



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Final SCOPING REPORT
FOR LISTED ACTIVITIES ASSOCIATED WITH PROSPECTING WITH BULK SAMPLING IN TERMS OF
SECTION 20 OF THE MPRDA

VIOOLSDRIF BLACK PROSPECT

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: : Zhongfei Mining Development (Pty) Ltd
TEL NO: : 063 821 6619
FAX NO:
POSTAL ADDRESS: : 52 Republic Street, Simonsig, Springbok, 8240.
PHYSICAL ADDRESS: : 52 Republic Street, Simonsig, Springbok, 8240.
FILE REFERENCE NUMBER SAMRAD: **NC 30/5/1/1/2/12377 PR**

5 July 2019
Report #: 2803/PR/FSR

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.

Table of Contents

1	OBJECTIVE OF THE SCOPING PROCESS.....	1
2	Contact Person and correspondence address	1
2.1	Details of the EAP who prepared the report.....	1
2.2	The qualifications of the EAP.....	1
2.3	Summary of the EAP’s past experience.....	1
3	Description of the property.	1
4	Locality Plan.....	2
5	Description of the scope of the proposed overall activity.....	5
5.1	Description of the Prospecting Right Area	5
5.2	Current geological model	5
5.3	Introduction to Proposed prospecting methods:.....	8
5.4	Schedule of Activities	11
5.5	Detail Description of proposed prospecting methodology	14
5.5.1	Description of Planned Non-Invasive Activities:.....	14
5.5.2	Description of Planned Invasive Activities:.....	15
6	Listed and specified activities	20
6.1	Listed Activities in tabular form.....	21
6.2	Listed activities in words:	22
7	Policy and Legislative Context.....	23
8	Need and desirability of the proposed activities.	24
8.1	Securing ecological sustainable development and use of natural resources	28
8.2	Promoting justifiable economic and social development	32
8.3	Cumulative Impact Assessment	37
9	Period for which the environmental authorisation is required	40
10	Description of the process followed to reach the proposed preferred site.	40
11	Details of all alternatives considered.....	41
11.1	Property on which or location where it is proposed to undertake the activity;.....	41
11.2	Type of activity to be undertaken;	41
11.3	Design or layout of the activity;	41
11.4	Technology to be used in the activity;.....	41
11.5	Operational aspects of the activity;	41
11.6	Option of not implementing the activity.....	41
12	Details of the Public Participation Process Followed	41
13	The Baseline Environmental attributes associated with the Site	53
13.1	Type of environment affected by the proposed activity.....	53
13.1.1	Geology.....	53
13.1.2	Topography.....	53
13.1.3	Soil	53
13.1.4	Existing land capability	53
13.1.5	Natural vegetation / plant life	53
13.1.6	Surface Water	57
13.1.7	Groundwater	57
13.1.8	Air Quality.....	58
13.1.9	Noise.....	58
13.1.10	Visual aspects	59
13.2	Description of the current surrounding land uses.	62
13.3	Description of specific environmental features and infrastructure on the site.....	63
13.4	Environmental and current land use map.....	63
14	Impacts identified	66

15	Methodology used in determining the significance of environmental impacts.....	75
16	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.....	76
17	The possible mitigation measures that could be applied and the level of risk.	77
18	The outcome of the site selection Matrix. Final Site Layout Plan.....	78
19	Motivation where no alternative sites were considered.....	79
20	Statement motivating the preferred site.....	79
21	Plan of study for the Environmental Impact Assessment process	79
21.1	Description of alternatives to be considered including the option of not going ahead with the activity.....	79
21.2	Description of the aspects to be assessed as part of the environmental impact assessment process.....	79
21.3	Description of aspects to be assessed by specialists.....	82
21.4	Proposed method of assessing the environmental aspects including the proposed method of assessing alternatives.....	82
21.5	The proposed method of assessing duration and significance	82
21.6	The stages at which the competent authority will be consulted	83
21.7	Particulars of the public participation process with regard to the Impact Assessment process that will be conducted.....	83
21.7.1	Steps to be taken to notify interested and affected parties.....	83
21.7.2	Details of the engagement process to be followed.....	83
21.7.3	Description of the information to be provided to Interested and Affected Parties.	84
21.8	Description of the tasks that will be undertaken during the environmental impact assessment process.	84
21.9	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.	84
22	Other Information required by the competent Authority.....	88
22.1	Compliance with the provisions of sections 24(4)(a) & (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:-	88
22.1.1	Impact on the socio-economic conditions of any directly affected person.	88
22.1.2	Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act.	88
23	Other matters required in terms of sections 24(4)(a) and (b) of the Act.	89
24	UNDERTAKING REGARDING CORRECTNESS OF INFORMATION	89
25	UNDERTAKING REGARDING LEVEL OF AGREEMENT	89

List of Photos

Photo 1 (a and b): Outcrops of thickly bedded black dolomite with vertical jointing which hopefully only occurs in the upper layer related to stress release during foliation	6
Photo 2: Overview of the central and southern end of the upper western black dolomite area	6
Photo 3: Overview of the central and southern end of the upper western black dolomite area	6
Photo 4: Percussion drill rig to be employed	16
Photo 5: Dust extraction system on percussion rig and sampling point for chips.....	16
Photo 6: Scale of core drilling equipment to be used on site	17
Photo 7: Core box containing drilled cores	17
Photo 8: Typical wire line cutting	18

Photo 9: Typical wire line cutting	18
Photo 9a: Ambient road dust levels.....	38
Photo 10: Illegal dumping in the north.....	39
Photo 11: Shows the very sparse soil and vegetation whi is unlikely to be disturbed to any significant extent by the proposed prospecting.....	54
Photo 12: Northward outward view from project camp site northern bulk sample pit.....	61
Photo 13: The interface of the Prospecting Project site with the buildings of the SANDF and church.....	61
Photo 14: Front view from the road screening much of the site from road views.....	61

List of Figures

Figure 1: Locality Plan	3
Figure 2: Detail Locality Plan	4
Figure 3: Geology	7
Figure 4: Proposed Prospecting Layout Plan	10
Figure 5: Diagrammatic pit plan and cross section	20
Figure 6: Excerpt from Municipal SDF (Municipal Context) showing site in “Orange River Water Corridor”	25
Figure 7: Excerpt from SDF : Rooiwal /Kotzeshoop Detail	26
Figure 8: Scoping Phase Engagement with surrounding owners	43
Figure 9: Surrounding Landowners	44
Figure 10: Vegetation Classification (Mucina and Rutherford, 2006)	55
Figure 11: Local CBA Mapping (2016 Northern Cape Mapping)	56
Figure 12: Surface Water Regime and topography on the central plateau	57
Figure 13: Visual Exposure of Prospecting and windrose	60
Figure 14: Surrounding Land Use	65

List of Diagrams:

Diagram 1: Municipal and ward context.....	62
--	----

List of Appendices:

Appendix 1:	Declaration and CV of EAP
Appendix 2:	Community Rights on State land Erf 226 Vioolsdrif and Community Support for Application by Zhongfei Mining Development through the Ward Councillor minutes of meeting held on 10-11-2018
Appendix 3:	Proof of advert and fence poster
Appendix 4:	Copy of correspondence sent
Appendix 5:	Copy of correspondence received
Appendix 6:	Environmental Awareness Induction Training
Appendix 7:	Site Layout Plans

List of Abbreviations:

Amsl	Above mean sea level
CBA	Critical Biodiversity Area
DMR	Department of Mineral Resources
EAP	Environmental Assessment Practitioner
EMP	Environmental Management Programme
I&AP	Interested and Affected Party

MWP	Mining Work Programme
ngl	Natural Ground Level
NID	Notification of Intent to Develop
ONA	Other Natural Area
SANBI	South African National Botanical Institute
SDF	Spatial Development Framework
SLP	Social and Labour Plan
WULA	Water Use Licence Application

1 OBJECTIVE OF THE SCOPING PROCESS

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
- f) 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.

2 Contact Person and correspondence address

2.1 Details of the EAP who prepared the report

Name of the Practitioner: Stephen van der Westhuizen assisted by Siphumelelo Mbali– Site Plan Consulting
Tel No: 021 854 4260
Fax No: 021 854 4321
e-mail address: siphumelelo@siteplan.co.za

2.2 The qualifications of the EAP

(With evidence attached as **Appendix 1**).

2.3 Summary of the EAP's past experience.

(EAP's curriculum vitae as **Appendix 1**)

3 Description of the property.

3.1 The Property

Farm Name:	Remainder of Erf 226 (Violsdrif)
Application area (Ha)	143.7888ha
Magisterial district:	Namaqualand
Distance / direction from nearest town	9km NW of Violsdrif Border Post
Surveyor General Code	C05300130000022600000

Land Owner	Republic of SA. Currently under Resolution of Community Land Claim by 3 CPAs
------------	---

3.2 Land Ownership/ Community Rights/ Right of Applicant to Lodge Application

Following earlier intention to lodge this application on this land in 2015/2016, the applicant was advised by the Regional Land Claims Commission (NC) that CPA's were being established to administer the land uses including the acceptance of mining applications in their capacity in relation to the State land ownership.

Consequently, during 2018, the applicant engaged with the community through a public meeting arranged through the Ward Councillor and NamaKhoi municipal offices during which the community support for the intended application by Zhongfei Mining Development was noted, as conveyed to the applicant in an email from the Ward Councillor Ms Daphne Markus being the minutes of the meeting held on 10/11/2018 as contained in Appendix 2.

During the draft Scoping Process, the now registered CPAs of Vioolsdrif, Rooiwal and Steinkopf have formally engaged in the process as "Landowners" and are herewith registered and affected parties.

4 Locality Plan

Overleaf

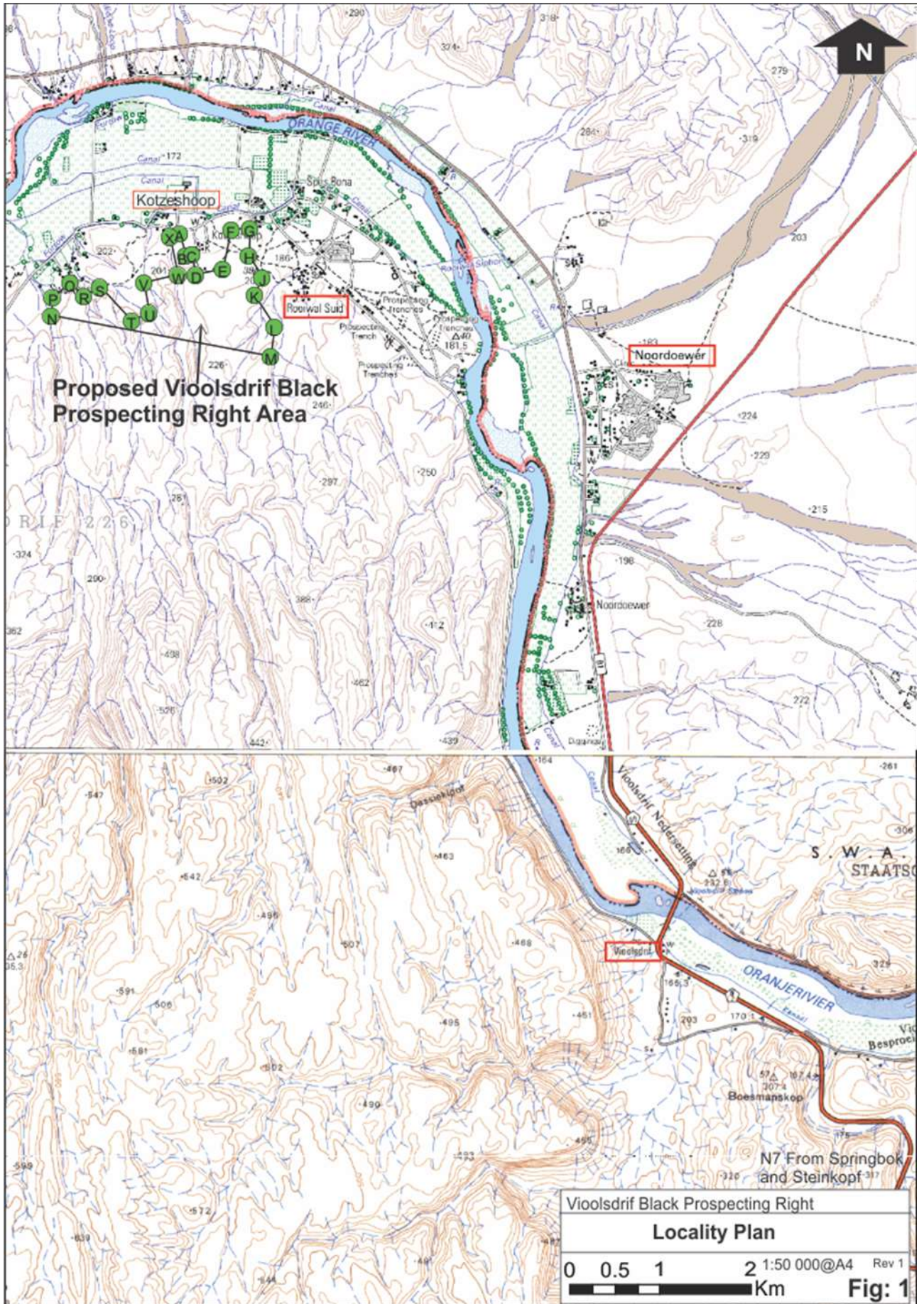


Figure 1: Locality Plan

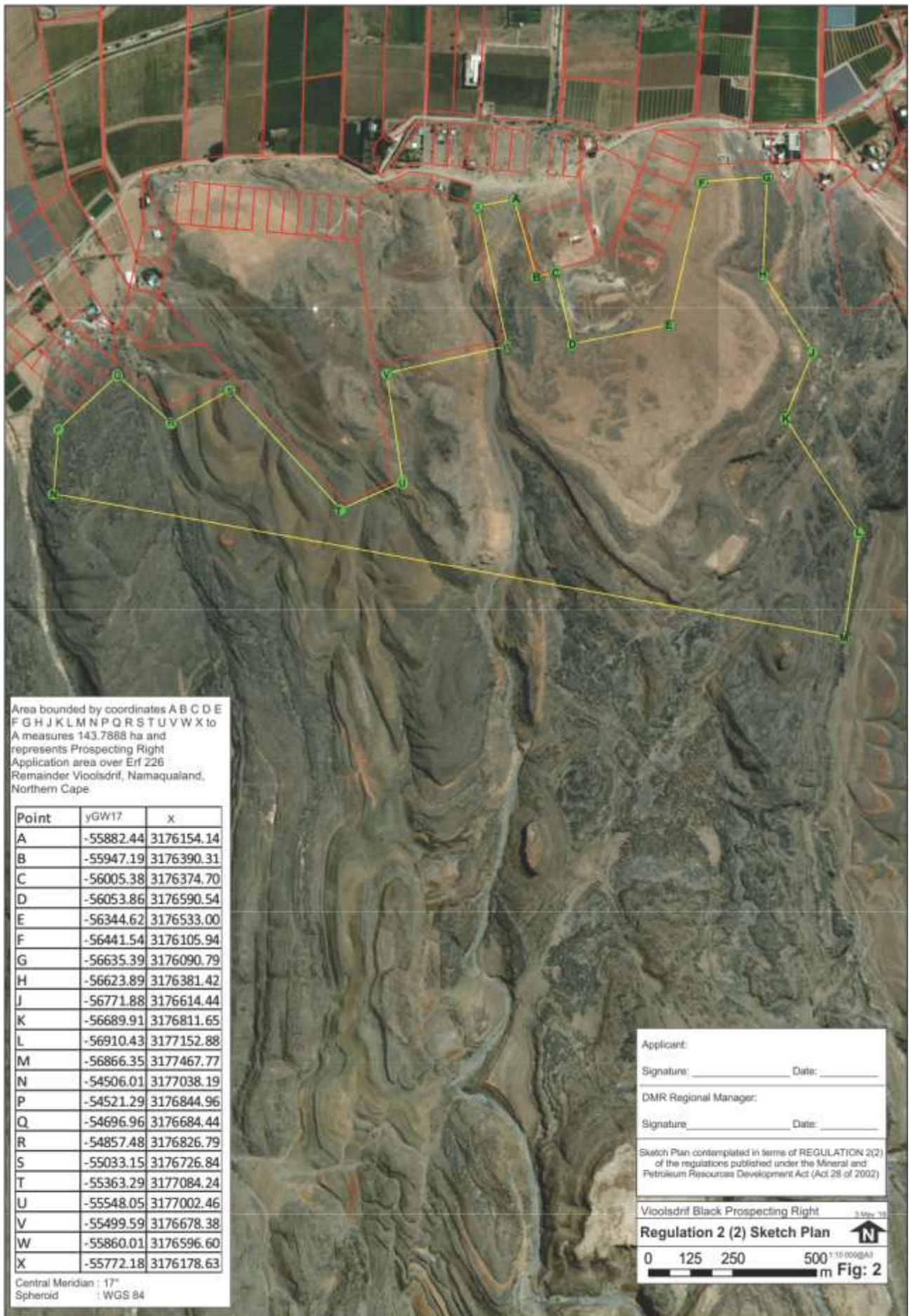


Figure 2: Detail Locality Plan

5 Description of the scope of the proposed overall activity.

The purpose of the Prospecting is to establish this indicated reserve as a proven Dimension Stone reserve, or disqualify it on the basis of Prospecting findings.

5.1 Description of the Prospecting Right Area

The proposed Prospecting Right area measures 143.7888 ha and is located entirely on the Remainder of Erf 226 in the Magisterial District of Namaqualand. Submitted coordinates as per figure 2 above:

Point	Y	X
A	-55882.44	3176154.14
B	-55947.19	3176390.31
C	-56005.38	3176374.70
D	-56053.86	3176590.54
E	-56344.62	3176533.00
F	-56441.54	3176105.94
G	-56635.39	3176090.79
H	-56623.89	3176381.42
J	-56771.88	3176614.44
K	-56689.91	3176811.65
L	-56910.43	3177152.88
M	-56866.35	3177467.77
N	-54506.01	3177038.19
P	-54521.29	3176844.96
Q	-54696.96	3176684.44
R	-54857.48	3176826.79
S	-55033.15	3176726.84
T	-55363.29	3177084.24
U	-55548.05	3177002.46
V	-55499.59	3176678.38
W	-55860.01	3176596.60
X	-55772.18	3176178.63

WG17°

Refer Figure 1 for Locality plan and Figure 2 for copy of sketch plan contemplated in terms of Reg 2(2).

5.2 Current geological model

The published geology sheet shows the entire area as being Nama Schwarzkalk Limestone (Dolomite). Identification of the site as a target area for Dimension Stone stems from the fact that a similar horizon of thickly bedded black dolomite from the same formation was successfully quarried as Dimension Stone in Namibia near Rosh Pinah some 30 years ago.

This Vioolsdrif target area presents:

- a) A large target outcrop area of the thickly bedded black dolomite seen in Photos 1 (a&b) below with the extent of the black dolomite outcrop seen in photos 2 and 3.

- b) Outside of the target outcrop area the limestone continues on the flat terrace but the black dolomite is overlain by a layer of yellow weathered dolomite, which, if suitably weathered to a hard yellow rock could constitute a 2nd target horizon for yellow/ brown dimension stone blocks, which if removed, would present fresh black dolomite below. Accordingly, Figure 3: Geology Plan shows the extent of the thickly bedded black dolomite outcrop and the area where the dolomite is overlain partly by yellow weathered dolomite, both of which will be assessed during prospecting. Given this geology, it requires a schedule of various prospecting methods.



Photo 1 (a and b): Outcrops of thickly bedded black dolomite with vertical jointing which hopefully only occurs in the upper layer related to stress release during exfoliation



Photo 2: Overview of the central and southern end of the upper western black dolomite area



Photo 3: Overview of the central and southern end of the upper western black dolomite area

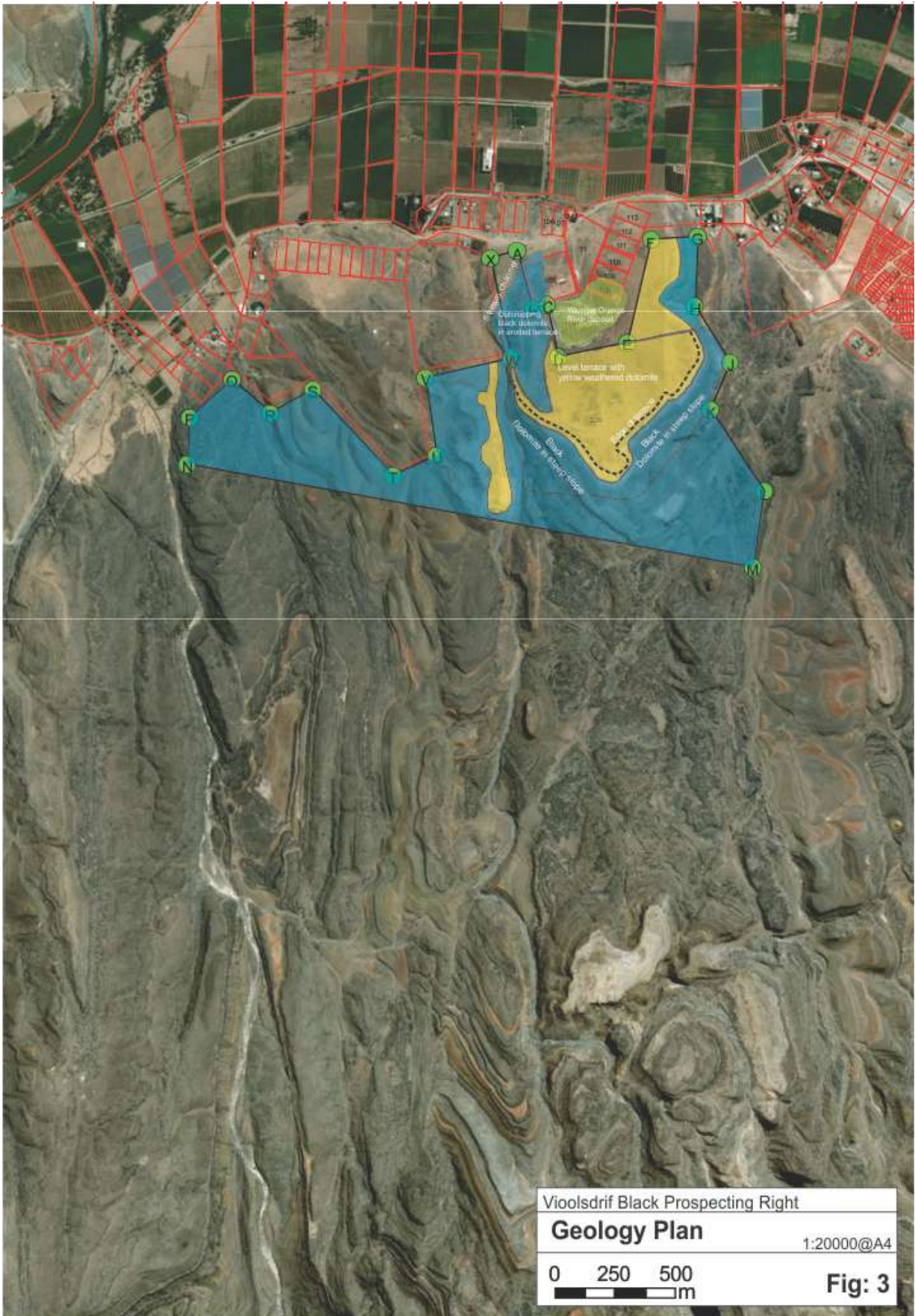


Figure 3: Geology

5.3 Introduction to Proposed prospecting methods:

The Prospecting methods and scheduling of their sequence are dictated by the geological characteristics of both the black dolomite outcrop area and the yellow weathered area and will consist of the following Prospecting Methods as also shown in Figure 4: Prospecting Layout Plan

- a) Non-invasive surface mapping and hand sampling for polishing hand samples to test colour and determine the exact positions and number of holes and sequence for “Percussion Drilling” and will extend over the entire Prospecting Right Area and indicate any further areas targeted by initial geological mapping for percussion drilling.

- b) Percussion Drilling; Total planned 12 holes as follows:
 - within the black dolomite outcrop area; will be to determine the thickness of the exposed black dolomite and guide the selection of sites (detailed positions and number) for the subsequent core drilling and be able to specify core drilling depth required.
4 x Percussion Holes are identified within the black dolomite outcrop area and 1 in the black valley area in the far south.

 - in the yellow weathered outcrop area; will be to determine the hardness and thickness of yellow material above black dolomite and if possible, the thickness of the underlying black dolomite horizon, in so doing determining the target area of both yellow weathered and underlying black dolomite which would be considered in the further prospecting phases.

7 broad-spaced Percussion Holes are identified at this stage for drilling in the yellow weathered area.

- c) Core Drilling – Total planned core holes to be drilled is 7.

The purpose of the Core Drilling will be;

- to determine the rock characteristics and consistency of the colour, texture and any blemishes in the vertical rock profile. It will also reflect any horizontal bedding or joint planes, determining the maximum thickness of blocks which could be cut. Inclined core drilling may also be applied to test the depth of the vertical jointing seen on surface of the outcrops (as in Photos 1 (a and b), but which jointing is hopefully limited to the upper layer only.
- the recovered cores can also be split and polished to test the polished surface texture and colour in the depth profile of the dolomite body.
- to inform the decision on the exact placing of between 1 and 5 bulk sample block cutting pits in the black dolomite outcrop area.
- to determine if any core holes will be drilled in the yellow weathered dolomites; allowance is currently made for 2 holes.

In the black outcrop area, 5 core holes are envisaged as shown in the Prospecting Layout Plan. In the yellow weathered dolomite area 2 core holes are provided for.

At this stage, while the two core drill hole positions are identified in the yellow weathered area, their drilling will be directly dependent on the findings of the detailed surface mapping and Percussion Drilling. Again, if core holes are drilled, they will have the aim of determining the texture, hardness and colour of the yellow weathered horizon as well as jointing thereof.

d) Bulk Sample Block Cutting Pits -

The cutting of Dimension Stone size blocks measuring up to 3m long x 1.8 m high x 2.1 m wide (11.34m³, if possible (30 tons) at each of the bulk sample block cutting pits, will determine/ prove:

- (i) The horizontal joint spacing/ bedding thickness and the depth to which the vertical surface joints seen in Photos 1a and 1b persist, as narrow spaced jointing would disqualify that area of the reserve or indicate the maximum size of small blocks, which could be processed for tile production.
- (ii) The colour; either deep black or brown yellow and their consistencies.
- (iii) Any blemishes e.g. white colour bands or flecks in the black rock, which could disqualify its selection for Dimension Stone.
- (iv) Any tendency of the yellow brown material to crumble.
- (v) The market response and value, by sending the blocks to the main cutting yards in the world, where the blocks will be cut and polished to tile and slab sizes for presentation/ sale into the market to test price.

At this stage, the Prospecting Layout Plan considers 5 possible sites in the black outcrop area for bulk sample cuts of various extents with the number of bulk sample sites and their extents to be dictated by the outcome of the core drilling in those optional areas.

Only one (1) possible yellow weathered dolomite Bulk Sample Cutting Pit is envisaged at this stage in the yellow weathered dolomite area. The methods of conducting these activities are illustrated in Photos 8-9 in paragraph 5.5.2.

The schedule in Paragraph 5.4 reflects the required scheduling of the various prospecting methods/ phases, given that the methods fall in a hierarchy dependent on the findings of the earlier method.

Paragraph 5.5 then provides a description with photos of the planned invasive activities (equipment) being Percussion Drilling, Core Drilling and Bulk Sample Block Cutting in pits.

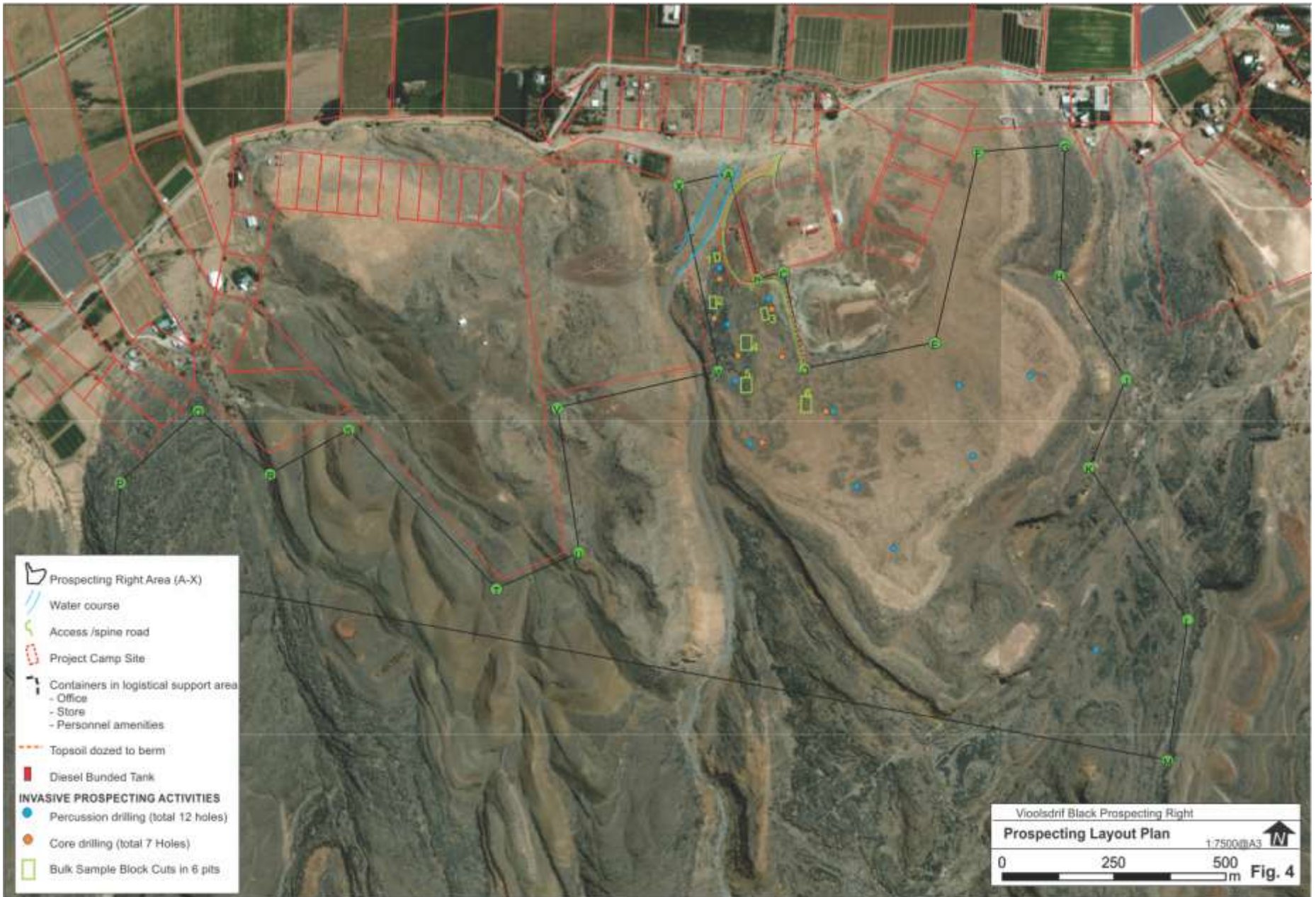


Figure 4: Proposed Prospecting Layout Plan

5.5 Detail Description of proposed prospecting methodology

5.5.1 Description of Planned Non-Invasive Activities:

The following main non-invasive site activities are planned:

Phase	Activity: (what are the activities that are planned to achieve optimal prospecting)	Notes
1	Pre-establishment phase	
	1.1. Geologist maps detailed geology and modifies provisional layout plan for drill and block cutting sites	Provides basis for finalising invasive activity sites
	1.2. Applicant considers modified number of selected sites and schedule	
	1.3. Finalise prospecting plan and schedule to begin invasive prospecting.	Finalisation of scheduling prospecting activity sites
	1.4. Mark provisional drilling, block cutting sites and project camp site by GPS	Pegging finally chosen invasive sites
	1.5. Applicant conducts environmental induction training	Environmental induction training
2	Establishment phase	
	2.7. Demarcate and establish access roads to site and core drill and block cutting sites by loose rock removal and gravel where required	Demarcation of final access and invasive sites
3	Operational phase percussion drilling	
	3.3. Implement hydrocarbon management, if refuelling is required	Train staff to implement when required
	3.6. On completion of percussion holes, geologist and mine planner consider percussion drilling logs and prescribe sites for core drilling	
4	Operational phase core drilling	
	4.5 Place cores in core boxes for storage in project site container	Core logging and storage
	4.6 Implement hydrocarbon management	Train staff to implement when required
	4.9. On completion of core holes, geologist and mine planner consider core drilling logs and inspect cores and prescribe sites for bulk sample block cutting	Geologist and mine stone specialist consider stone quality after core drilling
5	Operational phase block cutting	
	5.13. At any stage in prospecting and especially sample pitting, geologist and mine planner, based on: <ul style="list-style-type: none"> • Colour consistency/ variation • Blemishes • Joint spacing controlling block size • On-site polish achieved • Market demand and price Take decision to either proceed to: <ul style="list-style-type: none"> c) Mining Right Application OR d) Initiate rehabilitation and preparation of Closure Plan 	Ad hoc inspections by Geologist, company director and stone specialist to keep abreast of prospecting results in terms of quality to meet market requirements and conclude on suitability of pit area from which sample blocks derive
6	Decommissioning phase	
	6.7 Conduct final performance assessment for closure.	Check on rehabilitation level achieved per pit
	6.8 Lodge Closure Application	Compile and lodge application
7	Aftercare period	
	7.1. Remove alien vegetation, if present	Vegetation check for sign-off

The following tests are required on each of the core samples and bulk sample sampling and testing as the case may be. Testing of dimension stone is largely a non-technical process. The core samples and the cut sample blocks will be subject to the following inspections/actions by the applicant:

- a) Assessment of vertical and horizontal joint/bedding plane spacing to determine if a minimum spacing is achieved to qualify for tile cutting or slab cutting
- b) Depth of colour and colour consistency
- c) The polish achieved by polishing of split cores and block/slab faces
- d) Full block assessment of slab cutting from blocks, polishing of slabs and distribution thereof to international buyers for testing of market and pricing

5.5.2 Description of Planned Invasive Activities:

The main invasive site activities are planned:

Phase	Activity (what are the activities that are planned to achieve optimal prospecting)	Notes
3	Operational phase percussion drilling	
	3.2. Drill percussion hole and each subsequent hole	Drilling of percussion holes to 18m as per para a)
4	Operational phase core drilling	
	4.4. Drill core hole and each subsequent core hole	Drilling of core holes as per para b)
5	Operational phase block cutting and each block cutting site	
	5.5 Cut and drill blocks per block cutting pit	Bulk sample cutting of blocks as per para c)

a) Percussion Drilling: Methodology and Location :

(1) Percussion drilling method

The percussion drilling rig will be a self-propelled (tracked) diesel powered hydraulic rig as per ref Photo 4 capable of moving between percussion holes without assistance. The rig can drill to depth of 15-18m using 5-6 x 3m rods and will be equipped with a cyclone dust extraction and bagging system photo 5. The rigs will be refueled by bowser with sufficient diesel for a full day's drilling. Percussion sample chips will be gathered by shovel held periodically at the hole during drilling at 2m intervals with samples to small plastic GladwrapTM sandwich bags which are koki pen numbered per hole per rod and placed in rows in flat cardboard boxes for inspection/logging by the geologist and mine planner.

(2) Percussion drilling location and time required

- Location : The provisional locations of 4 holes in the black dolomite outcrop area and 8 holes in the yellow weathered area **total 12 holes** are provided for at this stage in the prospecting layout plan, the positions and number of which would be finalised by the geological mapping in pre-establishment phase 1.1.
- Time required: Allowing for the drilling to **15-18m per hole** and time for drill rig to move between holes requiring no road, only local moving of loose rock, and accepting the drilling of 5-7 holes per day, the drilling of 12 holes **requires 2-3 days.**



Photo 4: Percussion drill rig to be employed



Photo 5: Dust extraction system on percussion rig and sampling point for chips

b) Core Drilling: Methodology and Location

(1) Core drilling method

A core drilling rig generally as seen in photo 6 below with diesel motor and drill mounted on a skid platform will be used. It will require a support vehicle and trailer for relocating the rig, delivering 3m core rods and core boxes to and between sites.



Photo 6: Scale of core drilling equipment to be used on site



Photo 7: Core box containing drilled cores

All cores will be marked and placed in core boxes to be stacked in the project camp site for logging, photographing by the geologist and taking of samples for core splitting and polishing.

(2) Core drilling location and time required

- Location : The provisional locations of 5 core holes in the black dolomite outcrop area and 2 in the yellow weathered area **total 7 holes** are provided for in the prospecting Layout Plan Figure 4, the positions and number of which would be finalised by the geologist and mine planner from the outcome of the percussion drilling in terms of phase 3.6.
- Time required : Allowing for the drilling to average **10m per hole** and time to relocate drill rig between holes requiring basic roadway for transport vehicle, and accepting the drilling of 1 hole per day, the drilling of 8 holes would require the rig to be on site for a minimum of **10 days** plus establishment and decommissioning at various intervals based on earlier core hole results.

c) **Bulk sample block cutting in pits: Methodology and Location**

(1) **Block cutting in pits: Method - Wire-line block cutting**

This method will be applied in all areas and will not require levelling of the outcrop before cutting (as is the case where rail mounted circular saws are employed). This combination of mobile pneumatic drilling of small diameter holes through which the wire-line cutting cable is fed to cut blocks using an electric wire-line cutting unit is as seen in Photos 8 and 9 will be employed with an accompanying mobile diesel powered genset.



Photo 8: Typical wire line cutting



Photo 9: Typical wire line cutting

Once the sides of a block are cut free, the base of the block will be removed by short horizontal drilling at close spacing and feathering (wedge splitting of the block from the parent rock below). Block removal from the pit will either be by

crane or front end loader with 30 ton capacity depending on access into the pit at various stages of pit development.

(2) Block cutting location and time required

- Location of block cutting pits At this stage as shown in Prospecting Layout Plan, 5 pit localities have been identified within the black dolomite outcrop area and a further 1 pit locality in the yellow weathered area totaling 6 block cutting pits. Both the number and locality of the pits will be finally dictated by the geologist and mine planners consideration of the core drilling results.
- Time required Allowing for the establishment of 6 bulk sample block cutting pits in a range of sizes to yield 256 gross blocks (51 expected saleable blocks) over a period of 24 months is provided for phase 5 block cutting.

Number of pits	Length	Breadth	Depth (m) Depth(blocks)	Number of blocks
1	12m	5m	3.6m 2 blocks	16
2	15m	10m	3.6m 2 blocks	30 each
3	30m	20m	5.4m 3 blocks	60 each
6 pits total				256 blocks

- Waste rock management as pit backfill

Of the 256 blocks released it is estimated that 20% will be recoverable saleable blocks (i.e. 51 blocks) which will be dispatched from the site to test the market. The remaining 205 blocks will be broken or unsaleable and will be backfilled into the pit. The pit from which 20% has been removed will therefore have capacity for ± 1.25 bulking factor of the broken blocks and accordingly, it is expected that the backfill may only require slight doming above the backfill pit.

(3) Diagrammatic pit plan and cross section

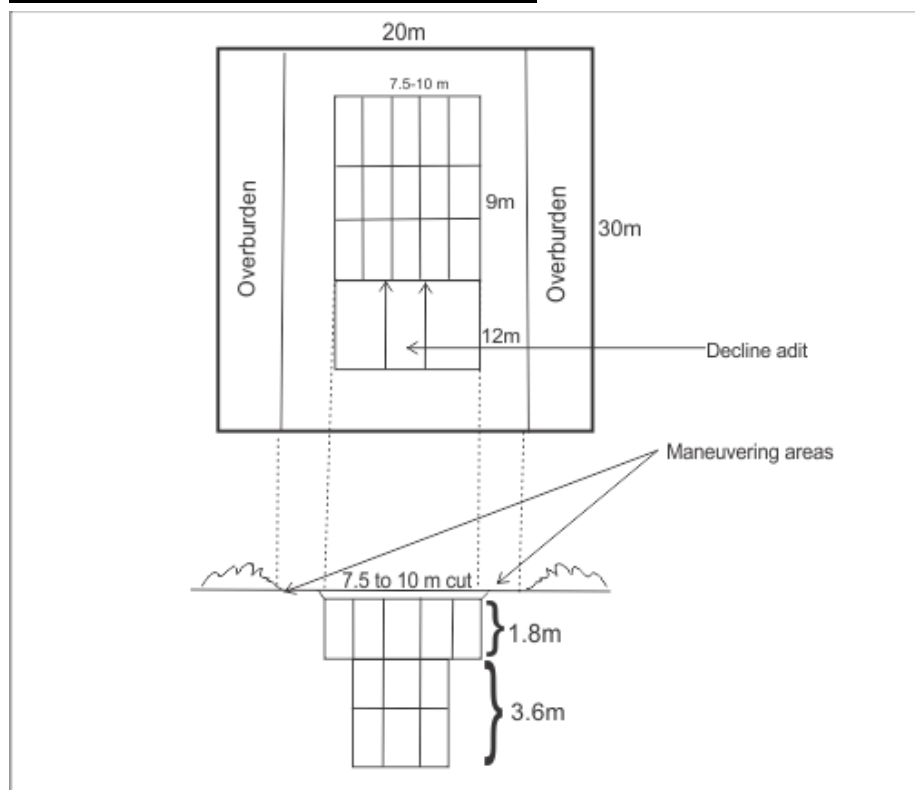


Figure 5: Diagrammatic pit plan and cross section

6 Listed and specified activities

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

Refer Proposed Prospecting Layout Plan Figure 4 above.

In order to determine listed activities, cognisance must be taken of location of national parks and formally protected areas, CBA's, Endangered Vegetation Types.

The site is not located within a National Park or formally protected area but is located 8.5km from the eastern boundary of the Richtersveld World Heritage Site and is within the Richtersveld Geographical Priority area of SKEP.

The site is largely located in an area classified as CBA2 in terms of the Northern Cape's CBA mapping published in 2016. A small section in the west is located in CBA1 by virtue of its location close to the stream channel.

In respect of vegetation, the site is located in the Northern Nababiepsberge Mountain Desert vegetation type. The vegetation type is not classified as Critically Endangered, Endangered or Vulnerable in terms NEM:BA published under GNR34809 (2011). The following is copied from the Mucina and Rutherford description:

"A large plateau of black limestone, south of the Orange River, west of Violsdrif, east of Helskloof with a southern boundary 15–20 km south of the river. Altitude about 180–765 m....Least threatened. Target 34%. None conserved in statutory conservation areas. Large parts mostly inaccessible,

hence well preserved”.

6.1 Listed Activities in tabular form

NAME OF ACTIVITY	Aerial extent of Activity (Ha or m ²)	LISTED ACTIVITY (Mark with X)	APPLICABLE LISTING NOTICE (GNR 983- 985)	WASTE MANAGEMENT AUTHORISATION
Application for Prospecting Right (including Bulk Sampling by Section 20 Application)	143.7888ha	X	GNR 983: Activity 20 GNR 984: Activity 19	
Total disturbance area = 6750 + 7000 + 300 + 315 + 6000 + 1400	±21 765m ²	X	GNR983: Activity 27	
1. Pre-Establishment Phase				
1.1. Geologist checks provisional layout plan for drill and block cutting sites	NA			
1.2. Mark drilling, block cutting sites and project camp site by GPS	NA			
2. Establishment Phase				
2.1. Fence the project camp site	375m fence surrounding 6 750m ² area			
2.2. Remove topsoil from access / spine road to perimeter berm and establish road (Wider than 4m wide)	7 000m ²	X	GNR 983: Activity 12 GNR 985: Activity 4 GNR 985: Activity 12	
2.3. Remove topsoil from project camp site to perimeter berm	6 750m ²	X	GNR 985: Activity 12	
2.4. Place logistical facilities (Office, Stores, Personnel Amenities, Workshop containers, Bunded fuel tank <30kl and genset or transformer and yellow fleet as required)	NA			
2.5. Demarcate and establish access roads to block cutting sites by loose rock removal and gravel where required. 350 x 4m wide to the block sites (Not applicable to drill sites)	1 400m ²	X	GNR 985: Activity 4. GNR 985: Activity 12	
3. Operational Phase Percussion drilling				
3.1. Establish percussion drilling at each site and conduct drilling (Max 25m ² disturbance per site)	12 holes x 25m ²	X	GNR 985: Activity 12	
3.2. Tidy up each site and cap hole with concrete plug	±300m ²	X	GNR983: Activity 22	
4. Operational Phase Drilling at each core drilling site				
4.1. Establish core drill at each hole position and conduct core drilling (±40m ² disturbance per site)	7 holes x 45m ²	X	GNR 985: Activity 12	
4.2. Provide water by tanker truck to each hole position	Assume 1 kl per hole			

NAME OF ACTIVITY	Aerial extent of Activity (Ha or m ²)	LISTED ACTIVITY (Mark with X)	APPLICABLE LISTING NOTICE (GNR 983- 985)	WASTE MANAGEMENT AUTHORISATION
4.3. Tidy up the site and cap hole with concrete plug	315m ²	X	GNR983: Activity 22	
5. Operational Phase Block Cutting at each block cutting site				
5.1. Strip topsoil if present and stockpile to berm (Min 600m ² each. Say 1 000m ² each x 6 sites)	6 000m ²	X	GNR 985: Activity 12	
5.2. Strip overburden if present to pit perimeter berm for reuse in rehabilitation	Irrelevant. Will be backfilled			
5.3. Establish cutter tracks and bolt to rock and mount cutter	NA			
5.4. Establish mobile genset to power cutter	NA			
5.5. Cut and drill blocks	256 blocks			
5.6. Apply wedges or black powder to release block	256 blocks			
5.7. Remove block by mobile crane or Front end loader to haul truck	256 blocks			
5.8. Haul truck to dispatch blockyard	256 blocks			
5.9. Load and deliver blocks to port	51 blocks			
5.10. Backfill pit with waste rock	6 pits			
5.11. Replace overburden from perimeter berm	6 pits			
5.12. Replace topsoil (if present)	6 pits			
6. Decommissioning Phase				
6.1. Remove diesel tank, bund and apron. Remove all plant and equipment from sites and project camp. Remove logistical containers: Office, stores, personnel amenities and workshop	As required	X	GNR983: Activity 22	
6.2. Scarify hardened areas (roads and project camp area)	15 150m ²	X	GNR983: Activity 22	
6.3. Replace topsoil and grass seed	15 150m ²	X	GNR983: Activity 22	
6.4. Remove fence	375m	X	GNR983: Activity 22	
6.5. Conduct final performance assessment for closure.				
6.6. Lodge Closure Application				
7. Aftercare Period				
7.1. Remove alien vegetation, if present				

6.2 Listed activities in words:

GNR983: Activity 12: The development of infrastructure (road) with a physical footprint of 100 square meters or more within 32m of a watercourse, measured from the edge of a watercourse.....

GNR983: Activity 20: Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources

Development Act, 2002 (Act No. 28 of 2002), including— (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource...

GNR983: Activity 22: The decommissioning of any activity requiring –...(i) a closure certificate in terms of section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002); or...

GNR983: Activity 27: The clearance of an area of 1ha or more, but less than 20ha of indigenous vegetation.... {Note : This applies to the activities in total}

GNR 984: Activity 19: 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 ...

GNR 985: Activity 4: Development of a road wider than 4m in
 (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;
 (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
 (gg) Areas within 10km from national parks or world heritage sites

GNR 985: Activity 12: The clearance of an area of 300m² or more of indigenous vegetation.... Within critical biodiversity areas identified in bioregional plans.

7 Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE POLICY / LEGISLATIVE
National Environmental Management Act	Entire document including public participation	Environmental Authorization from DMR as competent authority
Mineral and Petroleum Resources Development Act	Template for Scoping Report	DMR application and process
Municipality's SDF	Need & Desirability (Para 9)	End Use informant
National Water Act (<i>inter alia</i> S21)	14.1.8 and 14.1.9	Water Use Licence
N Cape 2016 Mapping of CBA's (from SANBI website)	Vegetation / Specialist Study	Specialist study required
Heritage Resources Act (S38)	23.1.2	Specialist study required
EMF	Need and Desirability (Para 9)	End Use Informant
EIA Guideline and Information Document Series' "Guideline on Need and Desirability"	Need and Desirability (Para 9)	Guideline for information utilized in this document
EIA Guideline 5 Assessing alternatives and impacts	Cumulative Impact Assessment (Para 9.2.1)	Guideline for information utilized in this document
NEMWA	EMP	The backfill of cut / broken material does not require Waste Licence.

8 Need and desirability of the proposed activities.

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

The EIA Guideline and Information Document Series' "Guideline on Need and Desirability" dated 2017 has been used to consider this aspect.

Important: The actual prospecting takes place in the short term (relatively speaking) and as a result the need and desirability should not **only** focus on the actual prospecting phase of this site's lifespan but also concentrate on the long term / permanent post prospecting land use proposal (**assuming that no further mining is contemplated**). As background to the following paragraphs, the **proposed eventual land use is to eventually return the rehabilitated area as a part of the current wilderness /grazing area.**

Need refers to timing of a project whilst desirability is defined to consider the placing of the activity.

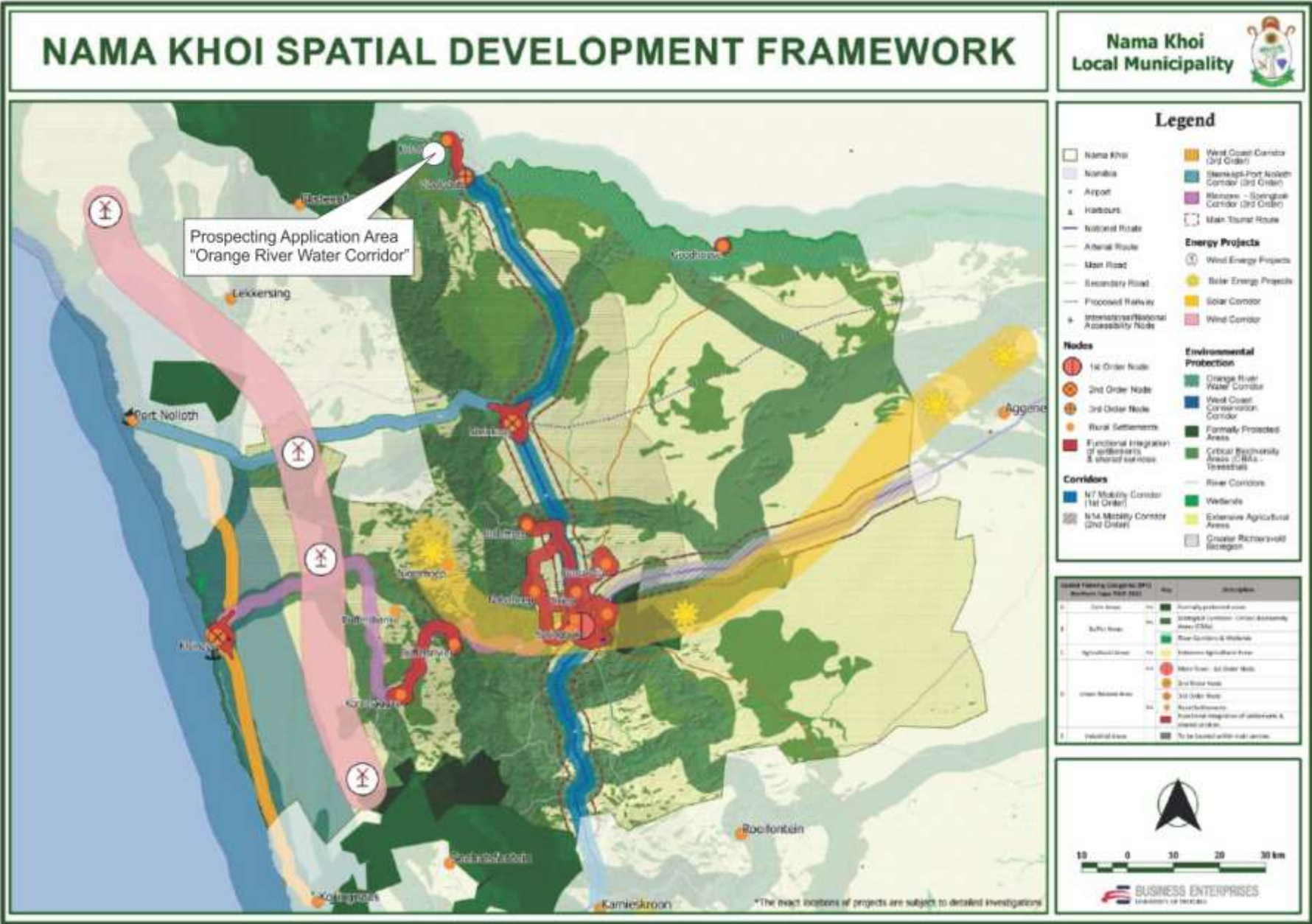


Figure 6: Excerpt from Municipal SDF (Municipal Context) showing site in "Orange River Water Corridor".

BROAD DEVELOPMENT FRAMEWORK: KOTZESHOOP

LEGEND:

-  Small-scale subsistence farming to be investigated: Chicken farming and; Hydroponics
-  Investigate alternative solar energy projects
-  Utilisation of mobile services (i.e. clinics and libraries)
-  Future development and growth – possible township expansion
-  Potential for water irrigation schemes to be investigated
-  Upgrading of road infrastructure to Vioolsdrift
-  Conservation of Oranje river system
-  Investigate feasibility of a water transport system (Oranje river)
-  Marketing and support for eco- and adventure tourism
-  Upgrading of ICT networks
-  Investment and upgrading of existing schools to cater for learners from both Kotzeshoop and Vioolsdrift
-  Development of efficient public transport system (shuttle services) to transport residents to Vioolsdrift and vice-versa.

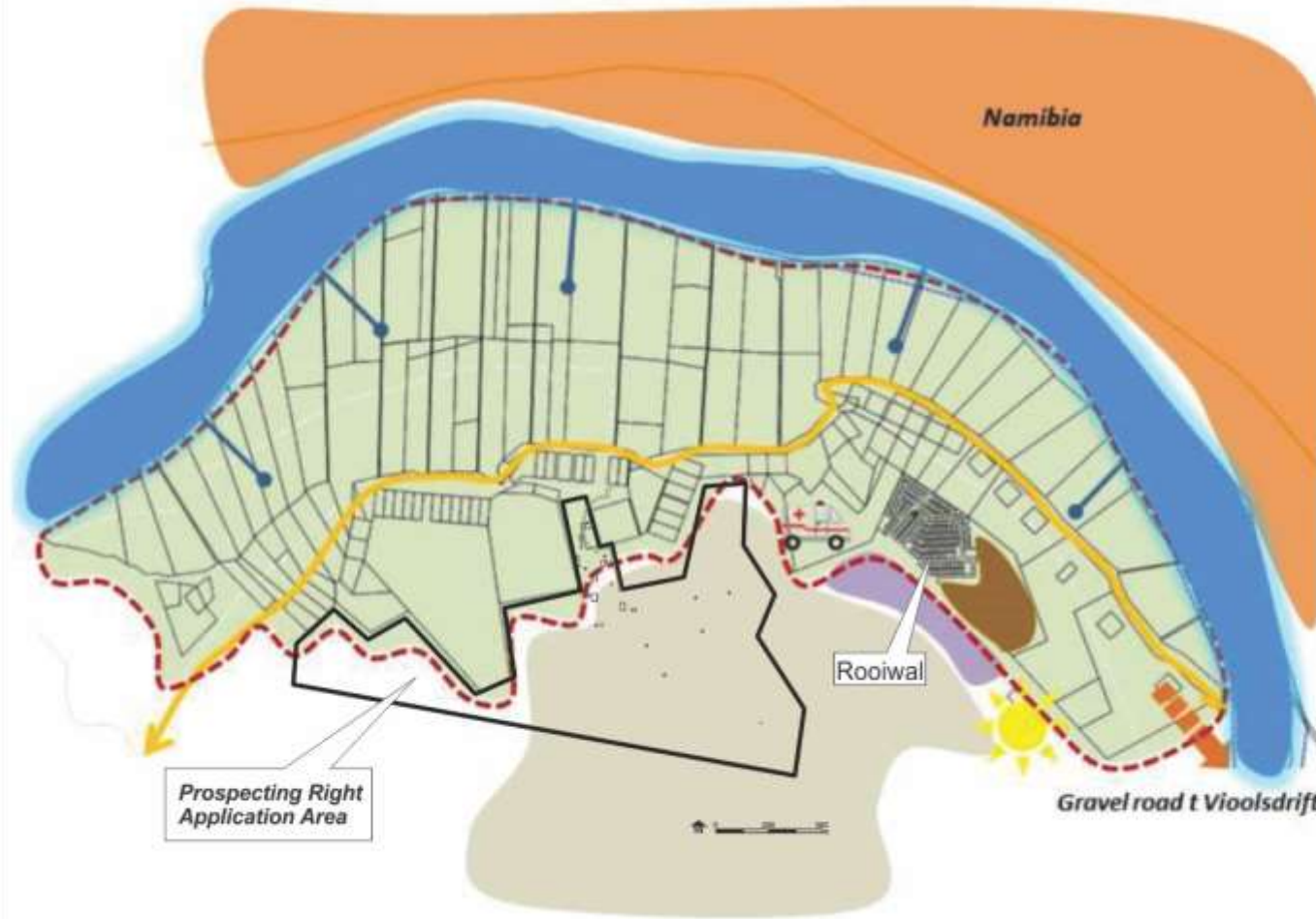


Figure 7: Excerpt from SDF : Rooiwal /Kotzeshoop Detail

Figures 6 and 7 above contain excerpts from the SDF for Nama Khoi Municipality. The site is located in an area categorised as “Orange River Water Corridor”. Furthermore, the site is located in CBA which forms part of the buffer zone SDF category.

The SDF contains the following information in this respect:

- The Orange River Corridor:
“The Orange River Corridor provides ample opportunities for tourism development including eco-tourism, and there must be a focussed effort to attract uses related to the tourism and hospitality industry to this corridor”.

Under SDF Proposals:

“ORANGE RIVER CORRIDOR

- To address the problem of invasive species threatening the Orange River’s health by providing effective control and eradication strategies.
- To develop specific guidelines for development, farming and tourism activities (including four-by-four routes) along the Orange River to ensure the conservation of this sensitive zone (river embankments)”.

And a quote from the “Scenario 3: A future imagined scenario”

“...opportunities presented by the coast line, the Orange River, the mineral deposits and the natural and agricultural land will be exploited in a meaningful and sustainable manner to benefit the local communities and future generations.

- Buffer Areas

Spatial objectives for Buffer areas (which include CBA Corridors):

“CORE & BUFFER AREAS

- To protect and manage the following environmentally important areas in line with the objectives and targets of the NBSAP:
 - The western part of the local municipality from the coast to the east of the N7, which has been identified as a SANBI priority area; and
 - The western mountain ranges including the Kamiesberg and the Hantam which has been identified as a SANBI Escarpment.
- To protect the natural spaces affected by the Terrestrial and Aquatic Critical Biodiversity areas against development and overgrazing, due to its vital role in maintaining biodiversity.
- To support the Critical Biodiversity Corridor Linkages towards the surrounding municipalities.
- To expand the three statutory protected conservation areas in the municipal area, i.e. Goegap Provincial Nature Reserve, Namaqua National Park and Nature Reserve.
- To rehabilitate all mining areas and damaged areas in the region and to remove and terminate unwanted activities and undesirable structures in and around protected areas.
- To investigate and eradicate the invasive Prosopis tree which poses a significant threat to biodiversity and ecosystem services in the Northern Cape Province of South Africa”.

The following tables are from the published 2017 Guideline on Need and Desirability

8.1 Securing ecological sustainable development and use of natural resources

1. How will this development (and its separate elements/aspects) impact on the ecological integrity of the area?		
1.1.	How were the following ecological integrity considerations taken into account:	
1.1.1.	Threatened Ecosystems	This site is located in an area designated as CBA 2 in the CBA mapping for the Northern Cape. Furthermore it is located in the Orange River Water Corridor and Buffer classification in the SDF. The site is also located within 10km of the Richtersveld World Heritage Area and with the Richtersveld Geographical Priority Area of SKEP.
1.1.2.	Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure	
1.1.3.	Critical Biodiversity Areas (“CBAs”) and Ecological Support Areas (“ESAs”),	These areas do not preclude prospecting but it is important that planning and additional controls be put in place to limit impact to an absolute minimum.
1.1.4.	Conservation targets.	The site falls within the Northern Nababiepsberge Mountain Desert vegetation biome (Mucina and Rutherford, 2006), which is not classified as Critically Endangered, Endangered nor Vulnerable in terms of the NEM:BA listed Ecosystems (GNR 32689). Currently 99% of the 245.9km ² vegetation type is undisturbed. “Target 34%. None conserved in statutory conservation areas BUT large parts mostly inaccessible, hence well preserved” – Mucina et Rutherford, 2006
1.1.5.	Ecological drivers of the ecosystem.	The vegetation is one the driest forms of the biome. Such sparse vegetation in drier seasons becomes particularly harsh habitat for fauna (and flora). The region is however intersected by a series of ephemeral water courses where vegetation is thicker. The vegetation in these water courses, although quite common species, does provide a habitat for foragers and other fauna, and must be conserved as vital component of the habitat type.
1.1.6.	Environmental Management Framework	No EMF could be located but the SDF has been used (which SDF would have had the EMF considered during its formulation).
1.1.7.	Spatial Development Framework, and	The SDF for the Nam Khoi Municipality (2014) classifies the area as Orange River Water Corridor and Buffer 2. Refer Figure 6 and the description which follows that figure.
1.1.8.	Global and international responsibilities relating to the environment (e.g. RAMSAR sites, Climate Change, etc.).	The Richtersveld World Heritage area is located less than 10km west of the site and will not be disturbed by the proposed prospecting. This has been noted in the listed activities.

1.2.	How will this development disturb or enhance ecosystems and/or result in the loss or protection of biological diversity? What measures were explored to firstly avoid these negative impacts, and where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts	<p>The proposed prospecting consists of a series of percussion holes, core holes and 6 pits for bulk sampling of the material. Despite the Least Threatened status of the vegetation but given the location of the area in a CBA and buffer area of the SDF and in SKEP, a specialist botanist will be tasked to undertake assessment and possibly adjust location of proposed activities slightly to eliminate any impact on vegetation.</p> <p>All mitigation and monitoring efforts aimed at minimising or preventing any negative impacts will be detailed in the future EIA/EMP.</p>
1.3.	How will this development pollute and/or degrade the biophysical environment? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	<p>Prospecting / bulk sampling without rehabilitation could result in significant and long term degradation of the site, however the proposed activities consists of removal of replacement of topsoil and overburden after backfill of waste blocks in an attempt to reinstate natural soil profile and maximize natural revegetation (if removed). The site is in a dry area and natural revegetation will take and extended period.</p> <p>The only other real risk of pollution to the site and surrounds is through hydrocarbon pollution. All mitigation and monitoring efforts aimed at minimising or preventing any negative impacts will be addressed in the upcoming EIA/EMP which will contain full Hydrocarbon policy.</p>
1.4.	What waste will be generated by this development? What measures were explored to firstly avoid waste, and where waste could not be avoided altogether, what measures were explored to minimise, reuse and/or recycle the waste? What measures have been explored to safely treat and/or dispose of unavoidable waste?	Minimal waste is generated at this site. The waste which is generated is dispatched by "bakkie" to Vioolsdrift for handling in terms of that town's waste disposal.
1.5.	How will this development disturb or enhance landscapes and/or sites that constitute the nation's cultural heritage? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	The application will be subject to full heritage impact assessment (initiated by lodgement of this document onto SAHRIS). The results and measures prescribed/ recommended in those documents will be included in future documentation.

1.6.	<p>How will this development use and/or impact on non-renewable natural resources?</p> <p>What measures were explored to ensure responsible and equitable use of the resources?</p> <p>How have the consequences of the depletion of the non-renewable natural resources been considered?</p> <p>What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts?</p> <p>What measures were explored to enhance positive impacts?</p>	<p>The prospect targets Dimension Stone which is a non-renewable resource.</p> <p>In terms of equitable use of the resource, the applicant has met all the legal requirements of the mining charter and in respect of responsible use of the resource, the application is subject to all Mineral and Environmental legislation and the public participation associated therewith. The application is subject to comment and input from several commenting authorities as well as specialist input in aspects of environment determined by public input and / or legislation.</p>
1.7.	<p>How will this development use and/or impact on renewable natural resources and the ecosystem of which they are part?</p> <p>Will the use of the resources and/or impact on the ecosystem jeopardize the integrity of the resource and/or system taking into account carrying capacity restrictions, limits of acceptable change, and thresholds?</p> <p>What measures were explored to firstly avoid the use of resources, or if avoidance is not possible, to minimise the use of resources?</p> <p>What measures were taken to ensure responsible and equitable use of the resources?</p> <p>What measures were explored to enhance positive impacts?</p>	<p>Water demand will be very low and limited to drinking water for operators on site and approximately 1kl water per core drill hole (of which 7 are planned). Such water will be locally sourced from one of the irrigation pumps on the Orange River by agreement with landowner.</p>
1.7.1.	<p>Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. de-materialized growth)? (note: sustainability requires that settlements reduce their ecological footprint by using less material and energy demands and reduce the amount of waste they generate, without compromising their quest to improve their quality of life)</p>	<p>This mining operation does not lower the dependency on use of resources to maintain economic growth. In order to develop this resource it does require the use of diesel, water and labour. Waste generation is very low.</p>

1.7.2.	Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more important priorities for which the resources should be used (i.e. what are the opportunity costs of using these resources against a proposed development alternative?)	The opportunity cost is possibly the loss of income due to goat grazing. However the carrying capacity is so low as to not represent a viable opportunity cost. Also remember that the proposed activity does not preclude future use of the site for grazing . Grazing also continues around the disturbed areas. In respect of tourism, it is highly unlikely that the proposed mining will have any impact whatsoever on tourism to the region.
1.7.3.	Do the proposed location, type and scale of development promote a reduced dependency on resources	No.
1.8.	How were a risk-averse and cautious approach applied in terms of ecological impacts	Yes. Impacts of prospecting have been subject to specialist input
1.8.1.	What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?	None. However, the programme is subject to specialist botanical input as well as lodging to SAHRIS system which may result in additional measures being required.
1.8.2.	What is the level of risk associated with the limits of current knowledge?	None. The limit of current knowledge will be removed once final studies have been completed (which study will be included in final EIA/EMP).
1.8.3.	Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?	See line item 1.8.2 above.
1.9.	How will the ecological impacts resulting from this development impact on people's environmental right in terms following:	
1.9.1.	Negative impacts: e.g. access to resources, opportunity costs, loss of amenity (e.g. open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?	The existing negative impacts have been identified in part 14 of this document, whilst future continued impacts are addressed in part 15. Measures taken to avoid, minimise, manage and remedy negative impacts as well as monitoring will be fully described in the upcoming EIA/EMP.
1.9.2.	Positive impacts: e.g. improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts?	Proposed measures taken to enhance positive impacts will be contained in upcoming EIA/EMP.
1.10.	Describe the linkages and dependencies between human wellbeing, livelihoods and ecosystem services applicable to the area in question and how the development's ecological impacts will result in socioeconomic impacts (e.g. on livelihoods, loss of heritage site, opportunity costs, etc.)?	The impact on Socioeconomic and Heritage profile of the area is provided in Para 23.1 and 23.2 (in the case of Heritage).
1.11.	Based on all of the above, how will this development positively or negatively impact on ecological integrity objectives/ targets/ considerations of the area?	If all rehabilitation takes place as proposed, there will be no residual impact of any significance.

1.12.	Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the “best practicable environmental option” in terms of ecological considerations?	The potential environmental impacts that were perceived to possibly be significantly impacted upon or about which insufficient information was available have been subjected to specialist study. It is unlikely that mining of any resource would result in the “best practicable environmental option” in terms of ecological considerations but it must be remembered that there are other considerations in respect of the socio-economic environment which also have a bearing.
1.13.	Describe the positive and negative cumulative ecological/biophysical impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and existing and other planned developments in the area?	Cumulative impact has been described as insignificant on all aspects of the ecology (as described in para 9.3).

8.2 Promoting justifiable economic and social development

2. Promoting justifiable economic and social development		
2.1.	What is the socio-economic context of the area, based on, amongst other considerations, the following considerations?:	Refer also para 23.1
2.1.1.	The IDP (and its sector plans’ vision, objectives, strategies, indicators and targets) and any other strategic plans, frameworks of policies applicable to the area,	The IDP targets economic growth but makes very little mention of mining in the Municipality, except to mention how it has declined in the recent years and the strain that has placed on social and economic conditions. The proposed development meets targets of the IDP in that it does facilitate potential future development as well as creating jobs (albeit very few) for a limited period. Should future mining go ahead then such positive impact would be much greater.
2.1.2.	Spatial priorities and desired spatial patterns (e.g. need for integrated of segregated communities, need to upgrade informal settlements, need for densification, etc.),	Not applicable.
2.1.3.	Spatial characteristics (e.g. existing land uses, planned land uses, cultural landscapes, etc.), and	Being located within a grazing area, the development could be considered a conflicting land use. But provided rehabilitation measures are applied, there is no reason why the limited areas of disturbances in the much larger prospecting area cannot be fully integrated as part of the future grazing /”extensive agricultural” use.
2.1.4.	Municipal Economic Development Strategy (“LED Strategy”).	The Municipality, along with many others, suffers from low employment rates and virtually any economic development has the potential for large multiplier effects.
2.2.	Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements/aspects), and specifically also on the socio-economic objectives of the area?	Refer Para 23.1
2.2.1.	Will the development complement the local socio-economic initiatives (such as local economic development (LED) initiatives), or skills development programs?	The small scale, simple nature of the proposed development does not lend itself to significant economic development or skills development. So although these factors will occur they will be relatively small.
2.3.	How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities	

2.4.	Will the development result in equitable (intra- and inter-generational) impact distribution, in the short- and long-term? Will the impact be socially and economically sustainable in the short- and long-term?	Any impact in this regard will be absolutely insignificant.
2.5.	In terms of location, describe how the placement of the proposed development will:	
2.5.1.	result in the creation of residential and employment opportunities in close proximity to or integrated with each other	NA
2.5.2.	reduce the need for transport of people and goods	NA
2.5.3.	result in access to public transport or enable non-motorised and pedestrian transport (e.g. will the development result in densification and the achievement of thresholds in terms public transport),	NA
2.5.4.	compliment other uses in the area,	Provided rehabilitation occurs as per the EMP, then the impact will be insignificant
2.5.5.	be in line with the planning for the area,	Provided rehabilitation occurs as per the EMP, then the impact will be insignificant
2.5.6.	for urban related development, make use of underutilised land available with the urban edge,	Not applicable
2.5.7.	optimise the use of existing resources and infrastructure	Not applicable.
2.5.8.	opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g. not aligned with the bulk infrastructure planning for the settlement that reflects the spatial reconstruction priorities of the settlement),	Not applicable
2.5.9.	discourage "urban sprawl" and contribute to compaction/densification,	Not applicable
2.5.10.	contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs,	Not applicable
2.5.11.	encourage environmentally sustainable land development practices and processes	This is prospecting with bulk sampling and such activities usually cannot encourage such sustainable land development practices and processes. However in this case, the activities are so limited as to have no impact in this regard, particularly given the proposed rehabilitation of the disturbances.
2.5.12.	take into account special locational factors that might favour the specific location (e.g. the location of a strategic mineral resource, access to the port, access to rail, etc.),	The aim of this prospect is to determine the presence of a strategic mineral resource.
2.5.13.	the investment in the settlement or area in question will generate the highest socio-economic returns (i.e. an area with high economic potential),	It may be argued that grazing / tourism at this site could provide socio-economic returns, but those pale into insignificance when compared with the potential future mining's economic return. In addition, the proposed prospecting does not preclude post prospecting future use of the vast majority of the prospecting right area for grazing.
2.5.14.	impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area, and	This draft Scoping report will be lodged to the Heritage authorities on the SAHRIS site.
2.5.15.	in terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement?	Not applicable.
2.6.	How were a risk-averse and cautious approach applied in terms of socio-economic impacts?	

2.6.1.	What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?	None Known. Small scale of activity and extent of proposed public participation, makes it unlikely that there any gaps in knowledge in respect of socio-economic impacts.
2.6.2.	What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable communities, critical resources, economic vulnerability and sustainability) associated with the limits of current knowledge?	There is no risk to these socio-economic aspects through the proposed prospecting at the site.
2.6.3.	Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?	Not applicable.
2.7.	How will the socio-economic impacts resulting from this development impact on people's environmental right in terms following	
2.7.1.	Negative impacts: e.g. health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts	The negative impacts have been identified in part 23.1 of this document. Measures taken to avoid, minimise, manage and remedy negative impacts will be fully detailed in upcoming EIA/EMP.
2.7.2.	Positive impacts. What measures were taken to enhance positive impacts?	See line item 2.7.1 above
2.8.	Considering the linkages and dependencies between human wellbeing, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socio-economic impacts will result in ecological impacts (e.g. over utilisation of natural resources, etc.)?	The impact on natural resources is very low and will be zero in the long term provided all rehabilitation measures are implemented. Furthermore, it is highly unlikely that the presence of the prospect dissuades any would-be visitor to the nearby located private Nature Reserves.
2.9.	What measures were taken to pursue the selection of the "best practicable environmental option" in terms of socio-economic considerations	Not applicable, given the very low negative (if any) impact of socio-economic considerations.
2.10.	What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries and is the development located appropriately)? Considering the need for social equity and justice, do the alternatives identified, allow the "best practicable environmental option" to be selected, or is there a need for other alternatives to be considered?	There is no unfair discrimination against any person as a result of the proposed prospecting. Public participation will confirm this fact.
2.11.	What measures were taken to pursue equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?	All legislation has been adhered to. And in the case of this application, an application entity has been incorporated to meet the requirements of BEE shareholding
2.12.	What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development's life cycle?	All prospects and mines are subject to Health and Safety legislation (Mine Health and Safety Act 29 of 1996). Such prescriptions are not within the ambit of this document but are strictly monitored by DMR.
2.13.	What measures were taken to:	
2.13.1.	Ensure the participation of all interested and affected parties.	Refer Part 13 for description of proposed Public Participation to date i.t.o Draft Scoping and further participation which will occur the during the pending EIA-EMP phase
2.13.2.	Provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation.	Refer Part 13 for description of proposed Public Participation
2.13.3.	Ensure participation by vulnerable and disadvantaged persons.	The amendment will be advertised in free local newspaper and advertised on posters at the suitable location.

2.13.4.	Promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.	None
2.13.5.	Ensure openness and transparency, and access to information in terms of the process.	Refer Part 13 for description of proposed Public Participation
2.13.6.	Ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition were given to all forms of knowledge, including traditional and ordinary knowledge, and,	Refer Part 13 for description of proposed Public Participation
2.13.7.	ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein were be promoted.	Refer Part 13 for description of proposed Public Participation
2.14.	Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g.. a mixture of low-, middle-, and high-income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area)?	Not applicable to this kind of application
2.15.	What measures have been taken to ensure that current and/or future workers will be informed of work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?	All prospects and mines are subject to Health and Safety legislation (Mine Health and Safety Act 29 of 1996). Such prescriptions are not within the ambit of this document but are strictly monitored by DMR.
2.16.	Describe how the development will impact on job creation in terms of, amongst other aspects:	
2.16.1.	the number of temporary versus permanent jobs that will be created,	The life of prospect is limited and only 3 years
2.16.2.	whether the labour in the area will be able to take up the job opportunities (i.e. do the required skills match the skills available in the area),	Yes. There will be an agreement set up between community and the applicant to ensure this. Note that there have already been meetings with community representatives in this regard. Minutes of such meeting are contained in Appendix 2 allowing the applicant to conduct prospecting.
2.16.3.	the distance from where labourers will have to travel,	Staff will be brought to site as required.
2.16.4.	the location of jobs opportunities versus the location of impacts (i.e. equitable distribution of costs and benefits), and	Very small scale impacts. Job opportunities are also limited.
2.16.5.	the opportunity costs in terms of job creation (e.g. a mine might create 100 jobs, but impact on 1000 agricultural jobs, etc.).	The proposed prospecting operation will not take any jobs away in any other sector (eg tourism).
2.17.	What measures were taken to ensure:	
2.17.1.	that there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment, and	Refer Part 13 for description of proposed Public Participation which will include all relevant State Departments at all levels of governance
2.17.2.	that actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures	Not applicable
2.18.	What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest, and that the environment will be protected as the people's common heritage?	Environmental impact has provisionally been assessed to be insignificant in all aspects of the environment (provided rehabilitation takes place as per the upcoming EIA/EMP). The proposed project will be subject to extensive public participation to ensure all public are aware of and have input into the impact assessment, planning and approval process.

2.19.	Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?	The management of operational impact is the responsibility of the applicant with monitoring and auditing largely by independent parties. The Mineral legislation requires that Closure be granted before the applicant can relinquish responsibility for the site. Such closure process is arduous and requires enforced participation by and satisfaction of relevant State Departments.
2.20.	What measures were taken to ensure that the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?	<p>In terms of operational control of environmental impact and pollution, the EMP will prescribe measures to be put in place to monitor and then mitigate / manage or avoid any known or unexpected impact.</p> <p>All Right's holders are responsible to annually update a calculation to determine the costs of Immediate Closure of the site. Such calculation is based on DMR Guideline and the value of the fund must be provided to the DMR either in form of cash or by bank Guarantee. Should the holder "disappear", then the fund is used by the State to rehabilitate the site.</p>
2.21.	Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations?	The only feasible alternative applicable to this application is the no go option. This will be considered if the specialist studies show that very significant impact would result from the proposed development.
2.22.	Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and other planned developments in the area?	Refer Para 9.3

8.3 Cumulative Impact Assessment

The assessment of cumulative impacts on a site specific basis is often a complex operation. The aim of this impact analysis is ultimately to determine at which point the combined impacts from several operations (similar or dissimilar) in the area will affect the environment or part thereof to such a negative degree that the project should not be allowed to proceed.

Always remember that mining is a place-bound operation (as opposed to say housing or shopping development which is less dependent on geology or other factors).

The following is an amended procedure sourced from http://www.eiatoolkit.ewt.org.za/documents/DEAT/guidelines/AT_EIA_Guideline5_Assessing_alternatives_and_impacts.doc

Types of cumulative impacts

Additive impact: Impacts of the same nature from different operations (e.g. excessive groundwater abstraction from several operations in the same area result in a severe drawdown effect)

Interactive impact: where a cumulative impact is the result of a combination of different impacts to cause a new kind of impact. This kind of impact can be:

- Countervailing – the net adverse effect is less than the sum of the individual impacts (e.g. pumping clear water into a polluted water resource).
- Synergistic – when the impacts work together to develop a sum of different impacts results in an impact which is greater than the individual impacts.

Methodology used in assessing cumulative impact/s

Determine extent of cumulative impacts:

- Identify potentially significant cumulative impacts associated with the proposed activity
- Establish the geographic scope of the assessment
- Establish the timeframe of the analysis
- Identify other activities affecting the environmental resources of the area

Describe the affected environment:

- Characterise the resources identified above in terms of their response to change and ability to withstand stress
- Define a baseline condition that provides a measuring point for the environmental resources that will be acted upon

Assess the cumulative impacts:

- Determine the magnitude or significance of cumulative impacts

And finally, recommend mitigation measures.

So, using the aforementioned procedure as headings, herewith an assessment of the cumulative impacts arising from this operation:

i) **Determining the extent of the cumulative impacts:**

(1) **Identification of potentially significant impacts:** Proposed operations of this type could **conceivably** result in the following cumulative impacts:

- (a) **Vegetation:** Refer para 14.1.5 for more detailed description of vegetation status. Although the vegetation type is classified as Least Threatened it is acknowledged that the site is located in CBA2 and in SKEP and is within 10km of the World Heritage Site. **It is for these reasons that specialist botanist input is required whose report will be considered in the EIA-EMP phase.** The proposed development will result in the disturbance of no more than 2.5ha, although a large percentage of such disturbances will be on denuded rock surface and drill sites will be chosen on areas devoid of vegetation.
- (b) **Noise:** There are no other mining operations within earshot of any community and as such, there can be no cumulative impact from this small operation. Nonetheless, all activities will be limited to daytime weekdays.
- (c) **Dust:** Dust will not present any impact on any residential area or surrounding land use from this small operation as both core drilling and diamond wire cutting are conducted wet not to exceed the ambient dust level of the public gravel road as seen in photo below of current vehicle generated dust.



Photo 9a: Ambient road dust levels

The impact of these dust levels especially on Agricultural crops has prompted the adjacent owners to install road wetting sprinkler systems along long portions of the road through Kotzeshoop. For mining impact consideration refer para 13.

- (d) **Socio-economic impacts:** This cumulative impact of any employment in the area is a beneficial impact (albeit negligible). There is also income to the landowner.
- (e) **Agriculture:** Full description of agricultural status and land capability is as described in para 13.1.4. The proposed mining will have absolutely insignificant impact on the current grazing despite the extent of the Prospecting Right area, given the very low carrying capacity of the veld type and the small area to be disturbed and the impact on irrigated crop production north of the road is considered in para 13.

The only potentially significant cumulative impact identified thus far is the possible disturbance of vegetation

(2) Geographic Scope of assessment:

Impact aspect	Geographic scope
Vegetation	Prospecting Right Area and Property Vegetation Biome SKEP Richtersveld World Heritage Site

(3) Timeframe of analysis

The proposed project will take place over a period of approximately 3-4 years. The timeframe of the analysis would typically depend on the nature of the impact being assessed:

- 1) Life of mine impacts typically assessed are noise, dust and socio-economic impact.
- 2) Longer term impact is in respect of the disturbance of vegetation particularly in this harsh arid climate.

(4) Other activities impacting on environmental resources in the area

Refer figure 12 for surrounding land use. The site is located in the Rooiwal/Kotzehoop rural settlement area. The floodplain to the north of the site (across the road) has been cultivated and no natural vegetation remains there.

Other impacts are generated by the location of some of the town’s facilities (such as police station, small settlement, etc) and these are located on the same vegetation type upon which the prospect is proposed. In terms of mining, there is evidence of an abandoned diamond prospect immediately east of the bulk sampling area.

In addition, the northern part of the site has been subjected to dumping by local (or other) community.



Photo 10: Illegal dumping on the site west of the adjacent alluvial gravel mound

ii) Resource characterization

This section aims to characterise the environmental resources in terms of their ability to withstand additional stress.

Vegetation: If this proposal were to go ahead then it could potentially result in the additional disturbance of Northern Nababiepsberge Mountain Desert vegetation type (which is not classified as Vulnerable, Endangered or Critically Endangered). The absolute maximum disturbance area is approximately 2.1ha as per table in para 6.1. This assumes that absolutely no controls are put in place in respect of the placement of activities. But for the sake of this draft Scoping report it is assumed that 2.1ha of disturbance does take place.

The full extent of the vegetation type is 245.9km² or 24 590ha. Of the original extent, 99% remains in situ. This remaining vegetation thus measures 24 344ha. The transformation of the 1% of the vegetation has come about through low agricultural production and some development in the lower lying accessible areas. The 2.1ha proposed for disturbance represents an absolutely trivial percentage of the remnant vegetation but of course it is all the “trivial” percentages which add up. The point of this section is to determine if these cumulatively result in no go option being the best option.

“The conservation target is 34%. None conserved in statutory conservation areas. Large parts mostly inaccessible, hence well preserved”. – Mucina and Rutherford, 2012.

iii) Magnitude and significance of cumulative impacts

Vegetation

The impact on vegetation at a cumulative level must be seen as insignificant for two reasons:

- Grazing restoration of the site is possible in this vegetation type
- The maximum 2.1ha does represent a very small percentage (0.00009%) of the vegetation remnant.

Socio-economic:

Insignificant positive impact to landowner and employees will occur. There is also the potentially positive impact in that a new export market may be opened up.

9 Period for which the environmental authorisation is required

4 years.

10 Description of the process followed to reach the proposed preferred site.

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

The May 2019 draft Scoping report and project description / site layout served as the basis for initial comment. No negative comments received have warranted any amendment to

the Prospecting Layout Plan as contained in this Final Scoping Report.

11 Details of all alternatives considered.

Remember that the public participation process may reveal additional alternatives:

11.1 Property on which or location where it is proposed to undertake the activity;

Not applicable. This is a prospecting operation and is in effect a study to determine alternatives based on geological indications. The development of a brand new prospecting / mining venture is usually confounded/challenged by:

- Finding suitable geological formation / material
- Finding an area which is not sterilized by surrounding / on site land uses

11.2 Type of activity to be undertaken;

The 3 invasive prospecting methods selected to determine the nature of the material are based on tried and tested methods of prospecting for dimension stone. Bulk sample is required to test the market for the material.

11.3 Design or layout of the activity;

The layout has been chosen to maximise the geological control of the prospecting results. Note that it is possible that the location of the drill holes and trial pits may be slightly relocated to cater for on-site conditions (such as vegetation).

11.4 Technology to be used in the activity;

The existing technology is tried and tested and will not be altered.

11.5 Operational aspects of the activity;

None.

11.6 Option of not implementing the activity.

The impacts appear to be so negligible that the option of not implementing the activity should not be considered.

12 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.

Given the mixed nature of the land use and subdivision of the Kotzeshoop area: between irrigated agricultural farms and allotments north of the public road and a mix of urban sized residential erven and large farm portions most of which are vacant south of the road as shown in Figure 9 and the low level of local municipal administration being limited to that of the “Diens Punt” in Rooiwal town, the establishment of ownership and occupancy was onerous especially as many of the properties and ownerships are not listed in a Windeed search site.

Accordingly, Figure 8, compiled after the public open day inputs and door to door visits in late May shows that to date, formal contact has been established with the properties and owners shown in light green while formal contact with those properties mainly vacant shown in yellow are still being sought despite intensive methods described below having been followed during scoping to involve those owners. It is anticipated that outstanding

data will be obtained by onset of the draft EIA-EMP phase.

12.1 Public participation process followed

The draft Scoping report had already contained a plan and list of surrounding owners identified by earlier site visit, municipal enquiries, Windeed searches and telephonic discussion with larger employees and such list served as the basis for establishing contact with surrounding landowners for comment on the draft Scoping report.

Given the dispersed nature of surrounding erven and farms the public participation process to involve as many as the local community was therefore structured by achieving such contact through:

- a public open day
- with many poster invitations (as per poster copy in Appendix 3) posted at key points in Kotzeshoop and Rooiwal
- postal and email invitations and distribution of draft Scoping reports to all known State and Parastatal organizations (as per copies of letters in Appendix 4)
- drop off of draft Scoping Reports for comment to:
 - SANDF Border patrol unit on erf 208
 - NG Church on through their book keeper in Springbok
 - Nama Khoi Municipal offices in Springbok
 - Drop off in Steinkopf for collection by the ward councilor
 - Drop off to the two large farm owners being
 - De Vlei Verpakking (for properties outlined in blue in Figure 8); and
 - Sutherland Packshed (for properties outline in dashed black line)
 - Libraries of Springbok and Steinkopf and Rooiwal Diens Punt office for perusal by persons responding to either poster invitations or the newspaper notice placed in the Namakwalander of 24 May 2019 as per copy in Appendix 3
- Placing of notice in the Namakwalander of 24 May calling for I&APs to peruse documents placed at the libraries and Rooiwal Diens punt and to attend the public open day on 30 May held in the Rooiwal Diens punt

Public Open day Held on 30 May in the Rooiwal Diens punt

This engagement of possible I&APs was planned as a Public Open Day with all plans and illustrations pasted on the walls of the venue where all aspects of the project could be discussed with ad-hoc or small groups of visitors during the course of the day between 1pm and 7pm managed by the authors of the draft Scoping Report and attended by the applicant. However, a large number of community members gathered at the diens punt just before 1pm and began packing out the chairs in rows with the intent of hearing a presentation, effectively converting the public open day to an I&AP meeting. Consequently such presentation meeting was conducted by Site Plan Consulting (SPC) with questions from the floor answered by either SPC or the applicant with SPC recording the matters raised and with an attendance register being kept for the meeting which lasted from 1:15 until 2:30 (refer Appendix 4 for attendance register).

Thereafter a few further persons visited the venue with SPC conveying the nature of the project to them by way of posters on the walls and referral to extracts from the draft Scoping report.

All attendees of the day were invited to return when convenient to peruse the full Draft Scoping Report which would lay at the diens punts office for the 30 days. A pack of blank response forms with SPC address and contact numbers was provided with draft Scoping Report and subsequently used in giving comments.

The venue was closed at 7pm.

The full register of I&APs is contained in Appendix 4

The formal comments received and responses thereto during the meeting and from correspondence received are contained in Appendix 5 and table 12.2 hereafter.

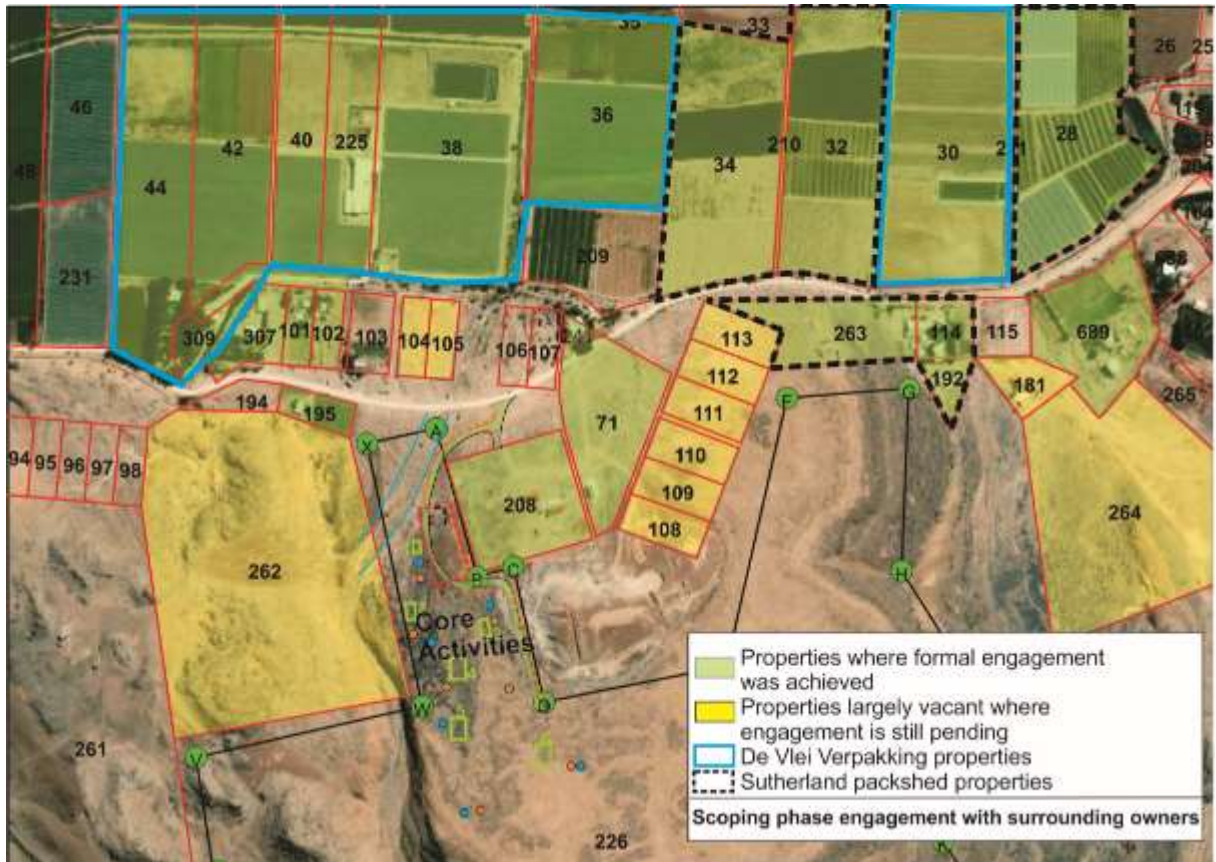


Figure 8: Scoping Phase Engagement with surrounding owners

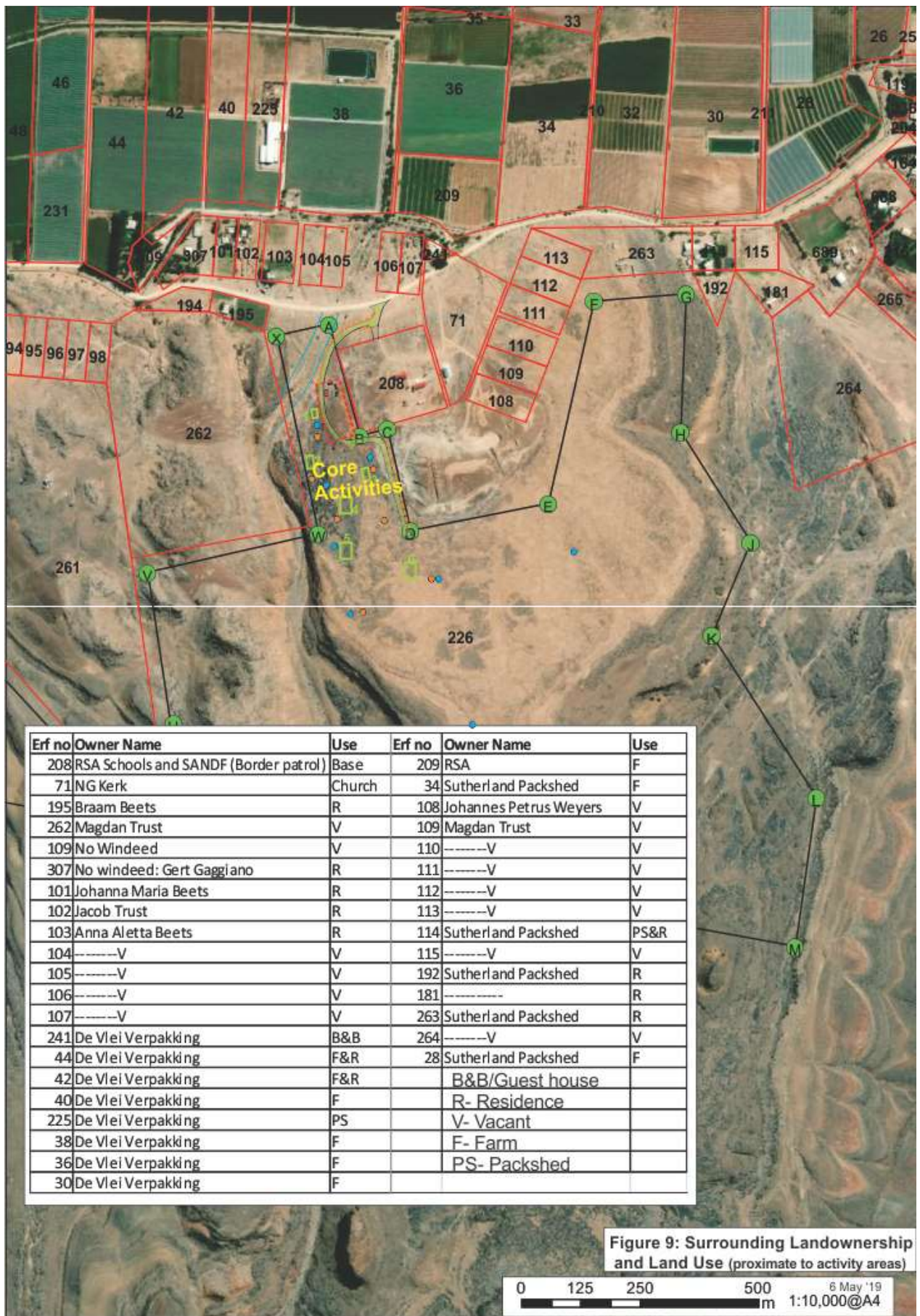


Figure 9: Surrounding Landowners

12.2 Table of interested and affected parties

Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section in this report where the issues / responses were incorporated.
AFFECTED PARTIES				
Landowner/s				
Government of South Africa Title deed: G235/1948				
Lawful occupier/s of the land				
Violsdrift Community: Name: See Open Day attendance register in Appendix 4	30 May 2019	<p>The following comments/questions are from the general public during the Open day in Rooiwal</p> <p>a) Meeting was opened by a prayer by Mr Michael Heyn</p> <p>b) The SANDF ground belongs to the School Governing Body (SGB) and documents regarding the application must be sent to SGB on the following details: Email:farmermv@gmail.com Tel: 082 866 4017/071 633 7286</p> <p>c) A question was asked about who is Zongfei Mining Development (Pty) Ltd and where are they from?</p> <p>d) When is the community going to get involved in the business?</p> <p>e) The community again agreed that Zongfei Mining Development Pty Ltd can continue with the application.</p> <p>f)How much local labour is going to be use in the prospecting</p>	<p>b) Noted, a Scoping Report was given to the SGB representative and from now on all docs will be sent to the SGB the contact details provided and the SANDF. A WinDeed records ownership of erf 208 as RSA</p> <p>c) The company has majority shareholding by two individuals from China with William Llale (who was present at the meeting) as their BEE partner.</p> <p>d) The community will not be significantly involved during the Prospecting Right phase but will be significantly involved in the Mining Right phase when the resource is proven. The prospecting right is risky and only the owners of Zhongfei Mining will bear the cost and potential loss from the prospecting. Community involvement by way of shareholders agreement between the community and the company will be signed before Mining Rights are finalised</p> <p>e) Noted.</p> <p>f) There will be minimal employment during prospecting but community labour will be used more when the Mining Right is in place.</p>	Appendix 4 and 5

Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section in this report where the issues / responses were incorporated.
Rooiwal CPA Violsdrif CPA Steinkopf CPA CPAs (Rooiwal, Violsdrif, Steinkopf): Mr DAR Hearn (Violsdrift CPA Secretary) on behalf of all 3 CPAs Email: violsdriftcpa@gmail.com received 27/06/2019	27 June 2019	I send this mail on behalf of The Violsdrift, Rooiwal and Steinkopf CPA'S, who are the owners of plot 226 Violsdrift, we would like to meet with you about your plan prospecting on plot 226, Mr Hein and Saal was not mandated to talk to you on behalf of these CPA'S. We are not against your plans to prospects on our land, but against this fact that you did not recognize us as CPA'S We are still waiting for your response on our previous email. We need to meet with you urgently	We responded in an email of 28 June to Mr Hearn referring to the history of our engagement seeking the CPAs as included in Appendix 5 It is important to note that the purpose of the scoping phase and calling for I&APs to register in the Open day, was to identify interested and affected parties and consequently your email contact now initiates formal registration of the CPAs in the process. Please therefore provide us with the name of the correct contact person/s, address and contact details (Telephone, fax, and email and physical address for courier delivery) of each of the 3 CPAs in order that we can distribute copies of the Scoping Reports and any other correspondence to you/them. Regarding a meeting to discuss the project formally with the CPAs administrations, we are unfortunately committed to other tasks for the month of July. Accordingly the best we can do in the meanwhile is to send you copies of the Scoping Report placed at the libraries of Steinkopf and Springbok and the Rooiwal Diens Punt and distributed to all I&APs identified at the time.	Appendix 4 and 5
Immediate Surrounding Landowners to the core activity area				

Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section in this report where the issues / responses were incorporated.
Erf 208 SANDF Border Patrol Contact Person: Docs. Delivered to Capt. F Milanzi Cell: 071 545 5118		No comments received, SPC will now trace the Upington person and send documentation directly.	When SPC met with Capt. Milanzi he undertook to convey the documentation to his commanding base in Upington. It has been established that the property Erf 208 belonging to Government of South Africa and is in fact vested with the Schools Governing Body (SGB) and that the buildings are those of the earlier school. SPC is currently resolving the allocation of this RSA property and is engaging with both SANDF and the SGB	Appendix 4
Erf 71 NG Kerk Care of Christo Dippenaar Email: cd@dipels.co.za Cell: 082 940 4139 Hania Bekker Cell: 027 761 8904		No comments received yet from either Christo or the NG Church	NA	Appendix 4
Erf 262, Erf 109 Magdan Trust Contact Person Email Cell:		No formal contact yet established	Continued attempt	
Erf 195 (DSR Report hand delivered at gate) Braam Beets Email: Cell:		No comments received	NA	Appendix 4
Erf 101 Contact Person: Johanna Maria Beets Email: Cell:		No comments received, report given to persons on site	NA	Appendix 4
Erf 103 Anna Aletta Beets Email: Cell		No formal contact yet established	Continued attempt	

Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section in this report where the issues / responses were incorporated.
Erf 102 Jacob Trust Contact Person: J Claassen Email:japie1@yahoo.com Cell:083 251 7700	30 May Verbal	During SPC's discussion with him on his property on 30 May, he received the report and commented that he would seek personal guarantees from the shareholders of the applicant company and not from the company. He has subsequently not submitted any further comment	NA	Appendix 4
Erf 241, Erf 44, Erf 42, Erf 40, Erf 38, Erf 225, Erf 36 and Erf 30 De Vlei Verpakking (Pty) Ltd Fanie Bekker Email: Cell: 083 286 9224	30 May Verbal	During SPC's discussion with him on his property on 30 May and confirmed later telephonically his two concerns were: i) Mining related dust on his agricultural products ii) Increased public road dust from increased traffic iii) Increased poor maintenance of public road resulting in export fruit delivery bruising	During the draft EIA-EMP phase assessments will be made of the items raised and attenuation measures given	Appendix 4
Sutherland Family farms, Packshed and residences and labour accomodation Erven 34, 32, 28 (farms) Erf 114, 192 and 263 (Packshed and residences) Mr Coenie Sutherland Email: onderplaasboerdery@gmail.com Cell: 083 842 4380	30 May 2019 Verbal	a) Please make sure that you limit the amount of dust and noise generated by your operation b) Where are you planning to get the water? Because you cannot use water from our canal we are using it for our crops c) Can you indicate how many employees are going to be employed by the operation? Please make sure they do not steal our own employees d) The biggest concern is the road, to limit dust and maintain its good conditions?	a) Yes noise and dust measures are addressed in the scoping report and will be further assessed in the draft EIA-EMP phase b) We have been directed to the Water Board who allows pumping of dust suppression for the road from the irrigation canal. SPC contact with the water board is in process c) The risk of stolen employees will be conveyed to the applicant and their employment contracts will discouraged farm labour being recruited to serve at the mine d) The matter of road maintenance or upgrade and contribution by the mine if mining proceeds will be considered in the EIA phase of prospecting but primarily in the EIA phase of mining	Appendix 4
Erf 21 Kotzeshoop : Herrick Mulder, Cell 072 598 7005, mulderboerdery@gmail.com	30 May 2019	No major issues with development, but the road damage is the major issue for me as it wears easily and the mining trucking may exaggerate the problem for bruised export fruit	The matter of road maintenance or upgrade and contribution by the mine if mining proceeds will be considered in the EIA phase of prospecting but primarily in the EIA phase of mining	Appendix 4
Erf 209 RSA		No formal contact yet established but noted that property used as a productive orchard current tenant to be found and matter referred to public works department.	Continued attempt	

Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section in this report where the issues / responses were incorporated.
Erf 104 Vacant		No formal contact yet established	Continued attempt, as vacant erven no impacts will be encountered and consequently the short term prospecting on vacant properties is of no consequence	
Erf 105 Vacant		No formal contact yet established	Continued attempt	
Erf 106 Vacant		No formal contact yet established	Continued attempt	
Erf 107 Vacant		No formal contact yet established	Continued attempt	
Erf 108 Johannes Petrus Weyers Vacant		No formal contact yet established	Continued attempt	
Erf 110 Vacant		No formal contact yet established	Continued attempt	
Erf 111 Vacant		No formal contact yet established	Continued attempt	
Erf 112 Vacant		No formal contact yet established	Continued attempt	
Erf 113 Vacant		No formal contact yet established	Continued attempt	
Erf 181 Residential		No formal contact yet established	Continued attempt	
Erf 115 Vacant		No formal contact yet established	Continued attempt	
Erf 264 Vacant		No formal contact yet established	Continued attempt	
Municipality. The prospect is located in Ward 2 of the Nama Khoi Local Municipality				
<p>Nama Khoi Municipal Manager: 4 Namakwa Street Springbok 8240 Phone: 027 718 8100 Fax: 027 712 1635 Email: municipal.manager@namakhoi.gov.za Ms Samantha A Titus Lorenzo Farber in Mayor's office pa.mayor@namakhoi.gov.za Tel: 027 718 8123</p> <p>Nama Khoi Rooiwal Office (Dienspunt) Lena Cell: 076 806 8879</p>		No comments received	NA	Appendix 6
<p>Ward 2 Councillor: Ms Daphne Markus Email: daphne.markus@namakhoi.gov.za Cell: 060 441 0990</p>		No comments received	NA	Appendix 6

Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section in this report where the issues / responses were incorporated.
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom etc.)				
Communities				
Rooiwal Vioolsdrif Steinkopf Thomas D Fredericks (Resident) Pk Kotzeshoop Rooiwal, Buldstraat 339, Tel: 079 304 9521 received by fax	11 June 2019	A draft Scoping report was delivered at the Rooiwal Diens Punt, Rooiwal Diens punt, Steinkopf Library and Springbok Library. One comment from a community member of Rooiwal, Mr Thomas Frederick was received by fax dd 11/06/2019: His issue was that he did not consider the removal of the 51 blocks applied for as prospecting and he felt that was mining	As Mr Heyn in his telecom with SPC assured SPC that he had explained to Mr Thomas Frederick that the 51 blocks were specifically part of the prospecting bulk sample and that they were accordingly not to be considered as mining and that mining would follow successful prospecting and reports that Mr Frederick then fully understood the process	Appendix 4 and 5
Dept. Land Affairs				
Commission On Restitution Of Land Rights: Regional Land Claims Commission: Northern Cape. Tel: (053) 807 5700 Ryan.oliver@drdlr.gov.za		See appendix 2, the community owns the land and have agreed that Zhongfei Mining Development (Pty) Ltd can proceed with the application	The matter of ownership and the rights of the 3 CPAs will now be dealt with through the CPA since they have by way of their email dated been registered formally as I&APs ("property owners")	
Traditional Leaders				
None				
State Departments / NGO's				
Department of Environment and Nature Conservation : Northern Cape Private Bag X6120, Kimberley, 8301 Tel 053 807 7300 Head of Department		No comments received	NA	Appendix 4
Department of Environment and Nature Conservation : Northern Cape Private Bag X16 Springbok 8240 Tel: 053 807 7300 Ms Onwabile Ndzumo		No comments received	NA	Appendix 4

Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section in this report where the issues / responses were incorporated.
<p>Department of Water and Sanitation: Mr Abe Abrahams: Chief Director: Northern Cape Private Bag X6101 KIMBERLEY 8300 Tel: (053) 830 8800/6 7600 Cell: 082 883 6741 AbrahamsA@dws.gov.za Hengani Alexia Email: hlengania@dws.gov.za Tel: 054 334 0205</p>	<p>28 June 2018</p>	<p>1. The applicant shall take note of Section 22(1) of the National Water Act, 1998 (Act 36 of 1998), "Permissible water use", a Person may only use water:</p> <ul style="list-style-type: none"> a) without a license- <ul style="list-style-type: none"> i. If that water use is permissible under Schedule 1; ii. If that water is permissible in terms of an existing lawful use (section 32); or iii. If that water use is permissible in terms of general authorisation issued under Section 39 b) If the water use is authorised by a license under this Act; or c) If the responsible authority has dispensed with a license requirement under subsection (3), (of the same Act) <p>2. Therefore any other water use activities as outlined in Section 21 of the national water act, 1998 (Act 36 of 1998) associated with the proposed project that are not permissible as indicated on paragraph 1 above shall have to be authorised by DWS prior to such water use activities taking place</p> <p>3. All relevant sections and regulations of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.</p> <p>4. No pollution of surface water or ground water resources may occur due to activity on the property.</p> <p>5. The minimizing of waste must be promoted and alternative methods for waste management must be investigated.</p> <p>6. A buffer area for the execution of a water use as contemplated in Sections 21 (c), (i) and (j) of the National Water Act, 1998 (Act 36 of 1998) must be applied to any wetland or any water resource within a distance of 500 meters upstream or downstream from the boundary of any wetland.</p> <p>7. Chemical toilets facilities be on-site during prospecting phase of project to be used by workers, such toilets facilities must be located outside of the 1:100 year floodline and such toilets facilities must be regularly monitored on daily basis and sewer content must be disposed of at a nearest authorised Wastewater Treatment Works in agreement with Water Service Authority;</p>	<p>Given receipt of this comment only days before the due date of the final scoping report the addressing of these elements of the Water Act will be addressed during the draft EIA-EMP phase but we do not expect them to be onerous given the nature of the activity's lateral or vertical distance from water courses and furthermore the fact that water consumption by the mining will be minimal and that the avenue of possible pumping from the orange river at stabled pumping points is now initiated with the local "Water Board".</p>	<p>Appendix 4 and 5</p>

Interested and Affected Parties: List the names of persons consulted in this column, and Mark with an X where those who must be consulted	Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section in this report where the issues / responses were incorporated.
Dept. of Agriculture Forestry and Fisheries: Head of Department Mr Thebe Thebe 072 991 8114 tthebe@ncpg.gov.za		No comments received	NA	Appendix 4
Department of Public Works Ruwayda Baulackay Private Bag X5002, Kimberley, 8300 Tel: 053 838 5202 Cell: 083 459 7602 Email: ruwayda.baulackay@dpw.gov.za		No comments received	NA	Appendix 4
OTHER AFFECTED PARTIES				
SAHRA To be lodged on SAHRIS			Now that no significant comments which could affect the definition of the prospecting area have been received an online SAHRIS will be lodged in the initiation of the draft EIA-EMP phase.	
INTERESTED PARTIES				

13 The Baseline Environmental attributes associated with the Site

13.1 Type of environment affected by the proposed activity.

Note: The nature / impact of the existing operation will also be described in this section.

13.1.1 Geology

Refer para 5.2 and Figure 3.

13.1.2 Topography

As shown in Figure 12, the overall area is characterized by north south deep valleys with raised ridges and a central elevated plateau on which the core prospecting activities will occur. The implications of the topography are dealt with under para 13.1.10 Visual Aspects

13.1.3 Soil

Topsoil varies in thickness from non-existent on the outcrops photos 2 and 3 in the black dolomite outcrop areas to an expected 200mm soil cover interspersed with rock outcrops in the yellow weathered area of the plateau but in the ravines and steep slopes of the greater prospecting right area topsoil is largely absent.

13.1.4 Existing land capability

The prospecting area is rated as “grazing” land of low potential and is non arable. The carrying capacity is extremely low and accordingly can only support very low levels of subsistence nomadic goat grazing.

13.1.5 Natural vegetation / plant life

The site is not located within a National Park or formally protected area but is located 8.5km from the eastern boundary of the Richtersveld World Heritage Site and is within the Richtersveld Geographical Priority area of SKEP.

The site is largely located in an area classified as CBA2 in terms of the Northern Cape’s CBA mapping published in 2016 (Refer Figure 11 below). A small section in the west is located in CBA1 by virtue of its location close to the stream channel, but will not be impacted by proposed non-invasive field mapping prospecting.

In respect of vegetation, the site is located in the Northern Nababiepsberge Mountain Desert vegetation type as per Figure 10b from Mucina and Rutherford overleaf. The vegetation type is not classified as Critically Endangered, Endangered or Vulnerable in terms NEM:BA published under GNR34809 (2011). The following is copied from the Mucina and Rutherford description:

“A large plateau of black limestone, south of the Orange River, west of Vioolsdrif, east of Helskloof with a southern boundary 15–20 km south of the river. Altitude about 180–765 m....Least threatened. Target 34%. None conserved in statutory conservation areas. Large parts mostly inaccessible, hence well preserved”.

The site is very sparsely vegetated with Mucina and Rutherford stating **“Possibly it is the most sparsely vegetated of all desert vegetation units”**.

While the level of impact on vegetation is considered low by the EAP, in light of the location in the northern Nababiepsberge Mountain Dessert vegetation, a specialist botanist will be appointed to give input to the EIA-EMP phase.



Photo 11: Shows the very sparse soils and vegetation which is unlikely to be disturbed to any significant extent by the proposed prospecting

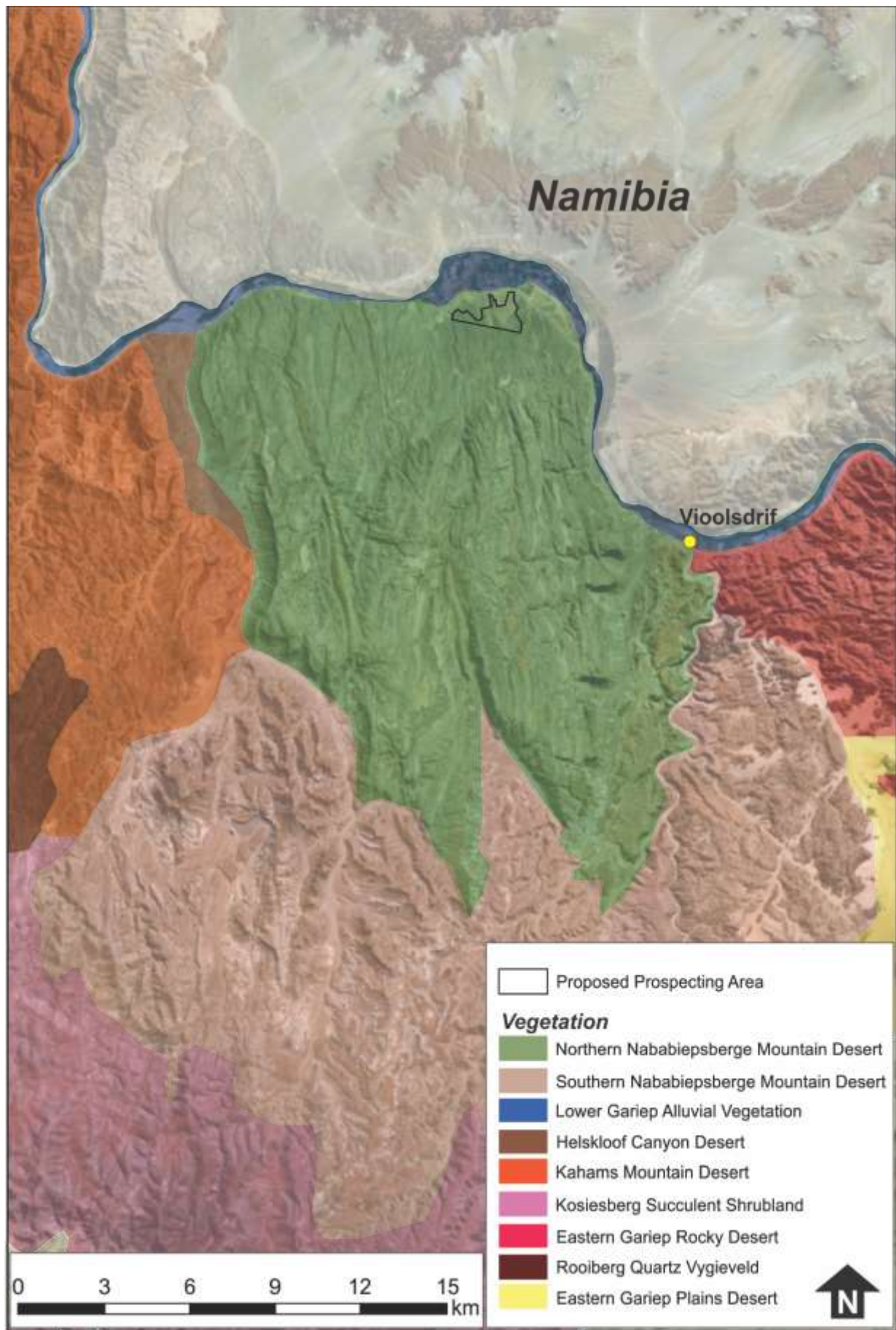


Figure 10: Vegetation Classification (Mucina and Rutherford, 2006)



Figure 11: Local CBA Mapping (2016 Northern Cape Mapping)

13.1.6 Surface Water

The site is located in Quaternary Basin D82G. Whilst the prospecting area is intersected by a number of ephemeral stream channels, the proposed invasive work is contained within an area where there are no stream channels and there is no impact on the surface water regime. The remainder of the site will be prospected by surface mapping.

Figure 12 below shows the location of proposed activities against a backdrop of the known surface water channels and the topography of the central plateau on which most of the invasive prospecting will occur as shown unaffected by drainage with only the access road into the site passing within 32m of a drainage channel.

Once we have examined DWS recent comment of 28 June, any required element will be assessed in the draft EIA-EMP phase.

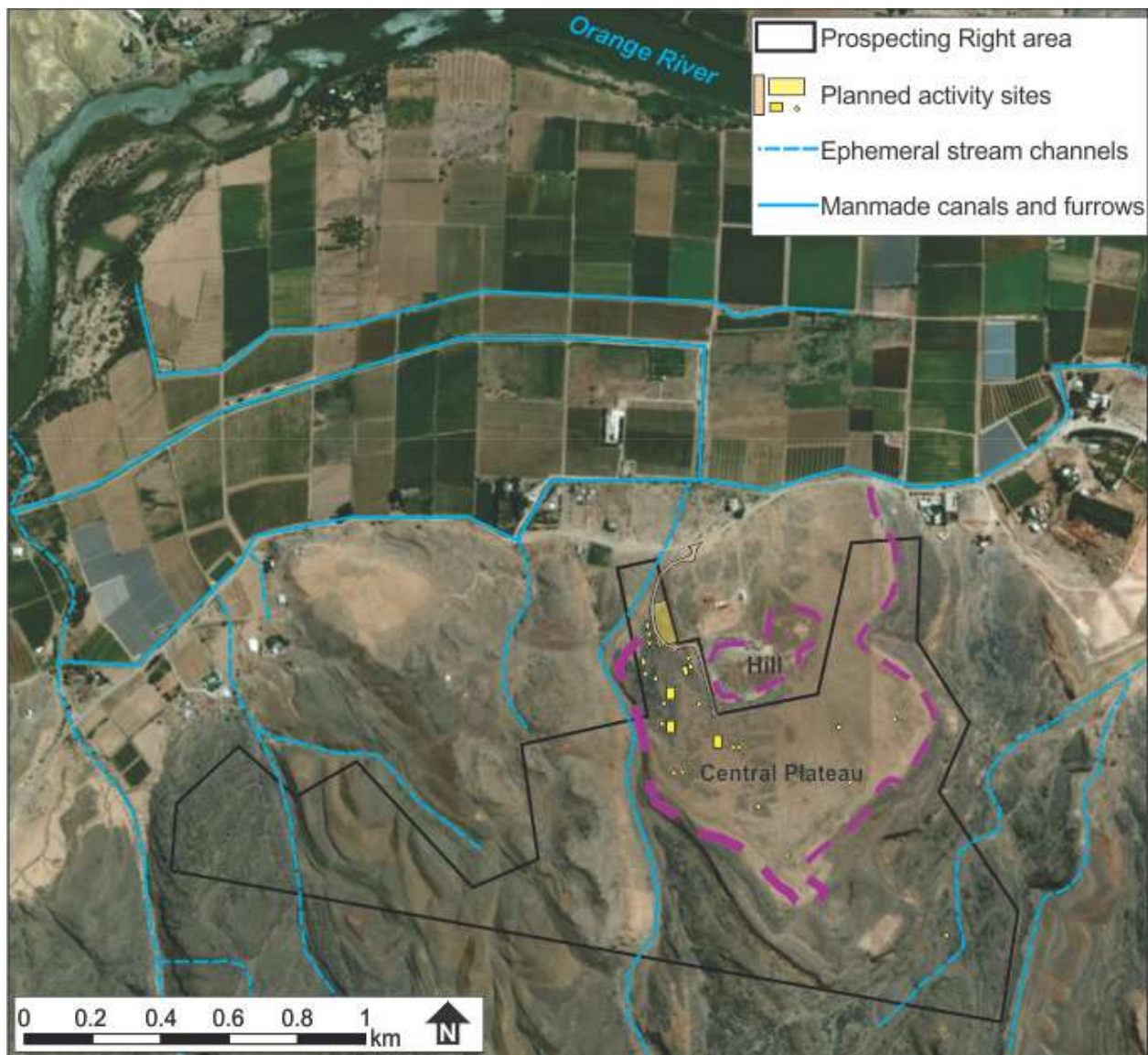


Figure 12: Surface Water Regime and topography on the central plateau

13.1.7 Groundwater

No groundwater will be impacted by the proposed operation.

13.1.8 Air Quality

Ambient natural pre-prospecting dust levels are generally very low although regional dust levels get elevated during windy conditions in this arid landscape.

While occasional limited dust is generated during ploughing of cultivated lands and windswept dust occurring of the disturbed adjacent alluvial hill, the main dust generator in Kotzeshoop is the traffic on the main public gravel road as seen in photo 9a.

As seen Figure 13 Windrose of Vioolsdrift, **the main dust receivers** from the prospecting project will include the adjacent SANDF unit and NG Church, the B&B on Erf 241 and the agricultural lands between properties 38 to 28 as well as the packshed, farmstead and staff accomodation of the Sutherlands on erven 114 and 263.

Dust generation by the prospecting project will largely be generated by occasional vehicle movement on the project roads, which distances are short and will take place mainly on rocky areas with limited dust generation. Furthermore, dust from percussion drilling will be low given that the drilling rig is equipped with full dust extraction as per photo 5 and that core drilling and block cutting will be wet operations with no dust generation.

The central concern regarding dust is that of the public road traffic generation dust which was raised by all three of the large agricultural producers. The road dust impact on their farming operations (export fruit) is reflected by the fact that they have installed sprinkler wetting systems along the public road to reduce road generated dust and that their that the dimension stone project will further raise the road dust generation level. Accordingly, the matter of air quality: dust will be further assessed in the draft EIA during which attenuation measures in addition to sprinkler systems can be assessed and the contribution to dust control by the project considered against projected project traffic generation.

13.1.9 Noise

Ambient noise levels are low. The only significant noise source in the area is a result of the regional, tourism and agricultural traffic on the public gravel road.

Figure 13 (Visual Exposure) shows the surrounding built facilities which will be subject to varied levels of noise to primarily include the houses on the public road between erven 307 and 241 and 38 and the De Vlei packshed on 225, and the SANDF facilities on erf 208 and the church on erf 71.

Noise generation by the prospecting project will have the following sources:

- **Percussion drilling** which while having a high noise generation level in close proximity to the drill rig, will be a very temporary activity over three days during daylight hours only and will take place as shown by the blue dots in Figure 13 to largely be isolated other than the four holes in the centre of the core activities area. Such noise would be the equivalent of a chainsaw operating in the agricultural sector
- **Core drilling** merely as the noise of its small diesel motor
- **Block cutting** the noise of this phase will be generated by:
 - A small diesel genset powering the cutter with the cutter itself quiet
 - The intermittent drilling of small diameter holes to feed the diamond wireline for cutting

- The front end loader or other lifting equipment to load the blocks from the excavation
- The very occasional visiting lowbed to collect the selected blocks

The noise generation and attenuation methods with conclusion on impact will be further dealt with in the EIA

13.1.10 Visual aspects

(i) Visual screening of proposed activities

- Figure 13: Visual Exposure of Prospecting shows the core activities relative to the topographical visual break lines which screen the activities on the central plateau from distant views from both the west and the east while the alluvial hill immediately east of the core activities further screen them.
- While photo 13 shows the immediate visual impact which the prospecting project site will have on the immediately adjacent SANDF and church buildings, photo 14 shows the level of screening which those facilities will have in screening the Prospecting Activities from especially west-bound traffic on the public gravel road and from the guest house and residence on erf 241.
- Furthermore, the residences north of the road are at a lower level than the project site which elevation difference reduces prospecting activities from south to north

(ii) Visual exposure

- Given the above screening, the core prospecting activity area visual impact is limited to:
 - the public road views and views from the residences between erf 307 and 241, i.e limited to the limited visual envelop as shown by arrows in Figure 13 and photo 12
 - The more distant views from the residences' on property 38 and the De Vlei packshed on erf 225
 - The immediately adjacent SANDF buildings rear sides, its vehicle parking area on erf 208 and the adjacent church on erf 71

13.1.11 Traffic impact/road maintenance

Other than dust, the primary concern of the three large agricultural producers was that of bruising of export fruit which results from delivery truck shaking caused by irregular maintenance of the main gravel road to eliminate potholes and corrugation irrespective of the project but noting that their concern is that project traffic could increase the problem of fruit bruising during delivery.

During the EIA-EMP phase, the contribution of the project to road maintenance requirements through more regular grading or application of gravel loss attenuation chemicals will be assessed but it is noted that the project will only generate 26-30 lowbed trips over a 2 year period of block cutting with loads distributed evenly throughout the two year.

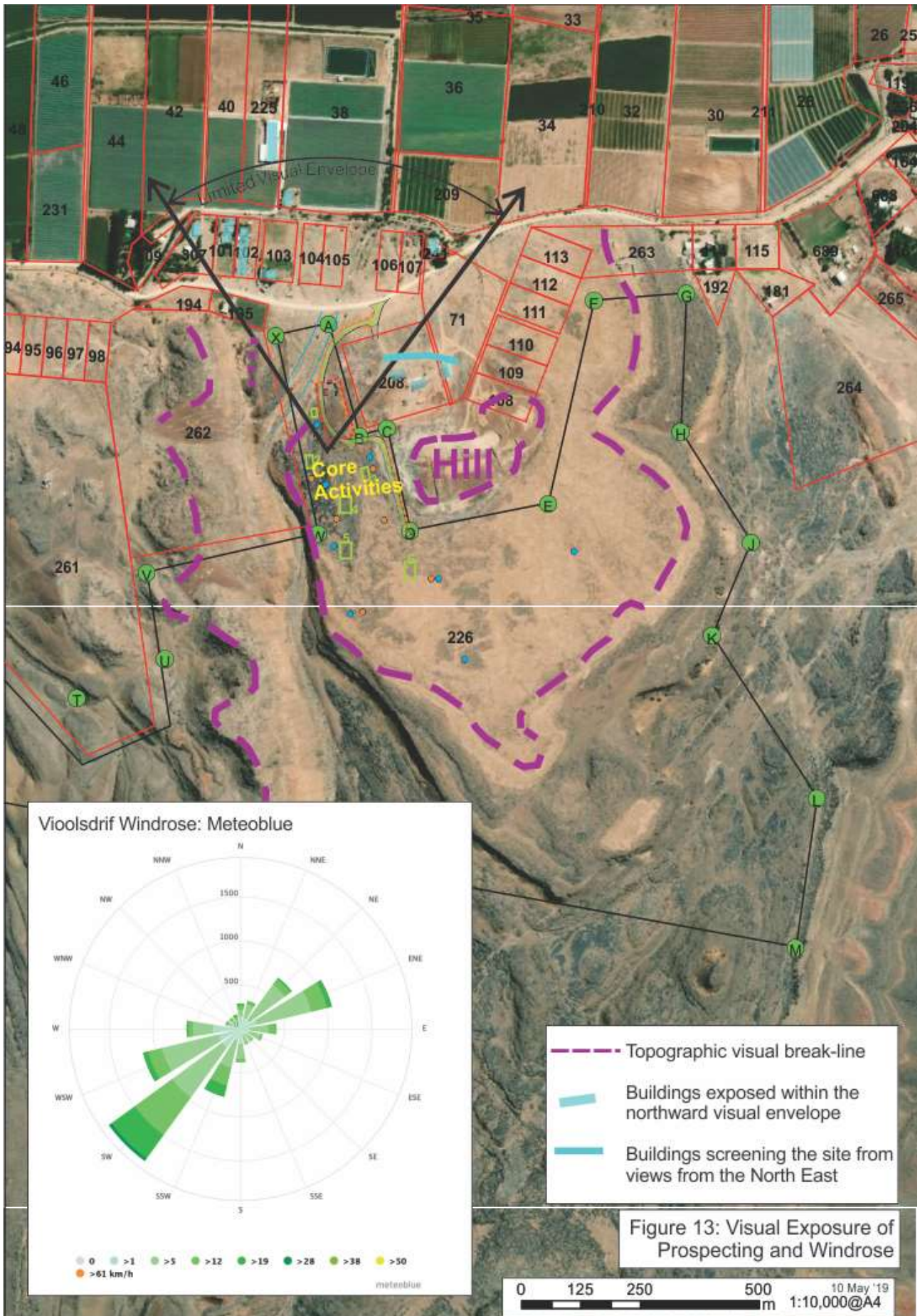


Figure 13: Visual Exposure of Prospecting and windrose



Photo 12: Northward outward view from project camp site northern bulk sample pit



Photo 13: The interface of the Prospecting Project Site with the buildings of the SANDF and Church



Photo 14: Front view from the road screening much of the site from road views

13.2 Description of the current surrounding land uses.

Refer Figure 13 (Visual Exposure) and photos 12 and 13 for location of very proximate surrounding land uses while Figure 14 overleaf shows the broader surrounding land use considerations which in total include:

- The closest residences to the project yard are 325m to the North between erf 307 and erf 201 (Figure 13).
- The closest buildings to the proposed activities are the SANDF facilities of office and accommodation blocks at between 150 and 300m from the prospecting project site.
- The NG church at 350m
- The unsurfaced public road between Violsdrif and the Richtersveld World Heritage Site as seen in both Figure 13 and 14.
- The closest cultivated land to the project site is located 450m to the north
- The closest settlement (i.e. not farmsteads) is the Rooiwal Suid settlement about 800m east of the closest proposed drill hole position
- The Rooiwal town is located 1500m east of the core prospecting activities
- There are two packsheds with office and other logistical facilities being:
 - The De Vlei packshed 500m due north of the core prospecting activities and
 - A second Sutherland packshed 800m north east of the prospecting core area as seen in Figure 14
- There is an abandoned Diamond Prospect hill just south of SANDF property.

A separate change of land use application to accommodate the prospecting project will be made through the CPAs as landowners of Erf 226 to the NamaKhoi Municipality

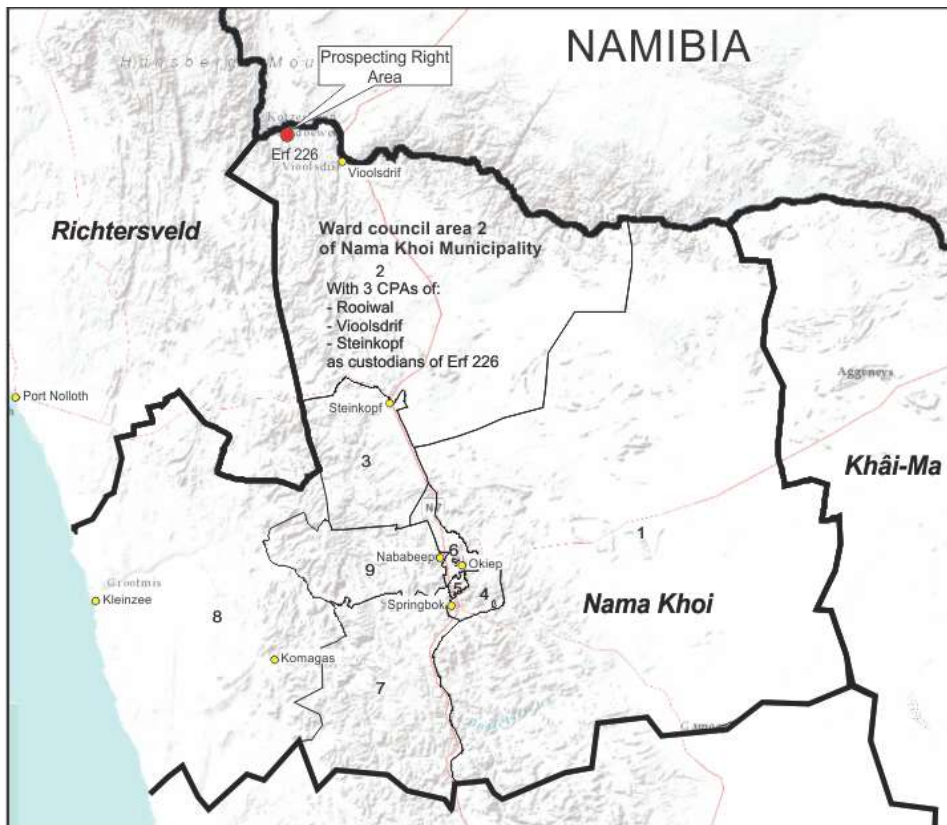


Diagram 1: Municipal and ward context

13.3 Description of specific environmental features and infrastructure on the site.

Refer Para 13.1 and 13.2 as well as para 5.

13.4 Environmental and current land use map.

(Show all environmental and current land use features)

Refer figures as follows:

Figure 1: Locality Plan

Figure 2: Detail Locality Plan

Figure 3: Geology

Figure 4: Proposed Prospecting Layout Plan

Figure 5: Diagrammatic pit plan and cross section

Figure 6: Excerpt from Municipal SDF (Municipal Context) showing site in “Orange River Water Corridor”.

Figure 7: Excerpt from SDF : Rooiwal /Kotzeshoop Detail

Figure 8: Scoping phase engagement with surrounding owners

Figure 9: Surrounding Landowners

Figure 10: Vegetation Classification (Mucina and Rutherford, 2006)

Figure 11: Local CBA Mapping (2016 Northern Cape Mapping)

Figure 12: Surface Water Regime and topography of the central plateau

Figure 13: Visual aspects (exposure of prospecting)

Figure 14: Surrounding Land Use

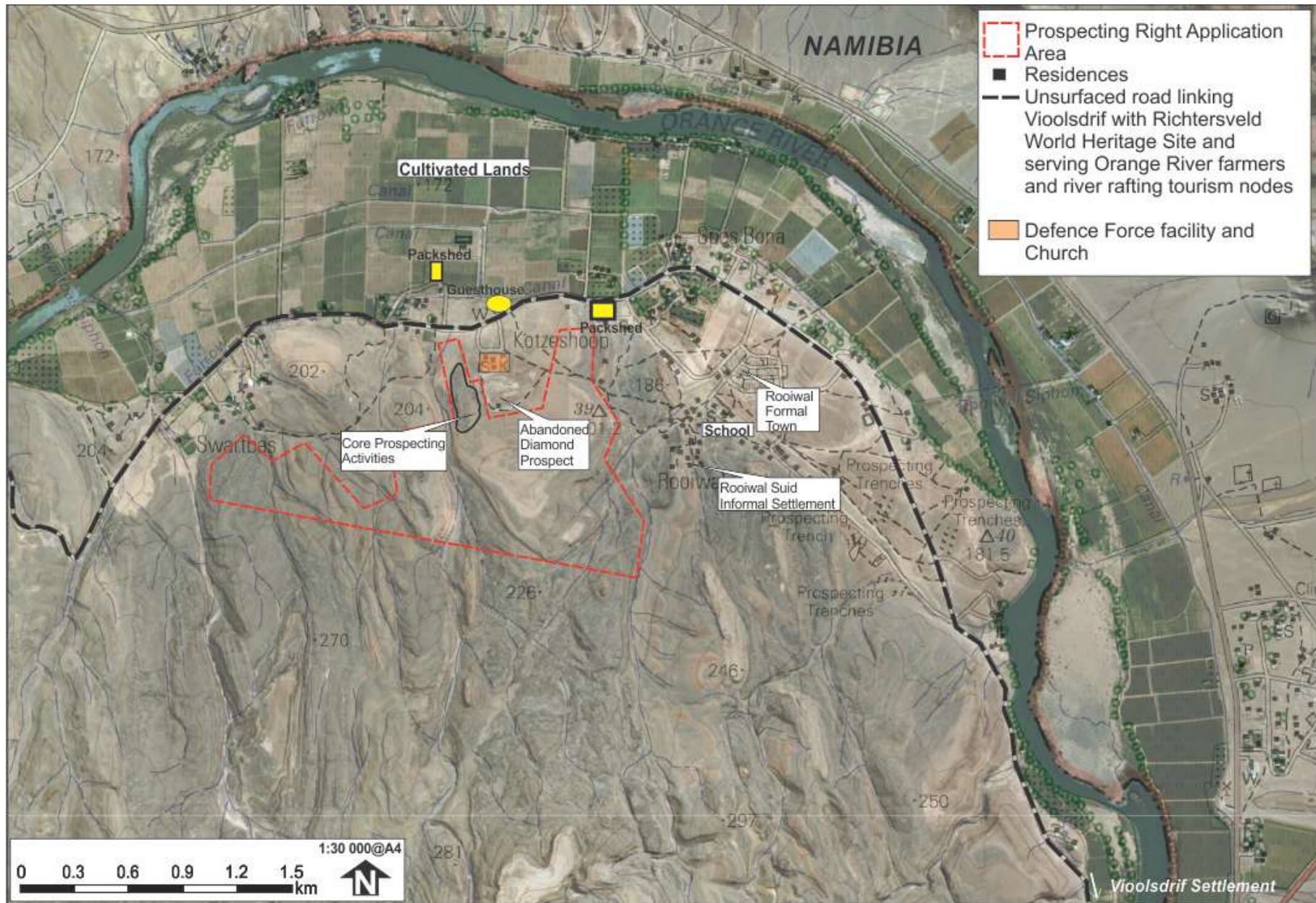


Figure 14: Surrounding Land Use

14 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).

Note that in this final Scoping Report, only the potential impacts identified are the typical impacts known for such activities. Such typical impacts were subjected to public participation to identify additional / different impacts as per table below. Second step is to ascribe significance and details as per table thereafter. The grey shaded blocks indicate potential negative impacts and the green indicate positive impacts.

This table identifies potential negative impacts only. Does not show beneficial impacts which arise out of operational or decommissioning rehabilitation activities or monitoring.	Geology	Topography	Soil/ Topsoil	Visual	Land Capability	Vegetation	Surface Water	Ground Water	Animal Life	Noise	Air Quality (Dust)	Social/ Economic	Archaeology/ Cultural	Hydrocarbon	Traffic /Access
Application for Prospecting Right (including Bulk Sampling by Section 20 Application)															
1. Pre-Establishment Phase															
1.1. Geologist checks provisional layout plan for drill and block cutting sites															
1.2. Mark drilling, block cutting sites and project camp site by GPS															
2. Establishment Phase															
2.1. Fence the project camp site															
2.2. Remove topsoil from access / spine road to perimeter berm and establish road (Wider than 4m)															
2.3. Remove topsoil from project camp site to perimeter berm															
2.4. Place logistical facilities (Office, Stores, Personnel Amenities, Workshop containers, Bunded fuel tank <30kl and genset or transformer and yellow fleet as required.															
2.5. Demarcate and establish access roads to block cutting sites by loose rock removal and gravel where required. 350 x 4m wide to the block sites (Not applicable to drill sites)															
3. Operational Phase Percussion drilling															
3.1. Establish percussion drilling at each site and conduct drilling (Max 25m ² disturbance per site)															
3.2. Tidy up each site and cap hole with concrete plug															
4. Operational Phase Drilling at each core drilling site															
4.1. Establish core drill at each hole position and conduct core drilling (±40m ² disturbance per site)															

This table identifies potential negative impacts only. Does not show beneficial impacts which arise out of operational or decommissioning rehabilitation activities or monitoring.	Geology	Topography	Soil/ Topsoil	Visual	Land Capability	Vegetation	Surface Water	Ground Water	Animal Life	Noise	Air Quality (Dust)	Social/ Economic	Archaeology/ Cultural	Hydrocarbon	Traffic /Access
4.2. Provide water by tanker truck to each hole position															
4.3. Tidy up the site and cap hole with concrete plug															
5. Operational Phase Block Cutting at each block cutting site															
5.1. Strip topsoil if present and stockpile to berm (Min 600m ² each. Say 1 000m ² each x 6 sites)															
5.2. Strip overburden if present to pit perimeter berm for reuse in rehabilitation															
5.3. Establish cutter tracks and bolt to rock and mount cutter															
5.4. Establish mobile genset to power cutter															
5.5. Cut and drill blocks															
5.6. Apply wedges or black powder to release block															
5.7. Remove block by mobile crane or Front end loader to haul truck															
5.8. Haul truck to dispatch blockyard															
5.9. Load and deliver blocks to port															
5.10. Backfill pit with waste rock															
5.11. Replace overburden from perimeter berm															
5.12. Replace topsoil (if present)															
6. Decommissioning Phase															
6.1. Remove diesel tank, bund and apron. Remove all plant and equipment from sites and project camp. Remove logistical containers: Office, Store, Personnel amenities and workshop.															
6.2. Scarify hardened areas (roads and project camp area)															
6.3. Replace topsoil and hand seed															
6.4. Remove fence															
6.5. Conduct final performance assessment for closure.															
6.6. Lodge Closure Application															
7. Aftercare Period															
7.1. Remove alien vegetation, if present															

Note, the table overleaf contains only the potential negative impacts as identified in the above. It does not (and is not meant to) show beneficial impacts which arise out of operational or decommissioning rehabilitation activities or monitoring. This has been done in order to reduce the length of this report. So, for example, the positive impact on soil, vegetation and land capability which arises out of topsoil replacement is not shown in the tables which follow.

Activity	Nature of impact	Extent	Duration	Probability	Significance	Extent to which impact can cause or be:		
						reversed	irreplaceable loss of resource	avoided, managed or mitigated
Application for Prospecting Right (including Bulk Sampling by Section 20 Application)								
1. Pre-Establishment Phase								
1.1. Geologist checks provisional layout plan for drill and block cutting sites								
1.2. Mark drilling, block cutting sites and project camp site by GPS								
2. Establishment Phase								
2.1. Fence the project camp site								
2.1.1. Land Capability	The fenced area will be unavailable as grazing land	6 750m ²	Life of prospect	Definite	Insignificant	Reversible	No	Mitigated
2.2. Remove topsoil from access / spine road to perimeter berm and establish road (Wider than 4m)								
2.2.1. Soil	Removal of topsoil to perimeter berms	±7 000m ²	Life of prospect	Definite	Insignificant	Reversible	No	Mitigated
2.2.2. Visual	Road will be visible to immediate neighbours	±7 000m ²	Life of prospect	Definite	Insignificant	Reversible	No	Mitigated
2.2.3. Land Capability	The disturbed area will be unavailable as grazing land	7 000m ²	Until revegetation	Definite	Insignificant	Reversible	No	Mitigated
2.2.4. Vegetation	Vegetation (if any) will be removed along with topsoil	7 000m ²	Until revegetation	Definite	Insignificant	Reversible	No	Mitigated
2.2.5. Noise	Noise generated by grader	Very local	On execution	Definite	Low	No	No	Managed
2.2.6. Air Quality	Dust generated by grader	Local	On execution	Definite	Low/moderate	No	No	Managed
2.2.7. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until clean-up	Possible	Insignificant	Yes	No	Managed
2.2.8. Archaeology	Possible disturbance of artefacts	7 000m ²	Permanent	Unlikely	Insignificant	No	Yes	Managed
2.3. Remove topsoil from project camp site to perimeter berm								
2.3.1. Soil	Removal of topsoil to perimeter berms	±6 750m ²	Life of prospect	Definite	Insignificant	Reversible	No	Mitigated

Activity	Nature of impact	Extent	Duration	Probability	Significance	Extent to which impact can cause or be:		
						reversed	irreplaceable loss of resource	avoided, managed or mitigated
2.3.2. Visual	Project camp will be visible to immediate neighbours	6 750m ²	Life of prospect	Definite	Insignificant	Reversible	No	Mitigated
2.3.3. Land Capability	Already assessed in 2.1.1.							
2.3.4. Vegetation	Vegetation (if any) will be removed along with topsoil	6 750m ²	Until revegetation	Definite	Insignificant	Reversible	No	Mitigated
2.3.5. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Low/moderate	No	No	Managed
2.3.6. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Low/moderate	No	No	Managed
2.3.7. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until clean-up	Possible	Insignificant	Yes	No	Managed
2.3.8. Archaeology	Possible disturbance of artefacts	6 750m ²	Permanent	Unlikely	Insignificant	No	Yes	Managed
2.4. Place logistical facilities (Office, Stores, Personnel Amenities, Workshop containers, Bunded fuel tank <30kl and genset or transformer and yellow fleet as required.								
2.4.1. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until clean-up	Possible	Insignificant	Yes	No	Managed
2.5. Demarcate and establish access roads to block cutting sites by loose rock removal and gravel where required. 350 x 4m wide to the block sites (Not applicable to drill sites)								
2.5.1. Soil	Removal of topsoil to perimeter berms	Up to 1 400m ²	Life of prospect	Definite	Insignificant	Reversible	No	Mitigated
2.5.2. Land Capability	The disturbed area will be unavailable as grazing land	1 400m ²	Until revegetation	Definite	Insignificant	Reversible	No	Mitigated
2.5.3. Vegetation	Vegetation (if any) will be removed along with topsoil	1 400m ²	Until revegetation	Definite	Insignificant	Reversible	No	Mitigated
2.5.4. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Insignificant	No	No	Not necessary
2.5.5. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Insignificant	No	No	Not necessary

Activity	Nature of impact	Extent	Duration	Probability	Significance	Extent to which impact can cause or be:		
						reversed	irreplaceable loss of resource	avoided, managed or mitigated
2.5.6. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
2.5.7. Archaeology	Possible disturbance of artefacts	1 400m ²	Permanent	Unlikely	Insignificant	No	Yes	Managed
3. Operational Phase Percussion drilling								
3.1. Establish percussion drilling at each site and conduct drilling	(Max 25m ² disturbance per site x 12 sites)							
3.1.1. Noise	Noise generated by drilling equipment	Local	On execution	Definite	Low to moderate	No	No	Not necessary
3.1.2. Air Quality	Dust generated drilling equipment	Local	On execution	Definite	Insignificant	No	No	Not necessary
3.1.3. Hydrocarbon	Possible fuel / oil leaks from mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
3.2. Tidy up each site and cap hole with concrete plug								
4. Operational Phase Drilling at each core drilling site								
4.1. Establish core drill at each hole position and conduct core drilling	(±40m ² disturbance per site x 7 sites)							
4.1.1. Noise	Noise generated by drilling equipment	Very local	On execution	Definite	Low	No	No	Not necessary
4.1.2. Air Quality	No Dust generated; wet drilling equipment	None						
4.1.3. Hydrocarbon	Possible fuel / oil leaks from mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
4.2. Provide water by tanker truck to each hole position								
4.2.1. Surface Water	Water use from Orange River. Exact source to be finalised	1kl per drill hole	Permanent	definite	Insignificant	No	No	Managed / Recycled in sump
4.3. Tidy up the site and cap hole with concrete plug								
5. Operational Phase Block Cutting at each block cutting site								
5.1. Strip topsoil if present and stockpile to berm (Min 600m ² each. Say 1 000m ² each x 6 sites)								

Activity	Nature of impact	Extent	Duration	Probability	Significance	Extent to which impact can cause or be:		
						reversed	irreplaceable loss of resource	avoided, managed or mitigated
5.1.1. Soil	Removal of topsoil to perimeter berms	±6 000m ²	Life of prospect	Definite	Insignificant	Reversible	No	Mitigated
5.1.2. Visual	Block sites will be visible to immediate neighbours	Total 6 000m ²	Until rehabilitation (possibly permanent)	Definite	Insignificant / Moderate	Reversible to some extent	No	Mitigated
5.1.3. Land Capability	Area will be unavailable for grazing.	±6 000m ²	Life of prospect	Definite	Insignificant	Reversible	No	Mitigated
5.1.4. Vegetation	Vegetation (if any) will be removed along with topsoil	±6 000m ²	Until revegetation	Definite	Insignificant	Reversible	No	Mitigated
5.1.5. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Insignificant	No	No	Not necessary
5.1.6. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Insignificant	No	No	Not necessary
5.1.7. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
5.1.8. Archaeology	Possible disturbance of artefacts	±6 000m ²	Permanent	Unlikely	Insignificant	No	Yes	Managed
5.2. Strip overburden if present to pit perimeter berm for reuse in rehabilitation								
5.2.1. Topography	Removal of overburden will lower local surface	Surface will be lowered by max 1m	Until backfill of mined out block (in order of 3 months per block site)	Definite	Insignificant	Yes	No	Mitigated
5.2.2. Soil	Removal of overburden to perimeter berms minimal in outcrops	±6 000m ²	Until backfill of mined out block (in order of 3 months per block site)	Definite	Insignificant cutting outcrops	No	Yes	Mitigated
5.2.3. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Insignificant	No	No	Not necessary
5.2.4. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Insignificant	No	No	Not necessary
5.2.5. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
5.3. Establish cutter tracks and bolt to rock and mount cutter								
5.4. Establish mobile genset to power cutter								
5.4.1. Hydrocarbon	Possible leaks from equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed

Activity	Nature of impact	Extent	Duration	Probability	Significance	Extent to which impact can cause or be:		
						reversed	irreplaceable loss of resource	avoided, managed or mitigated
5.5. Cut and drill blocks								
5.5.1. Noise	Noise generated by cutter	Very local	On execution	Definite	Low	No	No	Not necessary
5.5.2. Air Quality	Dust generated by cutter	Local	On execution	Definite	Insignificant	No	No	Not necessary
5.5.3. Hydrocarbon	Possible fuel / oil leaks from cutter	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
5.6. Apply wedges or black powder to release block								
5.7. Remove block by mobile crane or Front end loader to haul truck								
5.7.1. Topography	Blocks will be removed from 6 cuts as per plan. Refer Figure 5	Up to 220m ² per block cutting site	Permanent. Will be backfilled with waste rock but will not match surrounding topography	Definite	Insignificant / Moderate	No	No	Partially mitigated through backfill
5.7.2. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Insignificant	No	No	Not necessary
5.7.3. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Insignificant	No	No	Not necessary
5.7.4. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
5.8. Haul truck to dispatch blockyard								
5.8.1. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Insignificant	No	No	Not necessary
5.8.2. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Insignificant	No	No	Not necessary
5.8.3. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
5.9. Load and deliver blocks to port								
5.9.1. Traffic	Heavy vehicles transporting 2-3 blocks per trip (for 51 blocks)	Not more than 25 trips	On execution	Definite	Moderate	Yes	No	Managed
5.10. Backfill pit with waste rock								
5.10.1.Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Low	No	No	Managed
5.10.2.Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Insignificant	No	No	Managed

Activity	Nature of impact	Extent	Duration	Probability	Significance	Extent to which impact can cause or be:		
						reversed	irreplaceable loss of resource	avoided, managed or mitigated
5.10.3. Topography	Protruding block backfill	local	Permanent	Possible	Moderate	Yes	No	Managed
5.10.4. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
5.11. Replace overburden from perimeter berm								
5.11.1. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Insignificant	No	No	Not necessary
5.11.2. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Low	No	No	Managed
5.11.3. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
5.12. Replace topsoil (if present)								
5.12.1. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Insignificant	No	No	Not necessary
5.12.2. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Low	No	No	Managed
5.12.3. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
6. Decommissioning Phase								
6.1. Remove diesel tank, bund and apron. Remove all plant and equipment from sites and project camp. Remove logistical containers: Office, Store, Personnel amenities and workshop.								
6.2. Scarify hardened areas (roads and project camp area)								
6.2.1. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Moderate	No	No	Managed
6.2.2. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Definite	Low/moderate	No	No	Managed
6.2.3. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
6.3. Replace topsoil and hand seed								

Activity	Nature of impact	Extent	Duration	Probability	Significance	Extent to which impact can cause or be:		
						reversed	irreplaceable loss of resource	avoided, managed or mitigated
6.3.1. Noise	Noise generated by earthmoving equipment & trucks	Very local	On execution	Definite	Insignificant	No	No	Not necessary
6.3.2. Air Quality	Dust generated by earthmoving equipment and trucks	Local	On execution	Low/moderate	Insignificant	No	No	Managed
6.3.3. Hydrocarbon	Possible fuel / oil leaks from vehicles and mobile equipment	Local	Until cleanup	Possible	Insignificant	Yes	No	Managed
6.4. Remove fence								
6.5. Conduct final performance assessment for closure.								
6.6. Lodge Closure Application								
7. Aftercare Period								
7.1. Remove alien vegetation, if present								

15 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).

An initial table was compiled which described each activity (whether listed or not in terms of NEMA), potential impact, significance and duration. Such table was included in the draft scoping reporting, made available to all identified Interested and Affected Parties. Any relevant responses received would then inform a revision of the site layout plan.

Specialist study will be conducted in respect of Botany, but at this stage it is this EAP's opinion that the impact on vegetation will be absolutely insignificant. Heritage application will also be lodged with SAHRIS.

The impacts are rated according to nature, extent, duration, probability of occurring and significance.

a) The significance level is based on the following criteria:

<i>Significance</i>		<i>Criteria</i>
Negative	Significant (S)	<ul style="list-style-type: none"> Recommended level always exceeded with associated widespread community action Disturbance to areas that are pristine, have conservation value, are important resource to humans and will be lost forever Complete loss of land capability Destruction of rare or endangered specimens May affect the viability of the project
	Moderate (M)	<ul style="list-style-type: none"> Moderate measurable deterioration and discomfort Recommended level occasionally violated – still widespread complaints Partial loss of land capability Complete change in species variety or prevalence May be managed Is insignificant if managed according to EMP provisions
	Minor/ (I) Insignificant	<ul style="list-style-type: none"> Minor deterioration. Change not measurable Recommended level will rarely if ever be violated Sporadic community complaints Minor deterioration in land capability Minor changes in species variety or prevalence
	Negligible	<ul style="list-style-type: none"> An impact will occur but it is barely discernible and not worthy of further investigation
Positive	Minor	<ul style="list-style-type: none"> Improvements in local socio-economics
	Significant	<ul style="list-style-type: none"> Major improvements in local socio-economics with some regional benefits

b) The **duration** is classified as:

- Permanent (post-closure)
- Life of Mine (LOM)
- Temporary

c) The **probability** is ranked as:

- Definite/Certain
- Possible

- Unlikely

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

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

The proposed prospecting will have the following negative impacts on the environment and community:

a) Topography:

The most significant impact will be the impact which arises out of the block cutting excavations. The dimensions of the block excavations are relatively small at max 220m² each to depth of max 5.5m (as per figure 5). These blocks excavations will have topsoil and overburden removed (wherever these are present) prior to block cutting. The proposal involves the backfilling of the resultant excavations with the waste / broken blocks and then covering of that with topsoil and overburden – if these were present. However, it is unlikely that the topography will ever perfectly match pre-prospecting topography but being on the flat elevated central plateau will only be visible from close inspection.

b) Impact on Topsoil:

Topsoil is proposed to be removed from every disturbance area prior to disturbance of that area. The negative impact will be minimised / removed through replacement of that topsoil after activities have taken place.

c) Visual Impact:

The receptors will be the users of the unsurfaced road to the north as described in para 13.1.10, Figure 13 and Photos 12 and 13. The impact will be in place until revegetation (very sparsely vegetated in the first instance) of the topsoiled areas has taken place in the case of all disturbances, except the block excavation pits which could possibly have permanent visual impact.

d) Impact on Land Capability and Vegetation / Habitat:

The proposed core activity area will result in temporary disturbance of max 2.1ha of very low carrying capacity veld while only very broadly spaced single percussion holes will be drilled on the remainder of the central plateau and only on foot geological inspection will be undertaken on the vast remainder of the prospecting area. Given the arid and hostile environment, the denudation of topsoiled areas may be in place for extended times before revegetation takes place. But remember that pre-prospecting vegetation is extremely sparse.

e) Dust:

Para 13.1.8 provides a detailed description of the ambient dust situation in the area. The current dust generators in the area are occasional ploughing and traffic on gravel road while dust receivers are residences and land uses within a 150-800m radius from the core activity area of the project. Dust generating activities from the project namely traffic on gravel road, percussion drilling, core drilling and block cutting will have management attenuation measures implemented and such measures will be further expanded upon in the draft EIA-EMP phase.

f) Noise:

Noise generation will be highest from percussion drilling but that will be limited to daytime hours for a total of 3 days. The noise of core drilling and wireline cutting is largely generated by the small diesel powered electrical generator to be located in close proximity to the activity i.e moving further away from affected adjacent uses and a full range of gensets with attenuated noise levels to international standards is available for selection to ensure minimal noise impacts.

g) Traffic impact/road maintenance

The primary concern of the three large agricultural producers was that of bruising of export fruit which results from delivery truck shaking caused by irregular maintenance of the main gravel road to eliminate potholes and corrugation irrespective of the project but noting that their concern is that project traffic could elevate the problem of poor road condition elevating fruit bruising during delivery.

This concern will be investigated thoroughly and management attenuation measures will be fully provided in the draft EIA-EMP phase. These could include:

- Application of commercially available gravel loss reducing chemical sprays applied to the road
- Increased sprinkler wetting of the road
- Increased grading of the road

Only if positive prospecting leads to mining, will the mining company join a lobby with the farming and tourist community to advocate the taring of the road

h) Positive socio economic impact

The only positive impact of the prospecting phase would be the socio economic impact which would accrue through employment opportunities (direct and indirect) and purchasing of consumer goods). The main positive impact arises out of the knowledge of geological suitability of the material to enable future Mining Right application.

17 The possible mitigation measures that could be applied and the level of risk.

Impact	Possible Mitigation	Level of risk
Topography: Impact generated block cutting excavations	Backfill with waste / broken blocks and (if present then cover with overburden and topsoil). Ensure block replaced managed to avoid post filling topographical impact	Impact will be permanent. It will be impossible to perfectly match pre-prospecting topography at the local level. Level of risk as a result of prospecting: High
Topsoil / Soil	Topsoil must be removed prior to any new development.	Level of risk: Low at this site. Reason: If topsoil is not replaced, then revegetation will be extremely limited. Other impacts would arise, such as visual impact, loss of land capability, etc BUT in this case, the vegetation is so sparse that the loss of 2.1ha would represent an insignificant impact.
	Such topsoil must be stockpiled in berms no higher than 1.5m in order to retain seedbank	
	Topsoil must be replaced after completion of activities at any disturbance	

Impact	Possible Mitigation	Level of risk
Land Capability	Return the bulk sample sites and logistical area to serve a grazing function after full rehabilitation of the site.	Level of risk: Low Linked to successful topsoil return as described above.
Vegetation / Animal Life	Remove vegetation along with topsoil to ensure viable seedbank in stored topsoil	Level of risk: Low As per topsoil description above
	No poaching or trapping of animals is permitted. Ensure staff report any snare or poaching noted.	
	Alien / exotic plant management must take place	
Dust impact from the operation	Limit speed on internal roads as well as access roads to the site	Minimal risk given wet core drilling and wet cutting operations and dust extraction on percussion drilling and isolation of site. Must be controlled in terms of employee health regulations
	Ensure rehabilitation / revegetation of denuded blocks as soon as possible	
	If dust results in any complaints from surrounding parties, then source must be investigated and best options installed to eliminate any future dust from that source.	
Noise	The impacts of noise must be limited more because of employee health reasons than for any impact on surrounding land users or land use. In the use of wedges or black powder which generate the highest noise levels, such activities should be conducted between 9am and 4pm	Minimal risk given isolation of site. Must be controlled in terms of employee health regulations
	All vehicles must be equipped with working silencers and gensets selected with regard to noise generation levels	
Waste / Hydrocarbon impact	Any transfer of fuel must take place using suitable funnels and pumping equipment	Risk is low given small scale of the activities.
	Staff to be trained in respect of hydrocarbon pollution and contamination clearing methodologies to be employed	
	Separate waste streams and handle accordingly	
Heritage Impact	Monitoring / Search and rescue, if required by SAHRIS	Highly unlikely to be an impact but input awaited from SAHRIS
Traffic impact/road maintenance	<ul style="list-style-type: none"> o Application of commercially available gravel loss reducing chemical sprays applied to the road o Increased sprinkler wetting of the road o Increased grading of the road 	Moderate

18 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)

There is no change between the draft Scoping report layout plan and the final layout plan as comments received did not warrant any change.

19 Motivation where no alternative sites were considered.

This site has been proposed for application by the applicant for several years but awaited clarification of land claims. With the CPAs now in place, the purpose of this application is to test the geological feasibility for possible full Mining Right application.

20 Statement motivating the preferred site.

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

The overriding informant is geology: The presence of the suitable material on surface is the most important aspect in the decision to further explore this site.

21 Plan of study for the Environmental Impact Assessment process

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

The following alternatives must be considered during the EIA process:

Alternatives in respect of:	Contained in draft Scoping report	Update in Final Scoping report
Property on which or location where it is proposed to undertake the activity	Yes. Refer Para 12.1	As in draft Scoping
Type of activity to be undertaken	Yes. Refer Para 12.2	As in draft Scoping
Design or layout of the activity	Yes. Refer Para 12.3	As in draft Scoping
Technology to be used in the activity	Yes. Refer Para 12.4	As in draft Scoping
Operational aspects of the activity	Yes. Refer Para 12.5	As in draft Scoping
Option of not implementing the activity	Yes. Refer Para 12.6	As in draft Scoping the implementation is unchanged

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

The following activities and environmental aspects thereof will continue to be assessed during the EIA:

Activity / Impact	Was it provisionally assessed in the Draft Scoping Report	Status in the Final Scoping report
Application for Prospecting Right (including Bulk Sampling by Section 20 Application)		
1. Pre-Establishment Phase		
1.1. Geologist checks provisional layout plan for drill and block cutting sites		
1.2. Mark drilling, block cutting sites and project camp site by GPS		
2. Establishment Phase		
2.1. Fence the project camp site		
2.1.1. Land Capability	Yes	As in draft Scoping

Activity / Impact	Was it provisionally assessed in the Draft Scoping Report	Status in the Final Scoping report
2.2. Remove topsoil from access / spine road to perimeter berm and establish road (Wider than 4m)		
2.2.1. Soil	Yes	As in draft Scoping
2.2.2. Visual	Yes	As in draft Scoping
2.2.3. Land Capability	Yes	As in draft Scoping
2.2.4. Vegetation	Yes. But subject to specialist input	As in draft Scoping, still subject to specialist input
2.2.5. Noise	Yes	Updated
2.2.6. Air Quality	Yes	Updated
2.2.7. Hydrocarbon	Yes	As in draft Scoping
2.2.8. Archaeology	Yes. But subject to input from SAHRIS.	Awaiting clarification through SAHRIS
2.3. Remove topsoil from project camp site to perimeter berm		
2.3.1. Soil	Yes	As in draft Scoping
2.3.2. Visual	Yes	As in draft Scoping
2.3.3. Land Capability	Yes	As in draft Scoping
2.3.4. Vegetation	Yes. But subject to specialist input	As in draft Scoping, still subject to specialist input
2.3.5. Noise	Yes	Updated
2.3.6. Air Quality	Yes	Updated
2.3.7. Hydrocarbon	Yes	As in draft Scoping
2.3.8. Archaeology	Yes. But subject to input from SAHRA.	Awaiting clarification through SAHRIS
2.4. Place logistical facilities (Office, Stores, Personnel Amenities, Workshop containers, Bunded fuel tank <30kl and genset or transformer and yellow fleet as required.		
2.4.1. Hydrocarbon	Yes	As in draft Scoping
2.5. Demarcate and establish access roads to block cutting sites by loose rock removal and gravel where required. 350 x 4m wide to the block sites (Not applicable to drill sites)		
2.5.1. Soil	Yes	As in draft Scoping
2.5.2. Land Capability	Yes	As in draft Scoping
2.5.3. Vegetation	Yes. But subject to specialist input	As in draft Scoping, still subject to specialist input
2.5.4. Noise	Yes	Updated
2.5.5. Air Quality	Yes	Updated
2.5.6. Hydrocarbon	Yes	As in draft Scoping
2.5.7. Archaeology	Yes. But subject to input from SAHRA.	Awaiting clarification through SAHRIS
3. Operational Phase Percussion drilling		
3.1. Establish percussion drilling at each site and conduct drilling		
3.1.1. Noise	Yes	Updated
3.1.2. Air Quality	Yes	Updated
3.1.3. Hydrocarbon	Yes	As in draft Scoping
3.2. Tidy up each site and cap hole with concrete plug		
4. Operational Phase Drilling at each core drilling site		
4.1. Establish core drill at each hole position and conduct core drilling		
4.1.1. Noise	Yes	Updated
4.1.2. Air Quality	Yes	Updated
4.1.3. Hydrocarbon	Yes	As in draft Scoping
4.2. Provide water by tanker truck to each hole position		
4.2.1. Surface Water	Yes	In process
4.3. Tidy up the site and cap hole with concrete plug		
5. Operational Phase Block Cutting at each block cutting site		

Activity / Impact	Was it provisionally assessed in the Draft Scoping Report	Status in the Final Scoping report
5.1. Strip topsoil if present and stockpile to berm (Min 600m ² each. Say 1 000m ² each x 6 sites)		
5.1.1. Soil	Yes	As in draft Scoping
5.1.2. Visual	Yes	As in draft Scoping
5.1.3. Land Capability	Yes	As in draft Scoping
5.1.4. Vegetation	Yes. But subject to specialist input	As in draft Scoping, still subject to specialist input
5.1.5. Noise	Yes	Updated
5.1.6. Air Quality	Yes	Updated
5.1.7. Hydrocarbon	Yes	As in draft Scoping
5.1.8. Archaeology	Yes. But subject to input from SAHRA.	Awaiting clarification through SAHRIS
5.2. Strip overburden if present to pit perimeter berm for reuse in rehabilitation		
5.2.1. Topography	Yes	As in draft Scoping
5.2.2. Soil	Yes	As in draft Scoping
5.2.3. Noise	Yes	Updated
5.2.4. Air Quality	Yes	Updated
5.2.5. Hydrocarbon	Yes	As in draft Scoping
5.3. Establish cutter tracks and bolt to rock and mount cutter		
5.4. Establish mobile genset to power cutter		
5.4.1. Hydrocarbon	Yes	As in draft Scoping
5.5. Cut and drill blocks		
5.5.1. Noise	Yes	Updated
5.5.2. Air Quality	Yes	Updated
5.5.3. Hydrocarbon	Yes	As in draft Scoping
5.6. Apply wedges or black powder to release block		
5.7. Remove block by mobile crane or Front end loader to haul truck		
5.7.1. Geology	Yes	As in draft Scoping
5.7.2. Topography	Yes	As in draft Scoping
5.7.3. Noise	Yes	Updated
5.7.4. Air Quality	Yes	Updated
5.7.5. Hydrocarbon	Yes	As in draft Scoping
5.8. Haul truck to dispatch blockyard		
5.8.1. Noise	Yes	As in draft Scoping
5.8.2. Air Quality	Yes	As in draft Scoping
5.8.3. Hydrocarbon	Yes	As in draft Scoping
5.9. Load and deliver blocks to port		
5.9.1. Traffic	Yes	Updated
5.10. Backfill pit with waste rock		
5.10.1.Noise	Yes	As in draft Scoping
5.10.2.Air Quality	Yes	As in draft Scoping
5.10.3.Topography	Yes	Updated
5.10.4.Hydrocarbon	Yes	As in draft Scoping
5.11. Replace overburden from perimeter berm		
5.11.1.Noise	Yes	As in draft Scoping
5.11.2.Air Quality	Yes	As in draft Scoping
5.11.3.Hydrocarbon	Yes	As in draft Scoping
5.12. Replace topsoil (if present)		
5.12.1.Noise	Yes	As in draft Scoping
5.12.2.Air Quality	Yes	As in draft Scoping
5.12.3.Hydrocarbon	Yes	As in draft Scoping

Activity / Impact	Was it provisionally assessed in the Draft Scoping Report	Status in the Final Scoping report
6. Decommissioning Phase		
6.1. Remove diesel tank, bund and apron. Remove all plant and equipment from sites and project camp. Remove logistical containers: Office, Store, Personnel amenities and workshop.		
6.2. Scarify hardened areas (roads and project camp area)		
6.2.1. Noise	Yes	Updated
6.2.2. Air Quality	Yes	Updated
6.2.3. Hydrocarbon	Yes	As in draft scoping
6.3. Replace topsoil and hand seeding		
6.3.1. Noise	Yes	As in draft Scoping
6.3.2. Air Quality	Yes	As in draft Scoping
6.3.3. Hydrocarbon	Yes	As in draft Scoping
6.4. Remove fence		
6.5. Conduct final performance assessment for closure.		
6.6. Lodge Closure Application		
7. Aftercare Period		
7.1. Remove alien vegetation, if present		

21.3 Description of aspects to be assessed by specialists

The following is the list of specialists required and the status of their appointment:

- 1) Specialist Botanical assessment given location in a CBA.
- 2) Heritage: An application will be forwarded to SAHRA on the SAHRIS electronic lodging system. SAHRA will decide if any further studies will be required (unlikely)

Each of these specialist reports / inputs will be included in full in the draft EIA / EMP to be distributed at a future date.

21.4 Proposed method of assessing the environmental aspects including the proposed method of assessing alternatives

In this final Scoping report the environmental aspects have been assessed based on the experience of the report compiler (Refer CV in Appendix 1). This will be further assessed and refined in the following ways:

- Consultation with / Call for comments from all Interested and Affected Parties (I&AP's)
- Call for specialist studies to include assessment on specific environmental elements as listed in para 21.3 above.

The results of such further assessments will be included in the future EIA/EMP.

Note that no WULA is required.

21.5 The proposed method of assessing duration and significance

As for table in para 14.

21.6 The stages at which the competent authority will be consulted

This draft Scoping report was submitted to relevant I&APs and State Departments. This final Scoping report is being submitted to the competent authority and such report contains the details and results of the initial public participation.

The competent authority will decide on the implementation of the Plan of Study. If the applicant is given the go ahead to continue, then the draft EIA and EMP will be subject to public participation and finally lodged to the competent authority.

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

21.7.1 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 herein).

Notification of I&AP's has taken place in a system relative to their expected input as follows:

- 1) Landowner: Landowner is the Community. Public Open Day was held and CPAs have been engaged.
- 2) Surrounding adjacent landowners: Surrounding landowners have been invited to Public Open Day.
- 3) General public and residents of the area: Through advert in local press (Namakwalander newspaper see Appendix 3) and posters placed throughout the area included invitation to the Public Open Day.
- 4) Notice / posters placed strategic sites at Rooiwal and Vioolsdrif. Such poster included advert / invite to Public Open Day
- 5) In addition, the relevant Govt Departments were contacted by telephone and Email and registered in respect of the proposed project

Note that all parties had have full access to the Scoping report and in the EIA-EMP all registered I&APs will receive copies by post, email or via the municipal office in Rooiwal.

21.7.2 Details of the engagement process to be followed.

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

All parties (except landowner and State Departments) will have to register their interest in the matter. This registration continues from now until finalisation of the EMP/EIA. State Depts will be deemed to be registered I&AP's.

All registered I&AP's will be kept abreast of the application and will be supplied with all relevant documentation as well as consultations (one on one), if they so wish.

All commenting periods will be 30 days as stipulated and as defined in NEMA.

21.7.3 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).

The information presented will depend on timing. Initially, the draft Scoping report served as the basis for comment, and will be followed by the draft EIA/EMP which when compiled will form the basis of further consultation.

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

The following tasks will need to be undertaken during the EIA process:

- Public participation will proceed as transparent and all-inclusive as possible.
- This Final Scoping Report containing comments received on draft scoping report is hereby submitted to the competent authority for approval
- Draft EIA / EMP will be compiled as basis for further consultation
- Specialist studies as listed in para 21.3 will be completed.

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

Activity / Impact	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.).	Potential for Residual Risk
Application for Prospecting Right (including Bulk Sampling by Section 20 Application)		
1. Pre-Establishment Phase		
1.1. Geologist checks provisional layout plan for drill and block cutting sites		
1.2. Mark drilling, block cutting sites and project camp site by GPS		
2. Establishment Phase		
2.1. Fence the project camp site		
2.1.1. Land Capability	Remedy through management and rehabilitation.	Insignificant
2.2. Remove topsoil from access / spine road to perimeter berm and establish road (Wider than 4m)		
2.2.1. Soil	Remedy through management and rehabilitation.	Insignificant to moderate if not mitigated
2.2.2. Visual	Remedy through management and rehabilitation.	Insignificant
2.2.3. Land Capability	Remedy through management and rehabilitation.	Insignificant even if not mitigated
2.2.4. Vegetation	Remedy through management and rehabilitation.	Subject to specialist assessment. Unlikely to be significant
2.2.5. Noise	Managed	None
2.2.6. Air Quality	Control through dust control	None

Activity / Impact	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.).	Potential for Residual Risk
2.2.7. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
2.2.8. Archaeology	Avoid through monitoring and removal	Unknown but unlikely to be more than insignificant
2.3. Remove topsoil from project camp site to perimeter berm		
2.3.1. Soil	Remedy through management and rehabilitation.	Insignificant to moderate if not mitigated
2.3.2. Visual	Remedy through management and rehabilitation.	Insignificant
2.3.3. Land Capability	Remedy through management and rehabilitation.	Insignificant even if not mitigated
2.3.4. Vegetation	Remedy through management and rehabilitation.	Subject to specialist assessment. Unlikely to be significant at the project camp site given previous disturbance
2.3.5. Noise	Managed	None
2.3.6. Air Quality	Control through dust control	None
2.3.7. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
2.3.8. Archaeology	Avoid through monitoring and removal	Subject to specialist assessment. Unlikely to be significant at the project camp site given previous disturbance.
2.4. Place logistical facilities (Office, Stores, Personnel Amenities, Workshop containers, Bunded fuel tank <30kl and genset or transformer and yellow fleet as required.		
2.4.1. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
2.5. Demarcate and establish access roads to block cutting sites by loose rock removal and gravel where required. 350 x 4m wide to the block sites (Not applicable to drill sites)		
2.5.1. Soil	Remedy through management and rehabilitation.	Insignificant
2.5.2. Land Capability	Remedy through management and rehabilitation.	Insignificant even if not mitigated
2.5.3. Vegetation	Remedy through management and rehabilitation.	Subject to specialist assessment. Unlikely to be significant
2.5.4. Noise	None required	None
2.5.5. Air Quality	Control through dust control	None
2.5.6. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
2.5.7. Archaeology	Avoid through monitoring and removal	Unknown but unlikely to be more than insignificant
3. Operational Phase Percussion drilling		
3.1. Establish percussion drilling at each site and conduct drilling		
3.1.1. Noise	Managed	None

Activity / Impact	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.).	Potential for Residual Risk
3.1.2. Air Quality	Control through dust control	None
3.1.3. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
3.2. Tidy up each site and cap hole with concrete plug		
4. Operational Phase Drilling at each core drilling site		
4.1. Establish core drill at each hole position and conduct core drilling		
4.1.1. Noise	Managed	None
4.1.2. Air Quality	Control through dust control	None
4.1.3. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
4.2. Provide water by tanker truck to each hole position		
4.2.1. Surface Water	Monitor usage	None
4.3. Tidy up the site and cap hole with concrete plug		
5. Operational Phase Block Cutting at each block cutting site		
5.1. Strip topsoil if present and stockpile to berm (Min 600m ² each. Say 1 000m ² each x 6 sites)		
5.1.1. Soil	Remedy through management and rehabilitation.	Insignificant to moderate if not mitigated
5.1.2. Visual	Remedy through management and rehabilitation.	Insignificant
5.1.3. Land Capability	Remedy through management and rehabilitation.	Insignificant even if not mitigated
5.1.4. Vegetation	Remedy through management and rehabilitation.	Subject to specialist assessment. Unlikely to be significant
5.1.5. Noise	None required	None
5.1.6. Air Quality	Control through dust control	None
5.1.7. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
5.1.8. Archaeology	Avoid through monitoring and removal	Unknown but unlikely to be more than insignificant
5.2. Strip overburden if present to pit perimeter berm for reuse in rehabilitation		
5.2.1. Topography	Remedy through management and rehabilitation.	Insignificant (in the case of overburden)
5.2.2. Soil	Remedy through management and rehabilitation.	Insignificant to moderate if not mitigated
5.2.3. Noise	None required	None
5.2.4. Air Quality	Control through dust control	None
5.2.5. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
5.3. Establish cutter tracks and bolt to rock and mount cutter		
5.4. Establish mobile genset to power cutter		

Activity / Impact	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.).	Potential for Residual Risk
5.4.1. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
5.5. Cut and drill blocks		
5.5.1. Noise	Management	None
5.5.2. Air Quality	Control through dust control	None
5.5.3. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
5.6. Apply wedges or black powder to release block		
5.7. Remove block by mobile crane or Front end loader to haul truck		
5.7.1. Geology	None required	None
5.7.2. Topography	Remedy through management and rehabilitation.	High
5.7.3. Noise	None required	None
5.7.4. Air Quality	Control through dust control	None
5.7.5. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
5.8. Haul truck to dispatch blockyard		
5.8.1. Noise	None required	None
5.8.2. Air Quality	Control through dust control	None
5.8.3. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
5.9. Load and deliver blocks to port		
5.9.1. Traffic	Contribution to management	Low
5.10. Backfill pit with waste rock		
5.10.1.Noise	Managed	None
5.10.2.Air Quality	Control through dust control	None
5.10.3.Topography	Planned and managed	Possible
5.10.4.Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
5.11. Replace overburden from perimeter berm		
5.11.1.Noise	Managed	None
5.11.2.Air Quality	Control through dust control	None
5.11.3.Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
5.12. Replace topsoil (if present)		
5.12.1.Noise	None required	None
5.12.2.Air Quality	Control through dust control	None
5.12.3.Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
6. Decommissioning Phase		
6.1. Remove diesel tank, bund and apron. Remove all plant and equipment from sites and project camp. Remove logistical containers: Office, Store, Personnel amenities and workshop.		
6.2. Scarify hardened areas (roads and project camp area)		

Activity / Impact	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.).	Potential for Residual Risk
6.2.1. Noise	Managed	None
6.2.2. Air Quality	Control through dust control	None
6.2.3. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
6.3. Replace topsoil and hand seed		
6.3.1. Noise	Managed	None
6.3.2. Air Quality	Control through dust control	None
6.3.3. Hydrocarbon	Stop through design measures, monitoring and avoidance, remedy through rehabilitation	Insignificant
6.4. Remove fence		
6.5. Conduct final performance assessment for closure.		
6.6. Lodge Closure Application		
7. Aftercare Period		
7.1. Remove alien vegetation, if present		

22 Other Information required by the competent Authority

22.1 Compliance with the provisions of sections 24(4)(a) & (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:-

22.1.1 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 on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim).

NOTE: As a land claim has vested community Rights on State land Erf 226 Vioolsdrif, the community Support has been acquired for Application by Zhongfei Mining Development through the Ward Councillor minutes of meeting held on 10-11-2018

<i>How Impacted</i>	<i>Spatial extent of impact</i>	<i>Duration</i>	<i>Probability</i>	<i>Significance of Impact:</i>		
				<i>Internally</i>	<i>Externally</i>	
				<i>Significance</i>	<i>Significance</i>	<i>Affected Party</i>
Provision of direct employment and indirect employment to suppliers and transporters	Local	Life of operation	Certain	Insignificant	Low	Local

The prospecting operation will provide for low positive impact on local socio economic profile and no impact on regional socio-economic profile, through limited direct and indirect employment opportunities and possible requirement for mining related supplies and contractors.

22.1.2 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)(i)(vi) and (vii) of that Act).

This scoping report will be lodged to SAHRA on the SAHRIS electronic lodging website. SAHRA will decide if any further studies will be required (which will be duly conducted). If available, the study will form part of the draft EIA/EMP which will be distributed to registered I&AP's.

23 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.

Not applicable as the target rock is totally place bound.

24 UNDERTAKING REGARDING CORRECTNESS OF INFORMATION

I **Stephen van der Westhuizen** 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: 5 July 2019

25 UNDERTAKING REGARDING LEVEL OF AGREEMENT

I **Stephen van der Westhuizen** 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: 5 July 2019