applicant which will result in job losses after completion of the current reprocessing of surface tailings. The applicant will remove all existing infrastructure after completion of the current activities and will rehabilitate the site.

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

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

ENVIRONMENTAL COMPONENT

1.1 SOIL

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

Handling of topsoil as a natural resource:

- All available topsoil/overburden material should be removed and stockpiled for rehabilitation purposes.

Access roads, etc:

- The clearing of soil surface areas would be restricted to what is really necessary for the construction of infrastructure. Wherever possible all topsoil should be removed and stockpiled for rehabilitation purposes.
- Overburden material should also be stockpiled separately if practically possible.
- Topsoil and overburden material should be transported to an area earmarked for rehabilitation.

Potential for soil contamination:

- Vehicles to be inspected to ensure no oil and hydraulic fluid leaks occur.

- All oil spills on soil to be removed with the contaminated soil and disposed of as hazardous waste.
- No servicing of vehicles must occur except on a concrete floor in an area allocated for that. Emergency repairs must be done with drip trays placed underneath the vehicles/machinery.
- Training with reference to pollution hazards and their impact on the environment must be given as part of induction.
- An incidence register for this purpose must be kept.

CLOSURE OBJECTIVE

- The topsoil removed in the site preparation process should be replaced during the rehabilitation exercise
- Alleviation of compaction of soils will be done during rehabilitation of the terrain, including roads
- No soil erosion must be visible and no potential for soil erosion must be present at closure
- No soil contamination must be visible or known before closure can be given
- No compaction of any roads or any other area must be present during closure
- If the soil structure is disturbed mitigation measures e.g. the use of organic material, lime and fertilisers must be implemented to restore the soil structure
- The soil must be fertile enough to sustain vegetation

1.2 LAND USE

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

- The disturbance of vacant land must be restricted to the authorised area.
- Remove topsoil where it is available.
- Existing roads should be used as far as practically possible.
- If new land is used for roads to enter the area it must be done in consultation with surface owner.
- Topsoil will be placed in areas where it was removed and the areas will be re-vegetated accordingly.

CLOSURE OBJECTIVE

- To rehabilitate the area by backfilling excavations to such a state that vegetation can recover and sustain sustainable growth and be used for natural grazing again.
- Measures to address soil erosion will be implemented.

1.3 VEGETATION

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

- Activities will be restricted to the existing prospecting area.
- Vegetation will not be removed from any area where it is not part of the prospecting or current tailings operation activities.
- No firewood will be collected on site or the surrounding environment.
- No open fires will be allowed on site to prevent veld fires.
- Replace the vegetation by reseeding of grasses.
- Red data and protected vegetation types will be transplanted to other areas where it will not be affected after permits have been granted.

Habitat change, loss of species, spread of alien and invasive species:

- Reseed and plant trees.
- Bulk sampling should be done in a well-planned manner (according to a prospecting work programme) and in the process ensuring that activities are only restricted to surface areas really required.

Develop and implement an invasive and alien control programme to control the spread of weeds and other invasive species

- Eradicate exotic weeds and invader species if it invades the terrain.
- All illegal invader plants and weeds shall be eradicated as required in terms of Regulation 15 & 16 of the Act on Conservation of Agricultural Resources, 1983 (Act no. 43 of 1983) which list the plants.
- An invasive and alien control programme must be drafted and implemented by the operation.

CLOSURE OBJECTIVE

- During rehabilitation indigenous vegetation cover comprising of local plant species should be established in order to ensure a well-adapted sustainable plant cover that would be able to prevent erosion of the replaced topsoil on the disturbed mining site exposed surfaces.
- No invasive and alien species must be present after closure.
- A post-closure control program must also be implemented.
- No excessive dust must be present during the normal growth season after closure

1.4 ANIMALS

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

Wildlife or wildlife habitat destruction /change / disturbance

- To take care that no new or unnecessary destruction of habitats, other than the demarcated prospecting area should take place.

Injury and death to wildlife:

- Re-establish trees and grass cover as soon as possible during and after prospecting.
- Ensure that the rehabilitation plan is compiled and executed.
- Keep incidence register on killings and disturbances.
- No open fires allowed on site.

Restoration of habitat:

- Make game catching, traps, snares, poaching and any other unnecessary disturbance of animals a disciplinary offence.
- Keep an environmental incidence register to log all kills of birds and mammals.
- All staff must undergo basic environmental awareness lecture during induction training.
- Machine operators and drivers to undergo appropriate level of environmental impact training to ensure they understand their impact on the environment.

CLOSURE OBJECTIVE

- The animal life habitat must be restored after decommissioning.
- Success will be measured against the extent to which the animals return to the area.
- The post-closure phase must be suitable for further restoration of the newly man-made animal habitat.
- The area must be stable and acceptable for the return of animal- and plant life.

1.5 AIR QUALITY

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

Dust

- The existing Dust Fallout Monitoring Programme will continue to ensure that dust levels fall within the national standards.
- If dust levels exceed the standards, further mitigation must be implemented.
- Inspection should be done on a daily basis.
- Vehicles should be serviced and maintained to lower CO2 emissions.
- Vehicles will be restricted to 40km/h on dust roads.

CLOSURE OBJECTIVE

- Rehabilitation of the excavation areas would ensure that no dust is generated from exposed surfaces.

1.6 NOISE

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

- Ensure the required silencers are placed on all engines.
- No mitigation to reverse hooters is allowed due to safety standards.
- Inspection of vehicles and machinery to ensure silencers are fitted.
- Ensure that a complaints register is created, managed and maintained.
- Vehicles and earthmoving equipment should be equipped with the necessary silencers and regularly maintained in a good working condition.

CLOSURE OBJECTIVE

- No noise attributed to prospecting will be generated from the site after closure anymore.
- During decommissioning and closure phase some earth moving equipment and trucks would be utilized for rehabilitation.

1.7 VISUAL ASPECTS

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

- Visual impact would be addressed by means of the re-vegetation of disturbed areas with grasses
- Specific rehabilitation options would mitigate the impact.

CLOSURE OBJECTIVE

- No residual visual impacts will remain after closure. The terrain should blend in with the surrounding landscape.

1.8 SURFACE AND GROUND WATER

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

- Water will not be used without the necessary authorisation.
- Storm water channels, berms and other storm water management systems will be implemented to ensure that clean storm water is diverted around the site.
- Any spills of potentially hazardous substances should be cleaned and managed immediately.

- Temporary toilets will be placed on site. The toilets and the disposal of effluent from the toilets will be managed by an outside contractor.

CLOSURE OBJECTIVE

- The impact on water resources will not remain after closure.

1.9 SOCIO-ECONOMICS

ENVIRONMENTAL MANAGEMENT/MITIGATION MEASURES/ACTION PLANS/COMMITMENTS

- Increase in Socio – economic activity at local level.

CLOSURE OBJECTIVE

- The economic development must deliver a multiplier effect that will contribute to the local economy long after closure

iii. Description of aspects to be assessed by specialists

A biodiversity management plan was compiled by Mr. D. Van Rensburg in 2013 as attached. A Heritage Impact Assessment will be compiled and attached during the EIA Phase of the project. Should it be necessary a wetland specialist will also be appointed to assist with wetland delineation and assessment.

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

Please refer to the Impact Assessment methodology attached.

v. The proposed method of assessing duration significance

Please refer to the Impact Assessment methodology attached.

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

Throughout the project. All completed reports and information documents will be sent to the Competent Authority.

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

1. Steps to be taken to notify interested and affected parties.

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

The following process will be undertaken during the Public Participation Process:

- * Site notices will be placed on the fence of the properties and on site to notify the public of the proposed prospecting,
- * Advertisements will be placed in the local newspapers,

- * A Background Information Document (BID) will be sent to all potential Interested and Affected Parties (I&AP) to notify them of the project and to request them to submit comments. The Potential I&AP will include the following:
 - Neighbours,
 - Stakeholders in the area,
 - Regulating Authorities,
 - Local and District Municipalities, including the Ward Councillor,
 - Competent Authority.

Comments received by I&AP will be logged in a comments and response register. Response letters will be sent to all comments received and all reports and information regarding the proposed project will be sent to the I&AP throughout the various phases of the project.

2. Details of the engagement process to be followed.

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

If any of the potential Interested and Affected Parties as identified in the above-mentioned section registers as an I&AP and requests to be consulted they will be consulted one-on-one. In the event that the community request to be consulted this will be done in the form of a public meeting.

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

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

Potential I&AP will be provided with a BID which will contain a locality map and background information regarding the prospecting operations to be conducted on the site. The potential I&AP will be given a 30 day period to comment and/or register as an I&AP.

Registered I&AP will receive all reports, including site plans and specialist reports and all information associated with the proposed project. They will also be notified of the Environmental Authorisation.

viii. Description of the tasks that will be undertaken during the environmental impact assessment process

The EIA process will include all the specialist reports, findings and assessments and more detailed information regarding the prospecting will be provided in the EIA Report. Furthermore, all activities which may have an impact on the environment during the prospecting will be assessed and a rating system will be used to determine the significance of the impacts.

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

<p>ACTIVITY whether listed or not listed. (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.).</p>	<p>POTENTIAL IMPACT (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)</p>	<p>MITIGATION TYPE (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation..</p>	<p>POTENTIAL FOR RESIDUAL RISK</p>
<p>Drilling, Excavation and/or pitting</p>	<p>Dust (air pollution), Noise, Surface disturbance, Soil loss, Loss of dolerite, Surface- and ground water contamination, Loss of vegetation</p>	<p>Noise control measures, Dust control measures, Stockpiling of topsoil, Maintenance of vehicles and machinery to prevent petrochemical spills,</p>	<p>Low</p>
<p>Stockpiling</p>	<p>Alien vegetation, Loss of topsoil, Erosion, Soil contamination</p>	<p>Stockpiling of topsoil in the correct manner, Erosion control measures (i.e. berms and trenches), Control and removal of alien species, Cleaning and prevention of all spills on stockpiles</p>	<p>Low</p>
<p>Loading, hauling and transport</p>	<p>Soil compaction, Dust, Vegetation loss, Noise,</p>	<p>Vehicle maintenance, Noise control measures, Dust control measures, Maintaining and using access roads,</p>	<p>Low</p>
<p>NOTE: THE PROCESSING PLANT, OFFICES AND OTHER INFRASTRUCTURE ASSOCIATED WITH IT FORMS PART OF THE EXISTING TAILINGS OPERATION</p>			

AND WILL BE REHABILITATED UPON CLOSURE OF THE TAILINGS OPERATION. IT WILL NOT BE DECOMMISSIONED AND REHABILITATED AFTER PROSPECTING.			

l) Other Information required by the competent Authority

- i) 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:-

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

The socio-economic condition of no person will be negatively affected by the proposed prospecting for diamonds on the land as described. However, the prospecting will be done by the applicant which currently employes local residents from Jagersfontein at the surface tailings operation. Should the prospecting require more people it will result in more people from the local community being employed at the operation which will have a positive impact on the socio-economic conditions of local residents.

2) 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)(j)(vi) and (vii) of that Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

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

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

Due to the nature of the activities to be undertaken (i.e. prospecting for diamonds) the applicant is limited to the area where the minerals may potentially be located. This is based on desktop studies according to geological maps and existing data of the area. Therefore the applicant cannot identify any location alternatives as the properties applied for are most likely to contain the mineral.

The activity is limited to the drilling of boreholes, trenching/pitting and bulk sampling. There are no alternatives to this activities as this is the only way to prospect for diamonds in order to locate the mineral to be mined.

Most of the prospecting will be conducted on areas where historic mining and/or disturbance during mining activities occurred and will also be limited to the areas where there is the highest potential to locate diamonds. However, the location of the trenching/pitting will only be confirmed after drilling of boreholes and sampling.

Technology to be used during prospecting is limited to the drilling of boreholes and excavations for trenching/pitting. This may also involve large diameter drilling to up to 450mm. The existing operation has an Dense Medium Separation (DMS) plant which will be used for the processing of the samples.

The option of not implementing the activity will result in the applicant not having the opportunity to prospect for diamonds on the properties. No further mining of diamonds will occur on the properties by the applicant which will result in job losses after completion of the current reprocessing of surface tailings. The applicant will remove all existing infrastructure after completion of the current activities and will rehabilitate the site.


j) UNDERTAKING REGARDING CORRECTNESS OF INFORMATION

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



Signature of the EAP
DATE: 20/04/2018

k) UNDERTAKING REGARDING LEVEL OF AGREEMENT

I Louis DE VILLIERS 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: 20/04/2018

-END-

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mr Isaacs

