



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: Jubacel (Pty) Ltd

REFERENCE NUMBER: NC 30/5/1/1/2/11045PR

ENVIRONMENTAL MANAGEMENT PLAN

**SUBMITTED
IN TERMS OF SECTION 39 AND OF REGULATION
52 OF THE MINERAL AND PETROLEUM
RESOURCES DEVELOPMENT ACT, 2002,
(ACT NO. 28 OF 2002) (the Act)**

STANDARD DIRECTIVE

Applicants for prospecting rights or Mining permits, are herewith, in terms of the provisions of Section 29 (a) and in terms of section 39 (5) of the Mineral and Petroleum Resources Development Act, directed to submit an Environmental Management Plan strictly in accordance with the subject headings herein, and to compile the content according to all the sub items to the said subject headings referred to in the guideline published on the Departments website, within 60 days of notification by the Regional Manager of the acceptance of such application. This document comprises the standard format provided by the Department in terms of Regulation 52 (2), and the standard environmental management plan which was in use prior to the year 2011, will no longer be accepted.

IDENTIFICATION OF THE APPLICATION IN RESPECT OF WHICH THE ENVIRONMENTAL MANAGEMENT PLAN IS SUBMITTED.

ITEM	COMPANY CONTACT DETAILS
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ITEM	CONSULTANT CONTACT DETAILS (If applicable)
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1 REGULATION 52 (2): Description of the environment likely to be affected by the proposed prospecting or Mining operation

1.1 The environment on site relative to the environment in the surrounding area.

There is no community stated on the proposed prospecting area.

Direction and distance to adjacent towns (Fig. 1):

The nearest communities are Holpan - ±14km southwest, Windsorton - ±16 kilometre north-north-east, and Barkley West - 35 kilometres North North-East of the well-known small town of Barkly West.

The capital of the Northern Cape, Kimberly is ± 60 km to the South East of the proposed prospecting area.

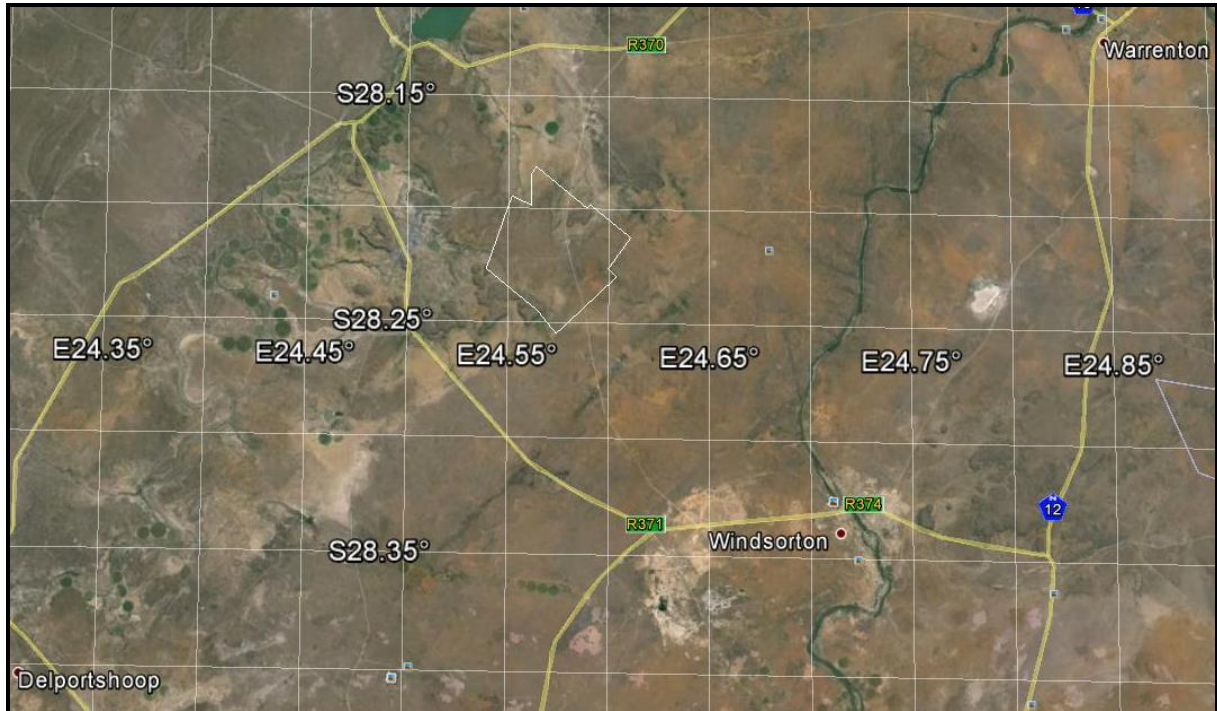


Figure 1: Location of the proposed application area

Climate

Regional climate:

The proposed prospecting area is located in a semi-arid region, receiving on average about 250mm of rain in the west to 500mm on its eastern boundary. It is situated within the Sn climate region. Most of the rainfall is due to showers and thunderstorms falling in the summer months October to March. The peak of the rainy season is normally March or February. The summers are very hot with cool winters.

The nearest weather station to the proposed prospecting area is at Barkly West #0290032 with a record going back to 1884. Due to the limited range of information available from this station and the number of

periods with broken records, the data from the weather stations at Kimberley will be used.

Table 1: Average monthly rainfall data and number of days per month with measureable precipitation.

MONTH	RAINFALL AVERAGE (mm)	NUMBER OF RAINY DAYS		
		>0,1 mm	>1,0 mm	> 10 mm
January	57	9.8	6.7	1.6
February	76	9.8	6.9	2.3
March	65	10.2	7.1	2.2
April	49	7.6	5.5	1.6
May	16	3.3	2	0.4
June	7	2.5	1.2	0.2
July	7	1.5	0.9	0.3
August	7	1.8	1.3	0.2
September	12	3.1	1.7	0.4
October	30	6.1	4	0.9
November	42	7.7	5.3	1.3
December	46	7.9	5.6	1.7
ANNUAL	414	71	48	13

Source: Directorate: Climatology South African Weather Bureau © 2000

Station: 02940468 – Kimberley : 1960 - 2000

Socio-Economic Conditions:

The following information relating to the socio-economic environment has been obtained from the Frances Baard District Municipality Integrated Development Plan (IDP) 2012/13 – 2016/17.

- a. The Dikgatlong Municipal area is reported to have an unemployment rate of 39.7%. Poverty is rated between 71-80%. Unemployment is attributed to low levels of education.

b. Due to the low level of transformation within the district municipality, economic development opportunities, including wildlife-related activities, tourism or livestock farming have been identified. Nature-related tourism opportunities have been identified for the Dikgatlong municipal area.

c. Limited water availability has been identified as a threat to the future socio-economic development of the district.

Municipal information published by Statistic South Africa confirms that the municipality's economy is driven by livestock, irrigation farming and commercial mining.

Surface infrastructure:

Based on site observations on aerial map and 1:50 000 topo, access roads to the proposed prospecting site is by the unpaved road which is intersecting the proposed prospecting area especially the Koppiesdam. Access to the site will be via the gravel road which connects R370 to the north and R374 roads to the south. Irrigation water to the farms is supplied by the canal and the developed furrows are used to circulate water.

No railway lines can be found near the proposed prospecting area and the nearest rail connection is along the R31 and the R29.

Current surface infrastructure on the farms includes secondary gravel roads, and numerous buildings and structures.

Land use:

According to the Agricultural Geo-Referenced Information System (AGIS) the prospecting site is indicated to be non-arable with a moderate grazing capacity. Cattle, Sheep, goats and game farming are predominant land use in the general area. The Vaalharts Agricultural

canal is found crossing farm 96 and appear in relative close proximity South west of the Koppiesdam farm.

Water Resources:

The proposed prospecting site falls within the Lower Vaal Water Management Area, within Quaternary Catchment C33B, and C33C the Harts sub-area. Based on the information contained in the Overview of Water Resources Availability and Utilisation Report for the Lower Vaal Management Areas (DWA Report No: P WMA 10/000/00/0203, September 2003), the main water requirement in Harts sub-area is for irrigation and are in excess of 85%.

Surface Water:

The Hart River is situated about ± 12 km west of the planned prospecting site, whereas the Vaal River is located about ± 14 km east of the planned prospecting site. The canal traverses the site toward the western part of Danny put within the vicinity, and just outside the koppiesdam farm. A number of non-perennial drainage channels, which originates on the planned prospecting site, flows towards the Hartsriver. The Spitskop Dam is located ± 11 km north of the planned prospecting site.

DWA (2003) reported that the water in the Harts River downstream of the Vaalharts irrigation scheme is of exceptional high salinity as a result of saline leachate from the irrigation fields.

Groundwater:

The DWA (2003) reports groundwater utilisation to be of major importance in the Lower Vaal Water Management Area. Dolomitic aquifers occur in the uppermost reaches of the Hartsriver and Molopo River and extend north and eastwards into the Crocodile (West) and Marico, Upper Vaal and Middle Vaal Water Management Areas. Significant quantities of groundwater are abstracted in the Harts sub-areas. The total yield from groundwater in the water management area well exceeds water available from surface water sources.

Biodiversity:

According to the South African National Biodiversity Institute's (SANBI) Biodiversity Geographical Information System (BGIS), the proposed prospecting site is located within the Savanna Biome. The descriptions for the vegetation types were obtained from Vegetation Map of South Africa, Lesotho and Swaziland.

The Schmidtsdrif Thornveld Vegetation Type represents 38.31% of Dikgatlong municipal area and the conservation status of the Schmidtsdrif Thornveld is recorded as "Least Threatened". The vegetation type is described as mostly a closed shrubby thornveld dominated by *Acacia Mellifera* and *Acacia Tortillis*. Grasses, bulbous and annual herbaceous plant species are also prominent.

Natural vegetation

Trees: *Acacia tortilis* (Umbrella Thorn) and *Boscia albitrunca* (Shepherd's Tree,).

Scrubs: *Acacia mellifera* (Black Thorn) and *Acacia tortilis* (Umbrella Thorn).

Grasse: *Enneapogon desvauxii* (Eight Day Grass), *Eragrostis echinochloidea* (Tick Grass) and *E. truncate*.

Forbs: *Felicia muricata* (Bloublommetjie), *Geigeria ornativa* (Vermeerbos), *Salsola* species and *Monechma incanum* (Skaapbloubossie).

Succulents: *Ledebouria cf. graminifolia* (Hyacinthaceae), *Euphorbia decepta* (Euphorbiaceae) (Melkbos), *Orbeopsis lutea* (Asclepiadaceae), *Aloe grandidentata* (Asphodelacea) (Bontaalwyn), *Titanopsis calcarea* and *Nanathus aloides* (Mesembryanthemaceae,).

Endangered for Rare species and/or Protected species

No endemic, rare and/or endangered plant species were recorded. The trees *Acacia tortilis* (Umbrella Thorn) and *Boscia albitrunca* (Shepherd's Tree) are protected plants in the Northern Cape Province. Other protected plants are *Orbeopsis lutea* (Asclepiadaceae), and *Aloe grandidentata* (Asphodelaceae).

The natural vegetation comprises of a mix of low scrub vegetation due to the aridity of the area that occurs on the flats, with the ridges and hillsides being characterised by much bushier vegetation between 1.5-2.5m height averages. The farm Rooipan falls within the Tropical bush and savanna type, Acocks veld type groups on a level to very gentle slope.

A large percentage of the municipal area remains natural (approximately 90%) though a very small percentage of the areas is statutorily conserved.

The Spitskop Dam has no protection status and a poaching as well as water pollution has been identified as habitat threats.

Geology:

The Project areas lie within the Kaapvaal Craton and within the world's most famous diamond mining area. The country rocks are flat laying clastic sediments of the Permo-Triassic Karoo Supergroup covering the early Precambrian platform sequences of the Venterdorp Group and Transvaal Supergroup. The Karoo rocks thicken to the east and south, into the main Karoo Basin of South Africa. Westwards the Transvaal Supergroup crops out over an extensive area. The closest discernable orogenic belt, the 1,900 Ma Kheis Belt which flanks the Kaapvaal Craton, lays some 200 kms to the west.

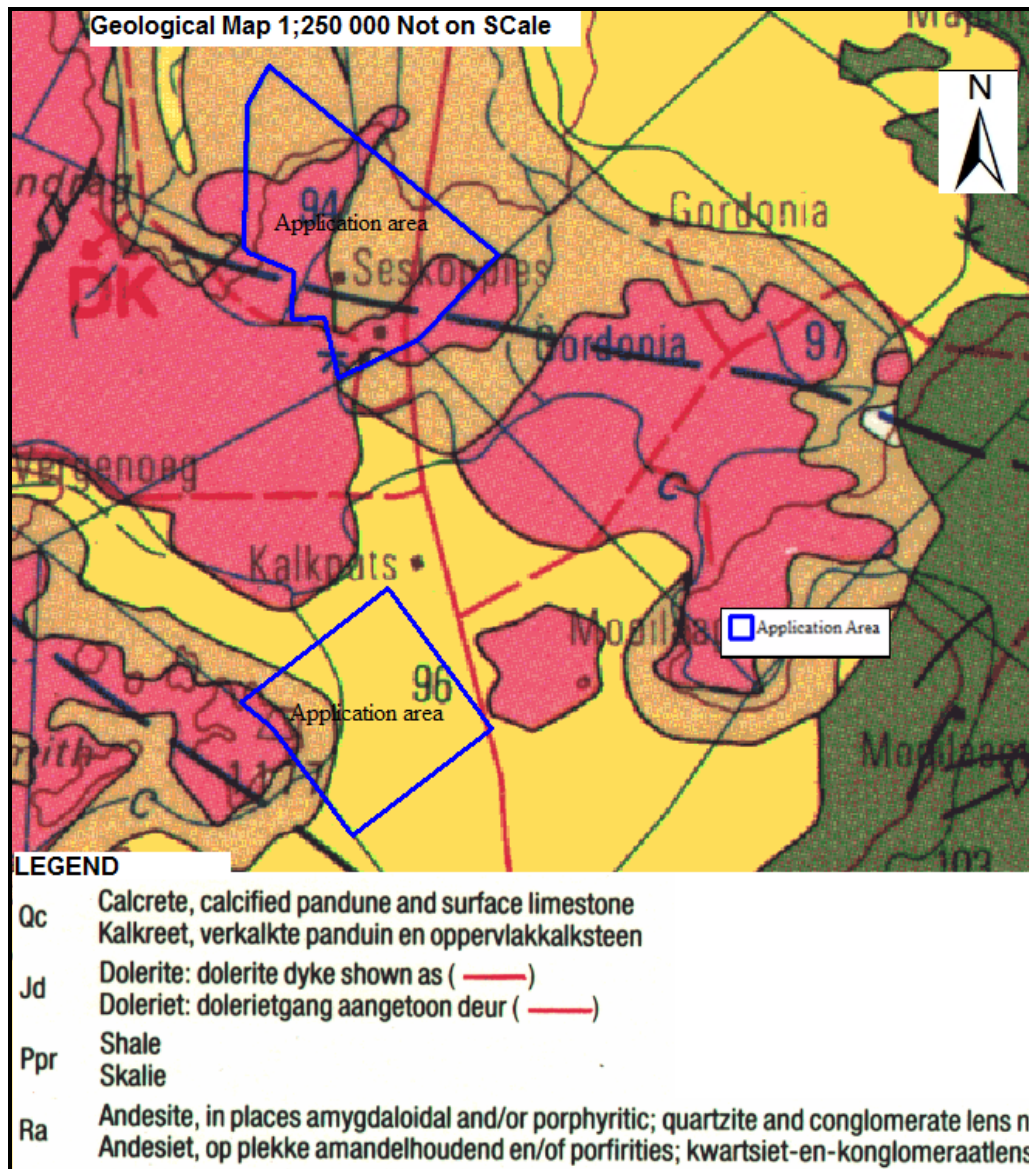


Figure 2: Surface geology of the area

The country rock is dark grey shale of the Dywka Group or lower Ecca Group, the lowermost units of the Karoo Supergroup, a correlation with the lower Ecca Group is perhaps more likely (the Dwyka Group is by definition glaciogenic). Although the shale is almost flat lying, the attitude of the bedding at sub-outcrop is intensely disturbed by calcretisation and its accompanying volume increase. The shale is generally very friable for down to 4 m below surface.

The shale overlies the late Archaean Ventersdorp Lavas. This unit is dominantly hard grey-green amygdaloidal lava. The historical mining of the kimberlite dykes around this area passed downwards from shale to

lava country rock, and it is estimated that the shale may be around 200 – 300 m thick.

There are numerous Posts – Karoo dolerite sills intruding the Karoo shale's, and these form the low, flat hills immediately south-west of the proposed application area.

Topography:

The proposed prospecting area itself lies on a flat topography area surrounded by small table mountain hills to the south-west that rises up to 90 metres from the surrounding landscape (Fig. 3). The nearest hill to the proposed prospecting area (the farm Dandy put - Denneputs 96) is a small “kopie” that rises up to 90 metres above the landscape (Fig. 3).

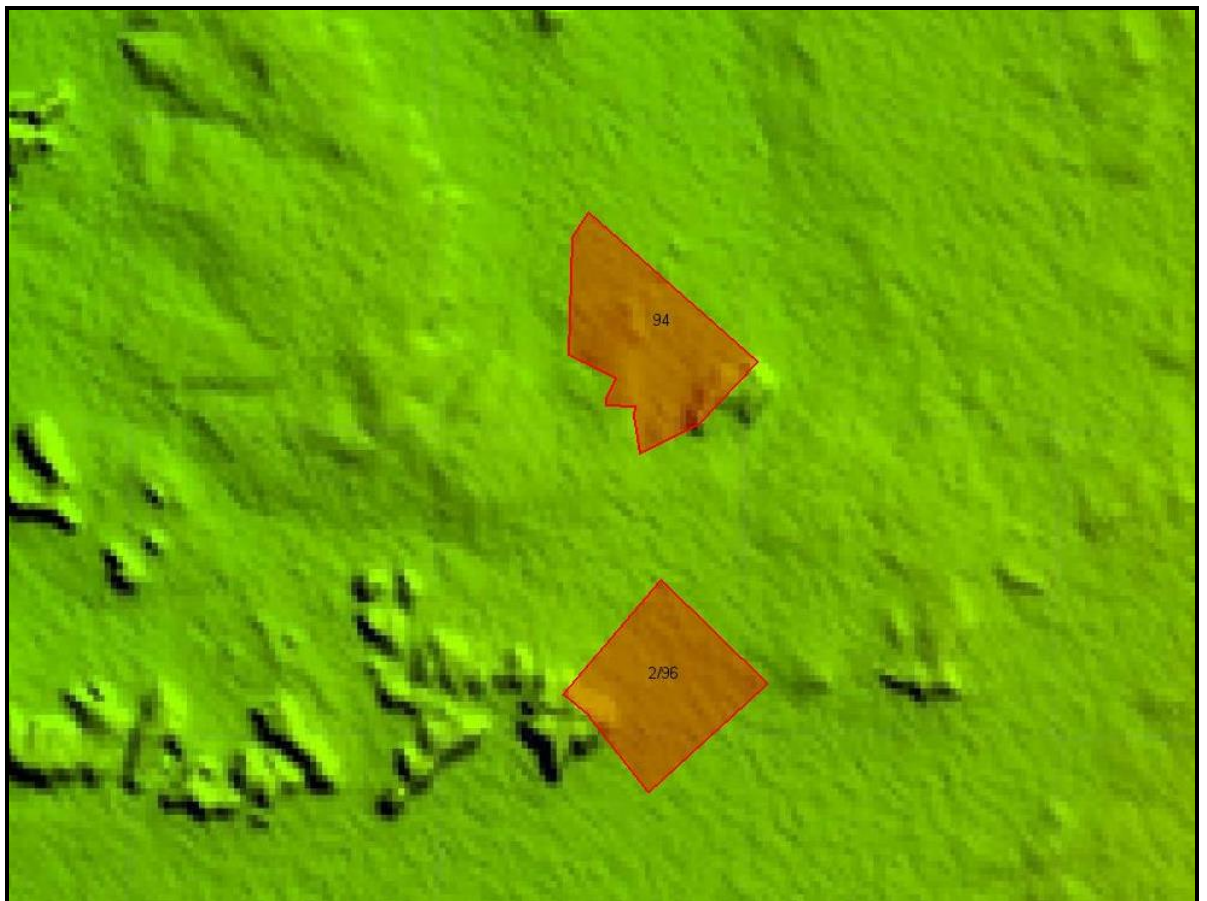


Figure 3: Map showing the height/landscape

Heritage:

To date, no desktop heritage resource information could be sourced for the affected farm portions. It should be noted that a Heritage Impact Assessment was not undertaken as part of this study.

1.2 The specific environmental features on the site applied for which may require protection, remediation, management or avoidance.

A number of water courses have been identified to occur within the proposed prospecting site. These include the canal, furrows, and wet pans on site. The canal traverses the site toward the western part of Danny put within the vicinity, and just outside the koppiesdam farm. A number of non-perennial drainage channels, which originates on the planned prospecting site, flows towards the Hartsriver.

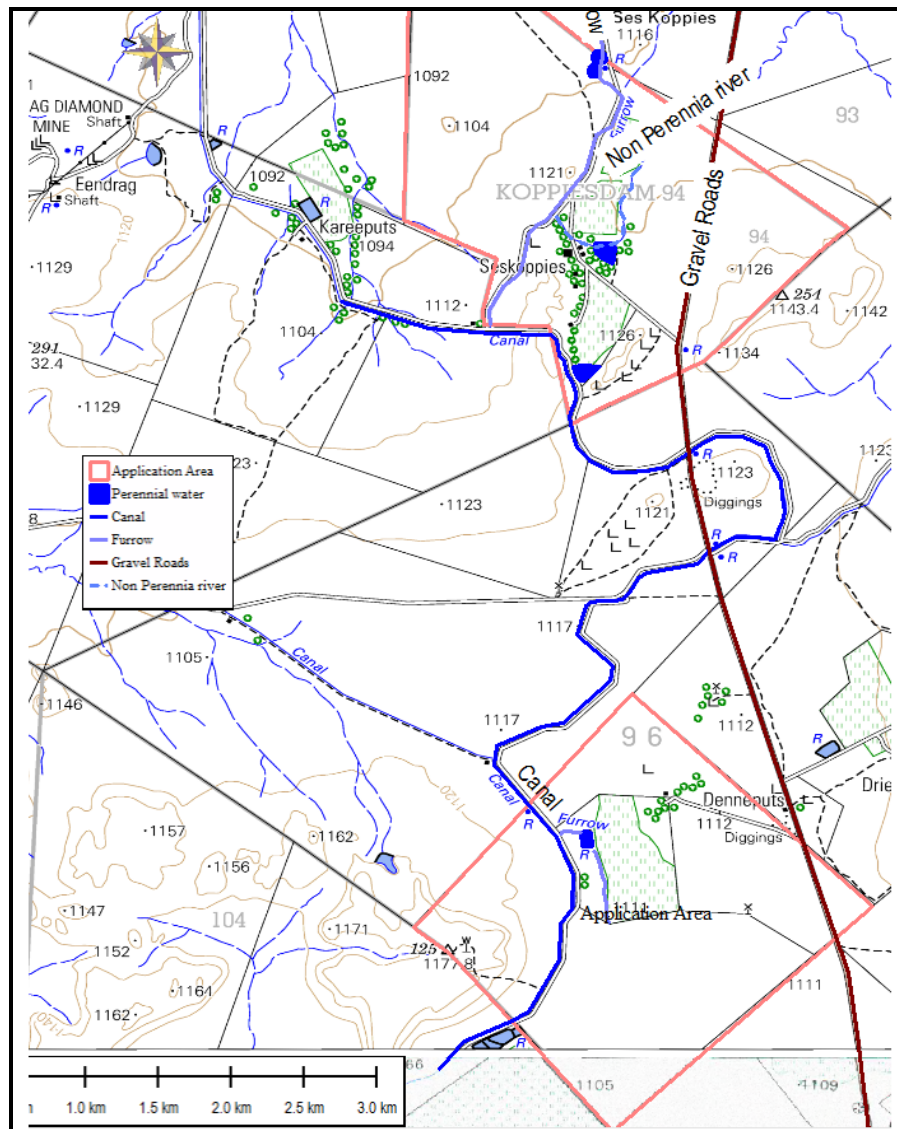


Figure 4: water course map

As these environmental features (water courses) need to be protected, no prospecting will be allowed within 100m of any of these features. All potential environmental impacts will be managed in accordance with the mitigation measures in the EMP.

1.3 Map showing the spatial locality of all environmental, cultural/heritage and current land use features identified on site.

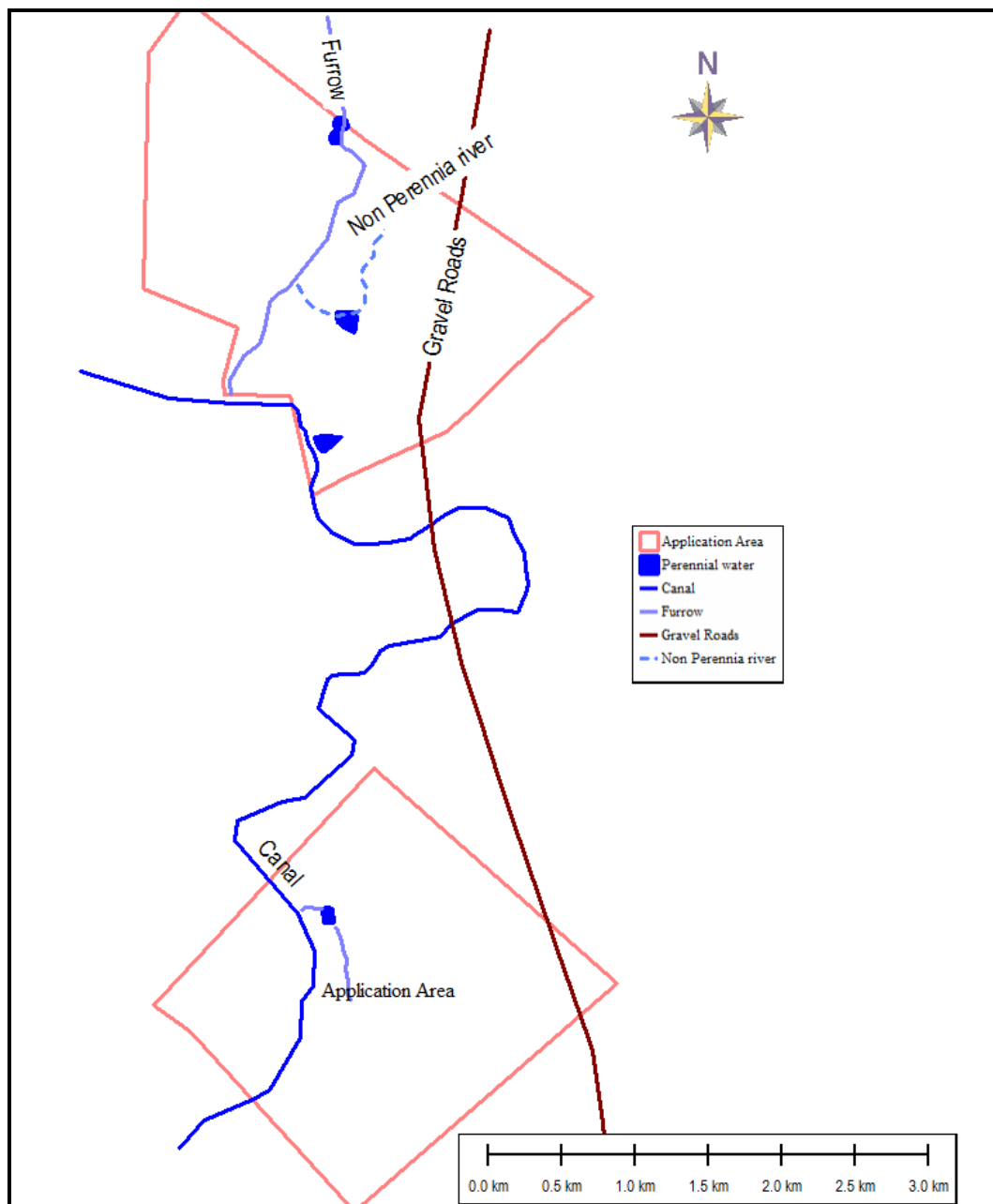


Figure 5: Environmental features on surrounding area.

1.4 Confirmation that the description of the environment has been compiled with the participation of the community, the landowner and interested and affected parties,

The Basic Information Document, results on the consultation report, has been made available to the registered interested and affected parties in the area. The draft EMP was also made available to the registered interested and affected party within the area for inputs and comments. Participants were also given an opportunity to provide and share their knowledge on the general environmental information of the proposed area.

No comments were made on the existing status of the area also as described in the advertisement and notifications presented to the I&AP's.

2 REGULATION 52 (2) (b): Assessment of the potential impacts of the proposed mining or prospecting operation on the environment, socio-economic conditions and cultural heritage.

2.1 Description of the proposed mining or prospecting operation.

2.1.1 The main prospecting activities (e.g. access roads, topsoil storage sites and any other basic prospecting design features)

Phase	Activity (what are the activities that are planned to achieve optimal prospecting)	Skill(s) required (refers to the competent personnel that will be employed to achieve the required results)	Timeframe (in months) for the activity)	Outcome (What is the expected deliverable, e.g. Geological report, analytical results, feasibility study, etc.)	Timeframe for outcome (deadline for the expected outcome to be delivered)	What technical expert will sign off on the outcome? (e.g. geologist, mining engineer, surveyor, economist, etc)
1	Non-invasive: Literature Review Geological mapping Progress report	Geologist Geologist Geologist	Month 1-2 Month 3-5 Month 6-7	Data acquisition from government or private sources. Geological maps/plans of the property. Detailed progress report.	Month 2 Month 5 Month 7	Geologist Geologist Geologist
2	Invasive: Boreholes Excavations/Pitting Progress report	Geologist /Contractor Geologist and Operations Manager Geologist	Month 8-11 Month 12-17 Month 18-19	Borehole chips data Delineate deposit. Plan, Detailed progress report.	Month 11 Month 17 Month 19	Geologist Geologist, Operations Manager Geologist
3	Invasive: Bulk Sampling	Operations Manager	Month 20-31	Outcome of trenching/Diamond results.	Month 31	Geologist
4	Non-invasive: Analytical Desktop studies/ including decision Making	Geologist	Month 32-36	Maps, Resource statement and final report	Month 36	Competent Person's Report (CPR)

Access roads:

It is not foreseen that any new permanent structures will be constructed as part of the proposed prospecting operation of Jubacel Pty Ltd. The existing access road to the site will be used. Should a portion of the access road be newly constructed the following will be adhered to:

- The route will be selected that a minimum number of bushes or trees are felled and existing fence lines will be followed as far as possible.
- Watercourses and steep gradients will be avoided.

Should there be a need to construct roads to access the proposed operations such arrangement will be done with the farm owners and these roads will not exceed 1 km as stated on the financial provision quantum on 4.3.

Top soil:

If topsoil is present it will be removed before commencement of the mining activities and will be stored. The topsoil will be used to cover disturbed areas with a thin layer of topsoil to enhance the establishment of natural vegetation. The necessary measures will be put in place to limit erosion from the stockpiles and to divert storm water away from the topsoil stockpiles. Rehabilitation would be done in such a way to ensure the least impact on the geology and soil characteristics.

Toilet facilities, waste water & refuse disposal:

Chemical toilets will be made available on site for employees and arrangement will be made for them to be removed on a weekly basis, and proper hygiene measures will be established.

The chemical toilets will be managed by an approved chemical toilet specialist. All chemicals, fuels and oils to be stored on site will be appropriately banded according to the Oil and Diesel Storage Procedure. Spills will be managed according to the Spill Procedure. Only one prospecting site will be operational at any time. Drill rig and other prospecting vehicles will be inspected for leaks every day to prevent contaminating of prospecting sites.

Any effluents containing oil, grease or other industrial substances will be collected in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognised facility.

Non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., will be stored in a container at a collecting point and collected on a regular basis and disposed of at a recognised landfill site.

No refuse will be allowed to be dumped on or in the vicinity of the prospecting area. Biodegradable refuse generated will be handled as indicated above.

Accommodation

The workers to conduct the prospecting activities including the contractors to conduct the drilling will not reside on the premises. The contractors and workers will only operate during day time (between 07h00 and 17h00) to respect the privacy of those residing within the proposed prospecting area.

Vehicle maintenance yard & storage areas:

The area chosen for these purposes will be the minimum reasonably required and involve the least disturbance to tree and plant life. Topsoil will be handled as described above.

Fuel and oil will be stored in a secured area. The maintenance of vehicles and equipment used for any purpose during the prospecting operation will take place only in the maintenance yard area.

Sites of Archaeological and Cultural interest:

If any artefacts of archaeological or cultural interest are found, the area will be marked and all activities in that vicinity would cease with immediate effect.

Dust:

Roads will be sprayed with water regularly or an environmentally friendly dust-allaying agent to suppress the dust if dust is generated above acceptable limits.

2.1.2 Plan of the main activities with dimensions

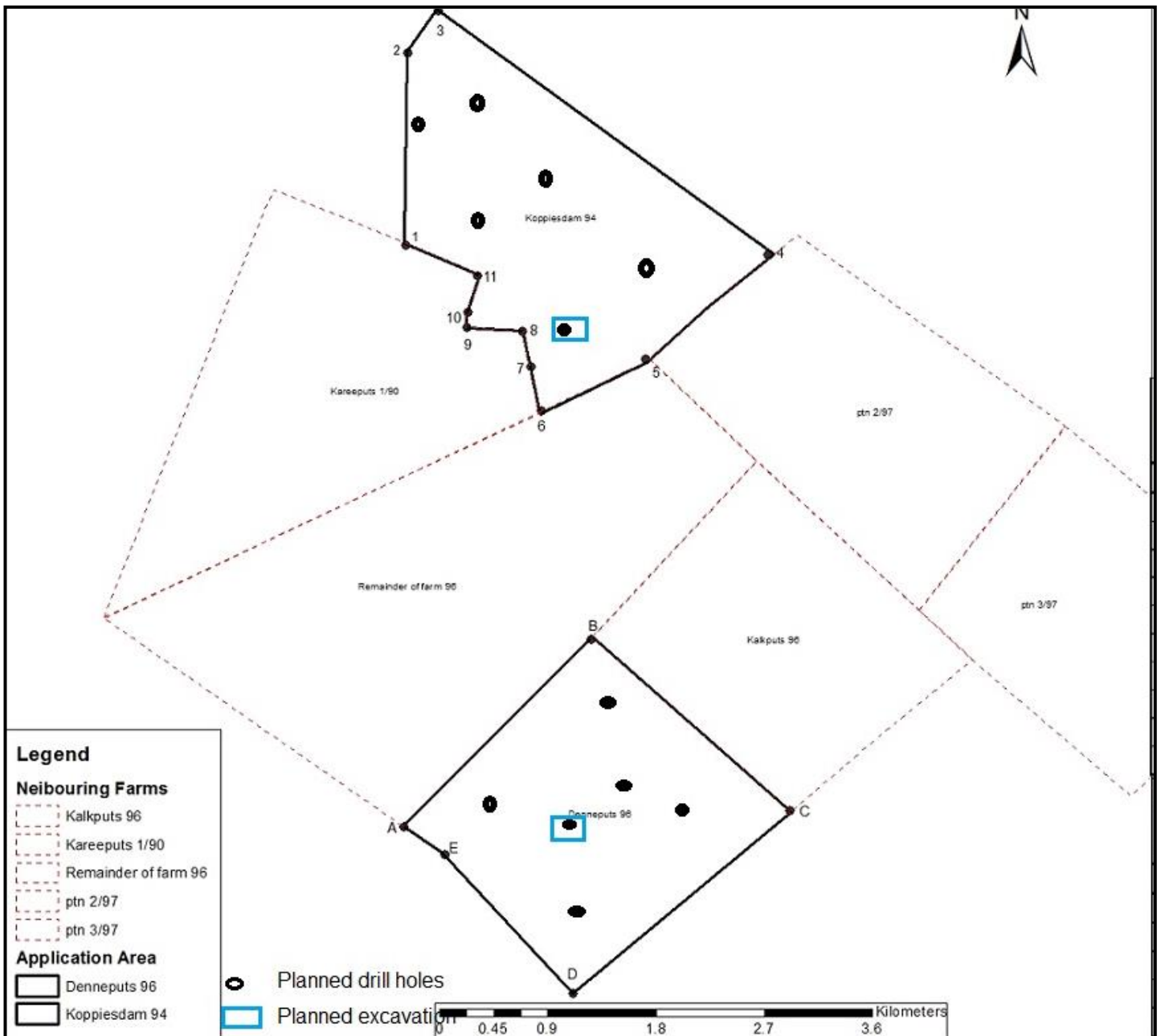


Figure 6: Planed drilling holes and excavations

2.1.3 Description of construction, operational, and decommissioning phases.

The entire proposed prospecting project of Koppiesdam 94 and portion 2 of the farm Dandy put (Denneputs) 96 will be conducted in four phases as described below over a period of 36 months. This prospecting will consist of non-invasive and invasive (Bulk Sampling) activities.

CONSTRUCTION PHASE:

The construction phase will commence upon granting of the Prospecting Right application as the applicant will spend the first two months focusing on a desktop study by means of sourcing published geological reports, infrastructure mapping, satellite imagery and existing geophysical information if available.

The proposed operation site will be established during this phase whereby the dedicated areas will be demarcated. This phase will include erecting temporary structures, e.g. Vehicle maintenance yard & storage areas, Top soil, Toilet facilities, waste water & refuse disposal and identifying of access roads and drill sites.

During this phase consultation is required with the surface owners.

The phase 1 prospecting activities will consist of the following:

PHASE 1:NON-INVASIVE (1-7 months)

- Literature Review
- Geological mapping
- Progress report

OPERATIONAL PHASE:

The full description of what will be conducted during the construction phase will include the following;

PHASE 2: INVASIVE PROSPECTING DRILLING AND PITS (MONTH 8-17)

Invasive Prospecting boreholes will be positioned in the region of the marked black circle as estimated on the image listed below on Fig. 6. Reverse or Percussion circulation drill holes (usually up to 165mm in diameter) will be positioned at targets identified during geological mapping and geophysical survey.

The exact location of the boreholes to be drilled is unknown since this stage is controlled by information from phase 1.

The first phase of drilling will require the drilling of approximately 6 boreholes to be drilled at Koppiesdam 94 whereas approximately 6 boreholes will be drilled on portion 2 of the farm Dandy put (Denneputs) 96. Drilling program will be put into practice where the grid spacing will be set to 500 M x 500 M with an average depth of 50 m, followed by a second round of infill drilling as to whether to continue with the prospecting programme or not. The collar position of all boreholes will be surveyed.

Each drill borehole and sample site will be rehabilitated as prospecting proceeds.

Invasive two (2) Prospecting excavations will be positioned in the region of the blue square shape as estimated on the image listed above on Fig. 6.

PHASE 3: INVASIVE

Bulk Sampling (Month 20-31)

Should delineation and initial evaluation of the deposit indicate a sufficient size and grade to warrant further evaluation, an appropriate

bulk sampling program will be undertaken in order to establish grade and confirm its viability for mining.

Refer to Table 6.1: Bulk Sampling Activities

ACTIVITY	DETAILS
Number of pits/trenches planned	2 Pits/Trenches
Number of pits/trenches – 2(Two)	Length Breadth Depth 30m 20m 0.5-10m
Locality	See figure 3 (estimated)
Volume Overburden (Waste)	8 000
Volume Ore	4000
Density Overburden	1.6
Density Ore	1.8
Phase(s) when bulk sampling will be required	Phase 3
Timeframe(s)	From time-to-time during Months 20 to 31

DECOMMISSIONING PHASE:

The decommissioning phase will only commence once all the prospecting is completed. During decommissioning all this phase all erected structures, e.g. chemical toilets, fences on demarcated areas, equipment, drill sites, excavation and access roads on permission of the surface owners will be rehabilitated to their previous state.

Final rehabilitation occurs within this phase where the last excavation and all infrastructural sites will be rehabilitated. The roads and areas of compacted soil will be ripped for rehabilitation purposes and stored topsoil will be used in areas where the topsoil was affected.

A maintenance programme will be initiated and all areas will be regularly inspected for the re-growth of indigenous plant species. Should the re-growth not be satisfactory a seed mix should be obtained and sown and monitored. After such a specialist study on the recovery of the environment must be drafted to be submitted with the closure certificate application at the Department of Mineral Resources.

2.1.4 Listed activities (in terms of the NEMA EIA regulations)

According to Listing Notice 1: List of activities and competent authorities identified in terms of Sections 24(2) and 24D of the National Environmental Management Act, 1998 (Act no. 107 of 1998) of Government Gazette no 33306, No. R. 544 the following activities are applicable according to NEMA EIA regulations:

Activity 19	Any activity requiring a Prospecting right in terms of Section 16 and 18 respectively of the Mineral and Petroleum Resources Development Act, 2002 (Act no 28 of 2002) or renewal thereof.
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2.2 Identification of potential impacts

2.2.1 Potential impacts per activity and listed activities.

Prospecting/NEMA Activity	Potential impact on:	Type of impact	Description
Roads	❖ Air quality	Negative	❖ Nuisance dust will be created by the Prospecting equipment hauling material from the open excavation areas to the processing site.
	❖ Fauna	Negative	❖ Where new haulage roads will be created the natural habitat of the animals will be disturbed and/or destroyed.
	❖ Flora	Negative	❖ Where new haulage roads will be created the vegetation will be disturbed and/or destroyed.
	❖ Ground Water	Not applicable	❖ No impact to groundwater is expected from the roads that will be used by the planned Prospecting operation.
	❖ Noise	Negative	❖ Noise from the Prospecting equipment on the haulage roads will be created.
	❖ Soil	Not applicable	❖ No impact to soil is expected from the roads

			that will be used by the planned Prospecting operation.
	❖ Surface Water	Not applicable	❖ No impact to surface water is expected from the roads that will be used by the planned Prospecting operation.
	❖ Topography	Not applicable	❖ No impact to the topography is expected from the roads that will be used by the planned Prospecting operation.
	❖ Visual	Negative	❖ The haulage roads will be visible to some extent from the immediate surroundings.
Prospecting Activity	Potential impact on:	Type of impact	Description
Drilling	❖ Air quality	Negative	❖ Nuisance dust will be created by the Prospecting equipment drilling material from the Prospecting boreholes.
	❖ Fauna	Negative	❖ Where new drilling will be created the natural habitat of the animals will be disturbed and/or destroyed.
	❖ Flora	Negative	❖ Where new drilling will be created the vegetation will be disturbed and/or destroyed.
	❖ Ground Water	Not applicable	❖ No impact to groundwater is expected from the creation of drilling.
	❖ Noise	Negative	❖ Noise impact from the prospecting drill rig will be created.
	❖ Soil	Negative	❖ The disturbance of the soil structure during excavation activities.
	❖ Surface Water	Not applicable	❖ No impact to surface water is expected during drilling activities.
	❖ Topography	Negative	❖ Changing of natural slopes by Prospecting activities.
	❖ Visual	Negative	❖ The boreholes will be visible to some extent from the immediate surroundings.
Excavation	❖ Air quality	Negative	❖ Nuisance dust will be created by the prospecting equipment excavating material from the prospecting blocks.
	❖ Fauna	Negative	❖ Where new excavation will be created the natural habitat of the animals will be disturbed and/or

	❖ Flora	Negative	❖ destroyed. ❖ Where new excavation will be created the vegetation will be disturbed and/or destroyed.
	❖ Ground Water	Not applicable	❖ No impact to groundwater is expected from the creation of excavation.
	❖ Noise	Negative	❖ Noise impact from the prospecting equipment will be created.
	❖ Soil	Negative	❖ The disturbance of the soil structure during excavation activities.
	❖ Surface Water	Not applicable	❖ No impact to surface water is expected during excavation activities.
	❖ Topography	Negative	❖ Changing of natural slopes by prospecting activities.
	❖ Visual	Negative	❖ The excavation will be visible to some extent from the immediate surroundings.
	Prospecting Activity	Potential impact on:	Type of impact
Temporary topsoil storage area	❖ Air quality	Negative	❖ Nuisance dust will be created by the prospecting equipment when the material is dumped / stockpiled in these areas.
	❖ Fauna	Negative	❖ The natural habitat of the animals will be disturbed and/or destroyed in these areas.
	❖ Flora	Negative	❖ The vegetation will be disturbed and/or destroyed in these areas.
	❖ Ground Water	Not applicable	❖ No impact to groundwater is expected.
	❖ Noise	Negative	❖ Noise impact from the Prospecting equipment will be created.
	❖ Soil	Negative	❖ The disturbance of the soil structure.
	❖ Surface Water	Not applicable	❖ No impact to surface water is expected.
	❖ Topography	Negative	❖ Changing of natural slopes.
	❖ Visual	Negative	❖ These temporary storage areas will be visible to the immediate surroundings.

2.2.2 Potential cumulative impacts.

Description	
Air Quality	<ul style="list-style-type: none"> ○ Smoke caused by burning of the harvest stubbles on adjacent irrigation lands. ○ Nuisance dust created by prospecting activities.
Fauna	<ul style="list-style-type: none"> ○ Disturbance and/or destruction of habitat by prospecting activities.
Flora	<ul style="list-style-type: none"> ○ Disturbance and/or destruction of vegetation by prospecting activities.
Ground Water	<ul style="list-style-type: none"> ○ Minimal utilization of groundwater for domestic purposes by the surface owner at his residence. ○ No impact to groundwater by Prospecting activities is expected.
Noise	<ul style="list-style-type: none"> ○ Noise created by prospecting activities. ○ Noise created by tractors and combines utilized by the surface owner.
Soil	<ul style="list-style-type: none"> ○ Removal and disturbance of soil structure by prospecting activities.
Surface Water	<ul style="list-style-type: none"> ○ Using of Orange River water for processing and domestic purposes by the Prospecting operation. ○ Using of Orange River water for irrigation purposes by the surface owner.
Topography	<ul style="list-style-type: none"> ○ Changing of natural slopes by Prospecting activities.
Visual	<ul style="list-style-type: none"> ○ Changing of natural view by Prospecting activities.

2.2.3 Potential impact on heritage resources

Should any material or objects that are protected under the general provisions of the SAHRA be uncovered during the course of prospecting works, it would be necessary to stop such work and to consult the responsible heritage resources authority on appropriate measures.

2.2.4 Potential impacts on communities, individuals or competing land uses in close proximity.

There are negative impacts from existing mining activities on the surrounding area, agricultural holdings, and existing farming of cattle, cow and sheep. The farm owners within the prospecting area and at the adjacent site will be impacted on by the visual, noise and dust generated from the proposed prospecting of diamond project.

Noise generation is likely to be one of the biggest impacts at the site during the prospecting operation. All efforts should be made to reduce noise levels via the use of efficient, well maintained equipment and the location of any noise generating equipment in noise checked areas or at distant locations from sensitive receptors.

2.2.5 Confirmation that the list of potential impacts has been compiled with the participation of the landowner and interested and affected parties,

The Basic Information Document, results on the consultation report, has been made available to the registered interested and affected parties in the area. The draft EMP was also made available to the registered interested and affected party within the area for inputs and comments. Participants were also given an opportunity to provide and share their knowledge on the general environmental information of the proposed area.

No comments were made on the existing status of the area also as described in the advertisement and notifications presented to the I&AP's.

2.2.6 Confirmation of specialist report appended.

There is no specialist report appended.

3 REGULATION 52 (2) (c): Summary of the assessment of the significance of the potential impacts and the proposed mitigation measures to minimise adverse impacts.

3.1 Assessment of the significance of the potential impacts

3.1.1 Criteria of assigning significance to potential impacts

ASSESSMENT CRITERIA TERMINOLOGY

The assessment of the impacts has been conducted according to a synthesis of criteria required by the integrated environmental management procedure.

Nature of impact

This is an appraisal of the type of effect the activity would have on the affected environmental component. Its description should include what is being affected, and how.

Extent

The physical and spatial size of the impact. This is classified as follows:

Local	The impacted area extends only as far as the activity, e.g. a footprint.
Site	The impact could affect the whole, or a measurable portion of the property.
Regional	The impact could affect the area including the neighbouring farms, transport routes and the adjoining towns.
Cumulative	The impact could have a cumulative effect with the surrounding land uses.

Duration

The lifetime of the impact which is measured in the context of the lifetime of the proposed phase (i.e. construction or operation).

Short term	The impact will either disappear with mitigation or will be mitigated through natural process in a short time period.
Medium term	The impact will last up to the end of the Prospecting period, where after it will be entirely negated.
Long term	The impact will continue or last for the entire operational life of the prospecting area, but will be mitigated by direct human action or by natural processes thereafter.
Permanent	The only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

Intensity

This describes how destructive, or benign, the impact is. Does it destroy the impacted environment, alter its functioning, or slightly alter it. These are rated as:

Low	This alters the affected environment in such a way that the natural processes or functions are not affected.
Medium	The affected environment is altered, but function and process continue, albeit in a modified way.
High	Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

This will be a relative evaluation within the context of all the activities and the other impacts within the framework of the project.

Probability

This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time. The classes are rated as follows:

Improbable	The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
Probable	There is a possibility that the impact will occur to the extent that provisions must be made therefore.
Highly probable	It is most likely that the impacts will occur at some or other stage of the development.
Definite	The impact will take place regardless of any preventative plans, and mitigation measures or contingency plans will have to be implemented to contain the impact.

Determination of significance

Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The classes are rated as follows:

No significance	The impact is not likely to be substantial and does not require any mitigatory action.
Low	The impact is of little importance, but may

	require limited mitigation.
Medium	The impact is of importance and therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
High	The impact is of great importance. Failure to mitigate, with the objective to reduce the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

3.1.2 Potential impact of each main activity in each phase, and corresponding significance assessment

Prospecting activity	Impact on	Extent	Duration	Intensity	Probability	Significance
Roads & Hauling	Air quality	Site	Short	Medium	Definite	Medium
	Fauna	Local	Long	High	Definite	High
	Flora	Local	Long	High	Definite	High
	Noise	Site	Short	Low	Definite	Low
	Visual	Site	Long	Low	Probable	No significance
Drilling	Air quality	Site	Short	Medium	Definite	Medium
	Fauna	Local	Long	High	Definite	High
	Flora	Local	Long	High	Definite	High
	Noise	Site	Short	Low	Definite	Medium
	Soil	Local	Long	High	Definite	High
	Topography	Local	Long	Medium	Definite	Low
	Visual	Site	Long	Low	Definite	No significance
Excavation	Air quality	Site	Short	Medium	Definite	Medium
	Fauna	Local	Long	High	Definite	High

	Flora	Local	Long	High	Definite	High
	Noise	Site	Short	Low	Definite	Medium
	Soil	Local	Long	High	Definite	High
	Topography	Local	Long	Medium	Definite	Low
	Visual	Site	Long	Low	Definite	No significance
Temporary topsoil storage area	Fauna	Local	Long	High	Definite	High
	Flora	Local	Long	High	Definite	High
	Soil	Local	Long	High	Definite	High
	Topography	Local	Long	Medium	Definite	Low
	Visual	Site	Long	Low	Definite	No significance

3.1.3 Assessment of potential cumulative impacts.

	Extent	Duration	Intensity	Probability	Significance
Air Quality	Site	Short	Medium	Definite	Medium
Fauna	Local	Long	High	Definite	High
Flora	Local	Long	High	Definite	High
Ground Water	Site	Short	Low	Definite	Low
Noise	Site	Short	Medium	Definite	Medium
Soil	Local	Long	Medium	Definite	High
Surface Water	Site	Long	Medium	Definite	Medium
Topography	Site	Long	Medium	Definite	Medium
Visual	Site	Long	Low	Definite	Low

3.2 Proposed mitigation measures to minimise adverse impacts.

3.2.1 List of actions, activities, or processes that have sufficiently significant impacts to require mitigation.

- ❖ Air quality

- ❖ Fauna
- ❖ Flora
- ❖ Noise
- ❖ Soil

3.2.2 Concomitant list of appropriate technical or management options

❖ Air quality:

To limit the creation of nuisance dust the following management guidelines will be followed:

- ✓ Avoidance of unnecessary removal of vegetation;
- ✓ Routine spraying of unpaved site areas and roads with water;
- ✓ Re-vegetation of rehabilitated areas not occupied by prospecting infrastructure to take place as soon as possible.

❖ Fauna & Flora

- ✓ Indigenous vegetation to be used for landscaping to minimize watering requirements.
- ✓ If any endangered species are found on the prospecting area they will be relocated. If this is not possible potential changes in the habitat of endangered species will be monitored.
- ✓ The above programme will also focus on species that depend on specific host plants or on specific symbiotic relationships, with specific reference to possible impacts on such related to emissions from the prospecting site.
- ✓ If monitoring shows that endangered species are being negatively affected to the degree that they are at risk of die-off, measures will be put in place to safeguard their continued existence.

- ✓ Any area that is rehabilitated or decommissioned will be seeded with a seed mixture reflecting the natural vegetation as is currently found. If this is not found to be feasible during rehabilitation a general seed mixture of the area will be used.
 - ✓ Management will also take responsibility to control declared invader or exotic species on the prospecting site. The following control methods will be used:
 - ✓ "The plants will be uprooted, felled or cut off and can be destroyed completely."
 - ✓ "The plants will be treated with an herbicide that is registered for use in connection therewith and in accordance with the directions for the use of such an herbicide."
 - ✓ The end objective of the re-vegetation program will be to achieve a stable self-sustaining habitat unit.
 - ✓ Vegetation on flat surfaces will be established using the dry lands technique requiring no irrigation.
 - ✓ Valid permits from Northern Cape Nature Conservation will be obtained before any protected plant species are removed.
 - ✓ Any form of poaching by workers of the proposed prospecting will result in the maximum form of punishment as allowed for by common law. Any form of snares or traps on the site will be removed.
 - ✓ If any endangered species are encountered the Department of Nature Conservation will be contacted.
- ❖ Noise
- ✓ As a minimum, ambient noise levels emanating from the prospecting will not exceed 82 dBA at the site boundary.

- ✓ Jubacel (Pty) Ltd will comply with the occupational noise regulations of the Occupational Health and safety Act, Act 85 of 1993.
- ✓ Jubacel (Pty) Ltd will comply with the measures for good practice with regard to management of noise related impacts during construction and operation.
- ✓ The management objective will be to reduce any level of noise, shock and lighting that may have an effect on persons or animals inside the prospecting site.
- ✓ When the equivalent noise exposure, as defined in the South African Bureau of Standards Code of Practice for the Measurement and Assessment of Occupational Noise for Hearing Conservation Purposes, SABS 083 as amended, in any place at or in any prospecting area or works where persons may travel or work, exceeds 82 dB (A), the site manager will take the necessary steps to reduce the noise below this level.
- ✓ Hearing protection will be available for all employees where attenuation cannot be implemented.
- ✓ If any complaints are received from the public or state department regarding noise levels the levels will be monitored at prescribed monitoring points.

Mechanical equipment:

- ✓ All mechanical equipment will be in good working order and vehicles will adhere to the relevant noise requirements of the Road Traffic Act.
- ✓ All vehicles in operation will be equipped with a silencer on their exhaust system.
- ✓ Safety measures, which generate noise such as reverse gear alarms on large vehicles, will be appropriately calibrated/adjusted.

❖ Soil

- ✓ In all places of development the first 100mm of loose or weathered material found will be classified as a growth medium.
- ✓ In all areas where the above growth medium will be impacted on, it will be removed and stockpiled on a dedicated area. The maximum height of stockpiles will be 2.5 meters.
- ✓ The growth medium/topsoil will be used during the rehabilitation of any impacted areas, after sloping in order to re-establish the same land capability.
- ✓ If any soil is contaminated during the life of the prospecting, it will either be treated on site or be removed together with the contaminant and placed in acceptable containers to be removed with the industrial waste to a recognized facility or company.
- ✓ Erosion control in the form of re-vegetation and contouring of slopes will be implemented on disturbed areas in and around the site.
- ✓ Topsoil will be kept separate from overburden and will not be used for building or maintenance of access roads.
- ✓ The stored topsoil will be adequately protected from being blown away or being eroded.

3.2.3 Review the significance of the identified impacts

Prospecting activity	Impact on	Extent	Duration	Intensity	Probability	Significance
Roads & Hauling	Air quality	Site	Short	Medium	Definite	Low
	Fauna	Local	Long	High	Definite	Medium
	Flora	Local	Long	High	Definite	Medium
	Noise	Site	Short	Low	Definite	Low

	Visual	Site	Long	Low	Probable	No significance
Drilling	Air quality	Site	Short	Medium	Definite	Low
	Fauna	Local	Long	High	Definite	Medium
	Flora	Local	Long	High	Definite	Medium
	Noise	Site	Short	Low	Definite	Low
	Soil	Local	Long	High	Definite	Medium
	Topography	Local	Long	Medium	Definite	Low
	Visual	Site	Long	Low	Definite	No significance
Excavations	Air quality	Site	Short	Medium	Definite	Low
	Fauna	Local	Long	High	Definite	Medium
	Flora	Local	Long	High	Definite	Medium
	Noise	Site	Short	Low	Definite	Low
	Soil	Local	Long	High	Definite	Medium
	Topography	Local	Long	Medium	Definite	Low
	Visual	Site	Long	Low	Definite	No significance
Temporary topsoil storage area	Fauna	Local	Long	High	Definite	Medium
	Flora	Local	Long	High	Definite	Medium
	Soil	Local	Long	High	Definite	Medium
	Topography	Local	Long	Medium	Definite	Low
	Visual	Site	Long	Low	Definite	No significance

4 REGULATION 52 (2) (d): Financial provision.The applicant is required to-

4.1 Plans for quantum calculation purposes.

The main invasive prospecting activities will be drilling and two excavation/ pit. The exact position of drilling and a bulk sample excavations is impossible to pinpoint at this stage, as no known Alluvial/kimberlites are currently known in the area applied for.

The quantum of the financial provision required to manage and rehabilitate the environment takes the following into account:

- Rehabilitation of two excavations (30m x 20m x 10m).
- Rehabilitation of twelve boreholes for percussion drilling will be identified and drilled.
- Access tracks that will be rehabilitated on levelling of the site area have been estimated to less than 1000m².

4.2 Alignment of rehabilitation with the closure objectives

(Describe and ensure that the rehabilitation plan is compatible with the closure objectives determined in accordance with the baseline study as prescribed).

Closure objectives:

- ✓ The main closure objective of Jubacel (Pty) Ltd planned Prospecting operation is to restore the site to its current land capability in a sustainable matter.
- ✓ To prevent the sterilization of any ore reserves.
- ✓ To prevent the establishment of any permanent structures or features.
- ✓ To manage and limit any impact to the surface and groundwater aquifers in such a way that an acceptable water quality and yield can still be obtained, when a closure certificate is issued.
- ✓ The prospecting also has the objective to establish a stable and self sustainable vegetation cover.
- ✓ To limit and rehabilitate any erosion features and prevent any permanent impact to the soil capability of the prospecting area.
- ✓ To limit and manage the visual impact of the prospecting site.
- ✓ To safeguard the safety and health of humans and animals on the prospecting site.
- ✓ The last closure objective is that the disturbed prospecting area is closed efficiently, cost effectively and in accordance with government policy.

Rehabilitation Plan:

○ Infrastructure areas

On completion of the Prospecting operation, the various surfaces, including the access road, the office area, storage areas and the plant site, will finally be rehabilitated as follows: All tailings or other material on the surface will be removed to the original topsoil level. This material will then be backfilled into the open pits. Any compacted area will then be ripped to a depth of 300mm, where possible, the topsoil or growth medium returned and landscaped.

All infrastructures, equipment, plant, and other items used during the operational period will be removed from the site.

On completion of operations, structures or objects on the site will be dealt with in accordance with regulation 44 of the Minerals and Petroleum Resources Development Act, 2002, which states:

Regulation 44:

1. *When a Mining right, Prospecting right, retention permit or Mining permit lapses, is cancelled or is abandoned or when any mining or Prospecting operation comes to an end, the holder of such right or permit may not demolish or remove any building, structure or object-*
 - (a) *which may not be demolished or removed in terms of any other law;*
 - (b) *which has been identified in writing by the Minister for purposes of this section; or*
 - (c) *which is to be retained in terms of an agreement between the holder and the owner or occupier of the land, which agreement has been approved by the Minister in writing.*
2. *The provision of subsection (1) does not apply to bona fide Prospecting equipment, which may be removed.*

- Rehabilitation of the secured storage areas

On completion of the Prospecting operation, the above areas will be cleared of any remaining contaminated soil which will be placed in acceptable containers and removed with the industrial waste to a recognized disposing facility or by a waste removal company.

The surface will be ripped or ploughed to a depth of at least 300 mm, where possible, and the topsoil, previously stored adjacent the site, distributed evenly to its original depth over the whole area. The area will then be fertilized if necessary (based on a soil analysis).

The site will be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.

Any other disturbed areas will be rehabilitated as described under the relevant activities.

- Residue deposits

- Disposal facilities

Waste material of all description inclusive of receptacles, and rubble will be removed entirely from the Prospecting area and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.

- Ongoing seepage, control of rain water.

No monitoring of ground or surface water will take place, except if so requested by the DWA - Kimberley.

- Long term stability and safety

It will be the objective of the project management to ensure the long term stability of all rehabilitated areas including the backfilled

pit or excavation. This will be done by the monitoring of all areas until a closure certificate has been issued.

- Final rehabilitation in respect of erosion and dust control
Self sustaining vegetation will result in the control of erosion and dust and no further rehabilitation is planned.

- Rehabilitation of dangerous excavation

Due to the removal of bulk sampling material, one pit could be created that can be classified as dangerous. All available material will be used during backfilling to avoid the existence of dangerous excavation.

- Final rehabilitation of one excavation/pit-haul ramps and roads and final voids

After rehabilitation has been completed, all roads will be ripped or ploughed, fertilized and seeded, providing the landowner does not want them to remain that way and with written approval from the Director Mineral Development of the Department of Mineral Resources.

- Submission of information

Reports on rehabilitation and monitoring will be submitted annually to the Department of Mineral Resources - Kimberley, as described in regulation 55.

- Maintenance (Aftercare)

Maintenance after closure will mainly concern the regular inspection and monitoring and/or completion of the re-vegetation programme.

The aim of this Environmental Management Plan is for rehabilitation to be stable and self-sufficient, so that the least possible aftercare is required.

The aim with the closure of the prospecting will be to create an acceptable environment and land-use. Therefore all agreed commitments will be implemented by Jubacel management

4.3 Quantum calculations.

(Provide a calculation of the quantum of the financial provision required to manage and rehabilitate the environment, in accordance with the guideline prescribed in terms of regulation 54 (1) in respect of each of the phases referred to).

CALCULATION OF THE QUANTUM							
Applicant:	JUBACEL PTY LTD			Location:	NC		
Evaluators:				Date:	Jan-14		
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	200	11.58	1.1	1.05	2674.98
2 (A)	Demolition of steel buildings and structures	m2	100	161.24	1.1	1.05	18623.22
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	237.62	1.1	1.05	0
3	Rehabilitation of access roads	m2	1000	28.85	1.1	1.05	33321.75
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	280.05	1.1	1.05	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	152.75	1.1	1.05	0
5	Demolition of housing and/or administration facilities	m2	0	322.48	1.1	1.05	0
6	Opencast rehabilitation including final voids and ramps	ha	1.2	169047.76	1.1	1.05	234300.1954
7	Sealing of shafts adits and inclines	m3	0	86.56	1.1	1.05	0
8 (A)	Rehabilitation of overburden and spoils	ha	1.2	112698.51	1.1	1.05	156200.1349
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0.6	140363.95	1.1	1.05	97272.21735
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	407683.45	1.1	1.05	0
9	Rehabilitation of subsided areas	ha	0	94368.03	1.1	1.05	0
10	General surface rehabilitation	ha	0.6	36890	1.1	1.05	25564.77
11	River diversions	ha	0	89276.23	1.1	1.05	0
12	Fencing	m	0	101.84	1.1	1.05	0
13	Water management	ha	0	33945.33	1.1	1.05	0
14	2 to 3 years of maintenance and aftercare	ha	1.2	11880.87	1.1	1.05	16466.88582
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
						Sub Total 1	584424.1534
1	Preliminary and General		70130.89841		weighting factor 2 1		70130.89841
2	Contingencies			58442.41534			58442.41534
						Subtotal 2	712997.47
						VAT (14%)	99819.65

4.4 Undertaking to provide financial provision

(Indicate that the required amount will be provided should the right be granted

Jubacels (Pty) Ltd take an undertaking to provide the required amount as calculated in the financial quantum. Linsumi Investments (Pty) Limited Annual Financial Statements for 2012 as documentary proof of financial capacity was submitted with the submission of the PWP at the DMR.

5 REGULATION 52 (2) (e): Planned monitoring and performance assessment of the environmental management plan.

5.1 List of identified impacts requiring monitoring programmes.

- Air quality
- Fauna
- Flora
- Noise

5.2 Functional requirements for monitoring programmes.

- Air quality
 - ✓ The National Environment Management: Air Quality Act, 2004 (Act No.39 of 2004) (All Sections of this Act, except Section 21,22,36 to 49, 51 (1)(e), 51(1)(f), 51(3), 60 and 61 have taken effect on 11 September 2005);
 - ✓ The Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965) (This Act will be repealed by the national Environment management: Air Quality Act, 2004 (Act No. 39 of 2004);
 - ✓ Regulations to the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) – Regulation 64.
 - ✓ The Prospecting Health and Safety Act, 1996 (Act No. 29 of 1996) as amended; and
 - ✓ The Occupational Diseases in Mines and Works Act, 1973 (Act No 78 of 1973).
- Fauna
 - ✓ Government Notice No. 27306 of 18 February 2006, issued in terms of Section 56(1) of the national Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).
 - ✓ Nature Conservation Ordinance, Ord 19 of 1974.
- Flora

- ✓ The National Forests Act, 1998 (Act No. 84 of 1998), as amended;
 - ✓ The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) – Section 7(1);
 - ✓ Government Notice No. 27306 of 18 February 2005, issued in terms of Section 56(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
 - ✓ Nature Conservation Ordinance, Ord 19 of 1974
- Noise
 - ✓ The Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) – Section 7;
 - ✓ The Mine Health and Safety Act, 1996 (Act No. 39 of 1996) as amended'
 - ✓ The Road Traffic Act, 1997 (Act No. 93 of 1997);
 - ✓ The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) – Section 34; and
 - ✓ Regulations of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) – Regulation 66.

5.3 Roles and responsibilities for the execution of monitoring programmes.

The Project Manager at Jubacel will be responsible for the execution of monitoring programmes.

5.4 Committed time frames for monitoring and reporting.

Quarterly reports on fall-out and nuisance dust and noise monitoring will be conducted as required by legislation. The results of these studies will be compiled into annual reports and forwarded to the Principle Inspector of Mine Health and Safety, Department of Mineral Resources, Kimberley.

The EMP will be reviewed on an annual basis when the Performance Assessment Report is compiled.

Annual performance Assessment and financial quantum reports will also be conducted.

6 REGULATION 52 (2) (f): Closure and environmental objectives.

6.1 Rehabilitation plan

The goal of rehabilitation with respect to the area where drilling and excavation will take place is to leave the area to similar to its previous state before the prospecting activity took place. All other equipment and material used during the prospecting operation will be removed from the area as in the case of other refuse. Removal of these materials shall be done on a continuous basis and not only at the final stage of rehabilitation and or closure.

6.2 Closure objectives and their extent of alignment to the pre-Prospecting environment.

Closure objectives:

- ✓ The main closure objective of Jubacel (Pty) Ltd planned Prospecting operation is to restore the site to its current land capability in a sustainable matter.
- ✓ To prevent the sterilization of any ore reserves.
- ✓ To prevent the establishment of any permanent structures or features.
- ✓ To manage and limit any impact to the surface and groundwater aquifers in such a way that an acceptable water quality and yield can still be obtained, when a closure certificate is issued.
- ✓ The prospecting also has the objective to establish a stable and self sustainable vegetation cover.

- ✓ To limit and rehabilitate any erosion features and prevent any permanent impact to the soil capability of the prospecting area.
- ✓ To limit and manage the visual impact of the prospecting site.
- ✓ To safeguard the safety and health of humans and animals on the prospecting site.
- ✓ The last closure objective is that the disturbed prospecting area is closed efficiently, cost effectively and in accordance with government policy

6.3 Confirmation of consultation

The closure objectives have been consulted with the surface owner.

7 REGULATION 52 (2) (g): Record of the public participation and the results thereof.

7.1 Identification of interested and affected parties.

There are no group of previously deprived persons, with interest or rights within the vicinity. The community members have not exercise communal rights in terms of an agreement, or custom or law.

There is no community stated on the proposed prospecting area. The below-mentioned towns are the nearest community identified close to the proposed application area.

The city of Kimberley lies ±60 km to the South East of the proposed prospecting area. The communities located in close proximity to the site include (refer Figure 1):

- a. Windsorton: 16 km towards north-west;
- b. Barkly West: 35 km towards the north north-east.

In accordance with the title deeds, Title Deed No T1778/184 of the Farm Portion 2 Dandy put (Denneputs) 96 and Title Deed No T001913/2008 of farm

Koppiesdam 94, both farms are owned by Mr Christoffel Andreas Smit. The site visit by the Jubacel representative was done to confirm the ownership and get the contact details of the farm owner, and it was brought to the applicant attention that Burghar Familie Trust is the owner of the above mentioned two farms. The landowner confirms that he is the owner of the farms, Portion 2 of the Farm Dandy put (Denneputs) 96 and the Farm Koppiesdam 94, which were registered into its name on 7 November 2013.

7.2 The details of the engagement process.

7.2.1 Description of the information provided to the community, landowners, and interested and affected parties.

The Basic Information Document, results on the consultation report, has been made available to the registered interested and affected parties in the area. The draft EMP was also made available to the registered interested and affected party within the area for inputs and comments. Participants were also given an opportunity to provide and share their knowledge on the general environmental information of the proposed area.

No comments were made on the existing status of the area also as described in the advertisement and notifications presented to the I&AP's.

7.2.2 List of which parties identified in 7.1 above that were in fact consulted, and which were not consulted.

Consulted

Adjacent and non-adjacent landowners were identified through the review of deed searches and expanded through queries and recommendations made by identified stakeholders. Further to that the interested and affected parties were requested to register themselves as the interested and affected party to receive more information.

- ❖ On request for stakeholder registration, only one (1) stakeholder registered as the interested and affected parties to receive more information.
- ❖ Burghar Familie Trust has registered as an I&AP, communications done via telephone and email.
- ❖ Below is the register of which stakeholder with whom consultation documents were hand-delivered to.

JUBACEL (PTY) LTD: CONFIRMATION DOCUMENT

AS THIS IS A CONFIRMATION DOCUMENT TO CONFIRM THAT YOU HAVE RECEIVED THE PUBLIC PARTICIPATION PROCESS DOCUMENTS AS PRESENTED TO YOU BY JUBACEL (PTY) LTD REPRESENTATIVE.

NAME	SURNAME	CONTACT DETAILS	SIGNATURES
Joppie	Burger	082 745 4299	
Simon	MAboitshage	016 641 5111	
Bennie	Basson	082 396 5593	
Danie	Schneider	0832 736 202	
Arno	v Rensburg	082 874 9222	
Eddie	Manuel	Dikgatlong Mun. 0720714995 053-5310671	

- ❖ Dikgatlong Municipality
- ❖ South African Heritage Resources Agency

7.2.3 List of views raised by consulted parties regarding the existing cultural, socio-economic or biophysical environment.

No comments from the interested and affected with regard to the cultural, socio-economic or biophysical environment except from the comment given in 7.2.7.

7.2.4 List of views raised by consulted parties on how their existing cultural, socio-economic or biophysical environment potentially will be impacted on by the proposed Mining or Prospecting operation.

No comments from the interested and affected with regard to the cultural, socio-economic or biophysical environment except from the comment given in 7.2.7.

7.2.5 Other concerns raised by the aforesaid parties.

None

7.2.6 Confirmation that minutes and records of the consultations are appended.

No comments from the interested and affected with regard to the cultural, socio-economic or biophysical environment.

7.2.7 Information regarding objections received.

A Summary of comments received from Stakeholder (Interested and Affected Parties) are included in **Table 1**.

Table 1: Summary of Stakeholder Comments

#	Summary of Comments by Stakeholders
	Burghar Familie Trust (Attorney's)– Email – 04 December 2013
	<ul style="list-style-type: none"> Registering Burghar Familie Trust as the interest and affected parties (landowner).

#	Summary of Comments by Stakeholders
	<ul style="list-style-type: none"> Stating that Burghar Familie Trust is not part to the purported application seeing that the proposed prospecting right was lodged before Burghar Familie Trust became the owner of the proposed application areas, which were registered into its name on 7th November 2013.
	<ul style="list-style-type: none"> Applicant failed to supply the landowner with the Environmental management plan (due for submission on the 27th of January 2014)
	<ul style="list-style-type: none"> The necessary information on everything that is to be done so that landowner can make an informed decision in relation to the representations to be made.
	<ul style="list-style-type: none"> The applicant is completely inexperienced and cannot qualify for a prospecting right.
	<ul style="list-style-type: none"> No historical or current geological or other information available to demonstrate any kind of possibility of the presence of diamonds on the farms.
	<ul style="list-style-type: none"> The portions of the purported application supplied to my client do not comply with the law or directives regarding the drafting and content of an application for a prospecting right.
	<ul style="list-style-type: none"> The applicant, despite an invitation to this effect, did not consult with my client as landowner at all.

7.3 The manner in which the issues raised were addressed.

#	Summary of Comments by Stakeholders	Response
Burghar Familie Trust (Attorney's)– Email – 04 December 2013		
1.	<ul style="list-style-type: none"> Registering Burghar Familie Trust as the interest and affected parties (landowner). 	Registered
2.	<ul style="list-style-type: none"> Stating that Burghar Familie Trust is not part to the purported application seeing that the proposed prospecting right was lodged before Burghar Familie Trust 	Jubacel (Pty) Ltd lodged the application for the Proposed Application Area on Friday, October 11, 2013. The Regional Manager responded to the application with the acceptance of the application in accordance with the provisions of section

#	Summary of Comments by Stakeholders	Response
	<p>became the owner of the proposed application areas , which were registered into its name on 7th November 2013.</p>	<p>16 of the Mineral and Petroleum Resources Development Act, (Act 28 of 2002). On the 28 October 2013, Jubacel (Pty) Ltd was requested to do a consultation with the interested and affected parties and submit such results on or before the 06 December 2013, followed by the compilation of the Environmental Management Plan due for submission on or before the 27 January 2014. The date of lodging this application is not relevant at this stage. What matters is that the applicant has engaged with the interested and affected parties (I&APs) before the granting of the proposed prospecting right. As stipulated in terms of Section 16 (4) b of the MPRDA (Act 28 of 2002), I&APs need to be notified and consulted with, as part of a Prospecting Right Application (PRA). The MPRDA (Act 28 of 2002), does not specify in anyplace that the applicant must consult with the Landowner before lodging the application. The applicant is also allowed to notify the interest and affected parties by means or advertisement or sending registered letters.</p>
4.	<ul style="list-style-type: none"> Applicant failed to supply the landowner with the Environmental management plan (due for submission on the 27th of January 2014) 	<p>The Environmental Management Plan has not been submitted to the DMR yet. The applicant is busy compiling the Consultation Report to be submitted on the 06 December 2013. The Environmental Management Plan will be submitted to the DMR before 27 January 2014, and your client will receive the Draft Environmental management plan. Newspaper Advertisements were placed in the Northern Cape Volksblad and Diamond Field Advertiser on 14 November 2013</p>

#	Summary of Comments by Stakeholders	Response
		<p>inviting comments by interested and affected parties and calling for registration to be included in the list of stakeholders who will receive a copy of the Environmental Management Plan for review and comment once is complete.</p>
	<ul style="list-style-type: none"> The necessary information on everything that is to be done so that landowner can make an informed decision in relation to the representations to be made. 	<p>The necessary information on how the proposed exploration activities will be undertaken is given in detail on the prospecting work programme (PWP) delivered on site. Refer to the PWP lines shown under.</p> <p>6. REGULATION 7(1)(g): A DESCRIPTION OF THE PROSPECTING METHOD OR METHODS TO BE IMPLEMENTED</p> <p>I. DESCRIPTION OF PLANNED NON-INVASIVE ACTIVITIES:</p> <p>(These activities do not disturb the land where prospecting will take place e.g. aerial photography, desktop studies, aeromagnetic surveys, etc.)</p> <p>II. DESCRIPTION OF PLANNED INVASIVE ACTIVITIES:</p> <p>(These activities result in land disturbances e.g. sampling, drilling, bulk sampling, etc.)</p> <p>III. DESCRIPTION OF PRE-/FEASIBILITY STUDIES</p> <p>IV. DESCRIPTION OF BULK SAMPLING ACTIVITIES</p>
5.	<ul style="list-style-type: none"> The applicant is completely inexperienced and cannot qualify for a prospecting right. 	<p>The MPRDA (Act 28) of 2002 does not point out that the prospecting right holder must have an experience or qualification in the mining sector. It was mentioned though in the copy of your "PWP" that technical skill will be in the form of qualified personnel. The contractors with certified professionals will carry out the proposed prospecting operation. The contractors will</p>

#	Summary of Comments by Stakeholders	Response
		be appointed and signed as soon as proof of an issued right is available.
	<ul style="list-style-type: none"> No historical or current geological or other information available to demonstrate any kind of possibility of the presence of diamonds on the farms. 	The Project areas lie within the Kaapvaal Craton and within the world's most famous diamond mining area, the more reason why fully exploration must be undertaken within the proposed prospecting area.

8 SECTION 39 (3) (c) of the Act: Environmental awareness plan.

8.1 Employee communication process

The company Jubacel will ensure that potential employees and contractors receive an environmental safety induction and site orientation prior to commencing work, and they will sign acknowledgement of the induction. In addition, through education and awareness campaigns, staff, contractors and stakeholders will be provided the opportunity to learn more about health and safety related issues at work. This will prevent the squalid conditions at work place and avoid possibility of probable impacts.

Environmental awareness will focus on means on enhancing ability of personnel to ensure compliance with environmental requirements.

Warning and safety signs will be placed at various areas on site, depending on the kind of work performed at specific area and hazardous conditions of the chemicals and equipment's to be used. These will also assist in facilitating the induction and site orientation. An induction process is the primary opportunity for environmental training and awareness and must cover a range of issues relating to the environment.

Aspects covered within this process include:

- × The definition of Environmental Management and the impacts humans have on the environment;
- × How mining relies on the environment and its resources. This addresses what resources the mine uses;
- × Sustainability - Responsibility Mining with regard to issues such as:

Water, soil and air pollution prevention;

- × Land rehabilitation; and
- × The impacts to biodiversity and how these impacts can be reduced or avoided.
- × Environmental policies will be availed to contractors;
- × Environmental inductions will be conducted for contractors and employees;

8.2 Description of solutions to risks

Detailed environmental awareness performance criteria will form part of the job descriptions of employees, to make sure diligence and full responsibility at all levels of the organisational work force.

General environmental awareness will be fostered among the projects workforce to encourage the implementation of environmentally sound practices throughout its duration. This will ensures that environmental accidents are minimized and environmental compliance maximized.

8.3 Environmental awareness training.

Environmental awareness will commence with the development of an environmental awareness plan to ensure that:

- Training needs are identified and all personnel whose work may create a significant impact upon the environment have received appropriate training;
- All employees are aware of the impact of their activities (activities and the environmental components they are likely to impact on are shown in question 2.2.

- Procedures are established and maintained to make appropriate employees aware of:
 - The significant environmental impacts, actual or potential, of their work activities and environmental benefits of improved personal performance
 - Their roles and responsibilities in achieving conformance with environmental policy, procedures and any implementation measures
 - The potential consequences of departure from specified operating procedures Personnel performing tasks, which can cause significant environmental impacts, are competent in terms of appropriate education, training and /or experience

I. Responsibilities and frequency of training

The responsibilities in terms of environmental awareness training lie with Jubacel management, which handles overall training for the company. The responsible management of Jubacel will undertake the generalized environmental awareness training such as inductions which are done on a continuous basis (at least weekly).

II. Identification of training needs

The identification of environmental training and development needs will be derived from the analysis of role descriptions. The role description is used to confirm the category of occupation as per Jubacel structure templates. Descriptions of activities, aspects and impacts will be sourced from the Environmental Implementation Plan.

9 SECTION 39 (4) (a) (iii) of the Act: Capacity to rehabilitate and manage negative impacts on the environment.

9.1 The annual amount required to manage and rehabilitate the environment.

The annual cost to manage and rehabilitate the environment was calculated to R99 819.65 as indicated on 4.3.

9.2 Confirmation that the stated amount correctly reflected in the Prospecting Work Programme as required.

The amount required to cover the prospecting operation was calculated to an amount of R900 000.00 as reflecting on the Prospecting Work Programme.

10 REGULATION 52 (2) (h): Undertaking to execute the environmental management plan.

Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant in terms of the resolution submitted with the application, and confirm that the above report comprises EIA and EMP compiled in accordance with the guideline on the Departments official website and the directive in terms of sections 29 and 39 (5) in that regard, and the applicant undertakes to execute the Environmental management plan as proposed.

Full Names and Surname	Joachim Otsile Mokwena
Identity Number	700714

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