



## BASIC ASSESSMENT REPORT

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**THE PROPOSED CONSTRUCTION OF A  
ROAD AND ASSOCIATED  
INFRASTRUCTURE TO LINK  
BLAAUWSKOP COMMUNITY WITH THE  
EXISTING R359 ROAD**

**Applicant:** Kai !Garip Local Municipality  
**MDA Ref No:** 40641  
**Date:** October 2013



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# **DRAFT: BASIC ASSESSMENT REPORT**

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Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2010.

**Kindly note that:**

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided are not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

## SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

NO
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If YES, please complete form XX for each specialist thus appointed:  
Any specialist reports must be contained in Appendix D.

### 1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail:

The proposed project will consist of the construction of a road and associated infrastructure to link Blaauwskop Community with the existing R359 road.

The activities being applied for as part of this Basic Assessment Report, includes the construction of a road, outside urban areas with a reserve wider than 13.5 m, as listed as Activity 22 (i) in notice R544.

#### Take note of the following:

- The road will be 7m (proposed maximum) wide, a 1m gravel shoulder and a road reserve of 33m
- It is proposed that a bridge will be constructed over a man-made water channel that forms part of an irrigation scheme of the area
- The dimensions of the reinforced concrete bridge will be 3m (length) x 7m (width) x 0.3m (slab thickness)
- Storm water management measures will be implemented, where necessary by means of concrete drifts or storm pipe culverts
- The road reserve will be fenced off by means of a 1.5m high stock proof fence
- The road will be paved with 60mm interlocking paving blocks, if funding is approved by MIG

#### The construction phase will mainly consist of:

- Clearance of the proposed road-area
- Levelling the proposed road-area
- Implementation of storm water management measures, where applicable
- Construction of a bridge over the irrigation channel
- Preparation of the proposed road surface area
- Paving the road
- Eradication of alien plants and other weeds
- Monitoring the occurrence of erosion
- Monitoring the re-establishment of natural occurring vegetation on the road reserve

#### The operational phase will mainly consist of:

- Usage of road by public
- Maintenance

**It is not anticipated that the proposed project will cease in the nearby future. However, if decommissioning is decided upon, a rehabilitation plan will be developed and will amongst other, include the following:**

- The demolishing of infrastructure and the rehabilitation of the site
- The removal of construction rubble and other solid waste
- No structures (mobile or otherwise) will be left behind, unless indicated in the rehabilitation plan
- The area will be ripped and levelled by using topsoil
- Seeding with natural occurring vegetation will take place if the tempo of natural re-vegetation is insufficient
- Note that the end-use of the area will be kept in mind during the compilation of the rehabilitation plan

## **2. FEASIBLE AND REASONABLE ALTERNATIVES**

**“alternatives”**, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

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

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

**Paragraphs 3 – 13 below should be completed for each alternative.**

## **3. ACTIVITY POSITION**

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites if applicable.

**NOTE:**

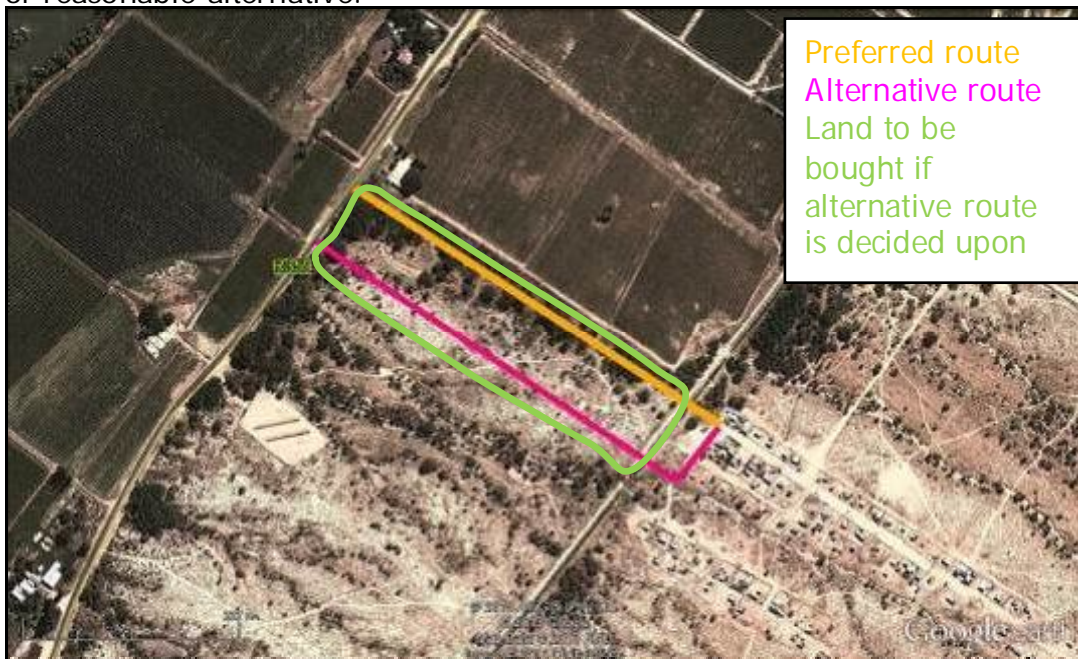
Please take note of the description of the preferred project as well as the alternatives.

**Preferred project (Alternative S1<sub>Preferred</sub>):**

The preferred project entails the construction of approximately 440m paved road (one lane in each direction) from the R359 towards Blaauwskop Community. As part of this alternative, a bridge will be constructed over an irrigation channel. Additional storm water measures will be implemented, where necessary.

**Locality Alternative (Alternative S2<sub>Locality</sub>):**

An alternative route was also assessed during the planning phase. However, this route will lead to the loss of more agricultural land as the area between the proposed alternative and the existing fence (northern side) is too small for any agricultural activities. Please refer to the map below. The alternative route can therefore not be seen as a feasible and / or reasonable alternative.



**Design Alternative (Alternative S3<sub>Design</sub>):**

A road reserve of 10m instead of the preferred 33m was investigated. A smaller reserve will lead to less vegetation destruction. However, a smaller reserve will also lead to a safety issue as it is anticipated that many individuals from the Blaauwskop Community will walk to and from the R359 by making use of the proposed new road reserve. A larger reserve is also necessary due to the position of the existing Telkom electronic equipment. Therefore, this alternative cannot be seen as a feasible and / or reasonable alternative.

**Technology Alternative (Alternative S4<sub>Technology</sub>):**

Construction of a gravel road was also considered. This option is the most economically, in the immediate terms. However:

- Less employment opportunities will be available during the construction phase
- Erosion monitoring will have to be undertaken more often than in the case of the preferred project monitoring
- General maintenance after each rainy event will have to be implemented in order to maintain the condition of the road
- Dust formation should be controlled during the operational phase
- Maintenance of gravel roads is required regularly, in comparison to paved surfaces

**No-go alternative:**

- Members from the Blaauwskop Community will have to drive on a poor maintained road to gain access to the R359 and pedestrians will have to walk longer distances to the R359
- The community is not connected to the R359 and access to the settlement is not possible besides by foot. It is imperative that this community is provided with a suitable access road to and from the R359.
- The 'no-go' alternative will be considered throughout the assessment of the proposed project

**Alternative:**

Alternative S1<sup>1</sup> (preferred or only site alternative)  
 Alternative S2 (if any)  
 Alternative S3 (if any)

Latitude (S):		Longitude (E):	
0	'	0	'
0	'	0	'
0	'	0	'

**In the case of linear activities:**

**Alternative:**

Alternative S1<sub>Preferred</sub> (preferred or only route alternative)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

Latitude (S):		Longitude (E):	
28°	39.756'	21°	5.850'
28°	39.804'	21°	5.930'
28°	39.889'	21°	6.079'

Alternative S4<sub>Technology</sub>

- Starting point of the activity
- Middle point of the activity
- End point of the activity

28°	39.756'	21°	5.850'
28°	39.804'	21°	5.930'
28°	39.889'	21°	6.079'

Alternative S3 (if any)

- Starting point of the activity
- Middle point of the activity

0	'	0	'
0	'	0	'

<sup>1</sup> "Alternative S.." refer to site alternatives.

- End point of the activity

0	,	0	,
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For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

**4. PHYSICAL SIZE OF THE ACTIVITY**

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

**Alternative:**

**Size of the activity:**

Alternative A1<sup>2</sup> (preferred activity alternative)

m <sup>2</sup>
m <sup>2</sup>

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

**Alternative:**

**Length of the activity:**

Alternative S1<sup>Preferred</sup>

3 080 m <sup>2</sup> (road)
14 520 m <sup>2</sup> (road, including reserve)
3 080 m <sup>2</sup> (road)
14 520 m <sup>2</sup> (road, including reserve)

Alternative S4<sup>Technology</sup>

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

**Alternative:**

**Size of the site/servitude:**

Alternative S1<sup>Preferred</sup>

14 520 m <sup>2</sup>
14 520 m <sup>2</sup>
m <sup>2</sup>

Alternative S4<sup>Technology</sup>

Alternative A3 (if any)

**5. SITE ACCESS**

Does ready access to the site exist?

YES	
m	

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

The contractors will make use of the existing R359 road to gain access to the site.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

**6. SITE OR ROUTE PLAN**

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
  - rivers;
  - the 1:100 year flood line (where available or where it is required by DWA);
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or invested with alien species);

<sup>2</sup> "Alternative A.." refer to activity, process, technology or other alternatives.



- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

**7. SITE PHOTOGRAPHS**

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

**8. FACILITY ILLUSTRATION**

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

**9. ACTIVITY MOTIVATION**

**9(a) Socio-economic value of the activity**

What is the expected capital value of the activity on completion?

R 2 760 000
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What is the expected yearly income that will be generated by or as a result of the activity?

None
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Will the activity contribute to service infrastructure?

YES	
-----	--

Is the activity a public amenity?

YES	
-----	--

How many new employment opportunities will be created in the development phase of the activity?

Unknown, depending on the contractor to be appointed
--

What is the expected value of the employment opportunities during the development phase?

R 270 000
-----------

What percentage of this will accrue to previously disadvantaged individuals?

None
------

How many permanent new employment opportunities will be created during the operational phase of the activity?

None
------

What is the expected current value of the employment opportunities during the first 10 years?

None, except during the construction phase, as mentioned above
--

What percentage of this will accrue to previously disadvantaged individuals?

NA
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**9(b) Need and desirability of the activity**

Motivate and explain the need and desirability of the activity (including demand for the activity):

Members from the Blaauwskop Community currently access the R359 by foot or by means of a detour.

A need exists to provide the Blaauwskop Community with a good access road that will ensure the safety of travelers (and pedestrians) to and from Blaauwskop Community.

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Indicate any benefits that the activity will have for society in general:

Taxis and other vehicles will be able to gain access to the Blaauwskop Community. This will aid the community members working elsewhere to be on time for work, being beneficial for the society in general.  
 Employment opportunities will possibly be available during the construction phase.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

Possible employment opportunities will be created during the construction period.  
 The salary received by the employed community members will be used to buy food, clothes, etc. from the shops in the nearby vicinity.  
 Taxis and other vehicles will be able to gain access to the Blaauwskop Community. This will benefit the local community, especially the elderly and / or ill.

<b>DESIRABILITY:</b>			
1.	Does the proposed land use / development fit the surrounding area?	YES	
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES	
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
5.	Will the proposed land use / development impact on the sense of place?		NO
6.	Will the proposed land use / development set a precedent?		NO
7.	Will any person's rights be affected by the proposed land use / development?		NO
8.	Will the proposed land use / development compromise the "urban edge"?		NO
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

<b>BENEFITS:</b>			
1.	Will the land use / development have any benefits for society in general?	YES	
2.	Explain:		
	The proposed road will increase road safety to and from Blaauwskop Community.		
3.	Will the land use / development have any benefits for the local communities where it will be located?	YES	
4.	Explain:		

	The local community will have a safer road to travel by after completion of the proposed road.
	Employment opportunities will possibly be available during the construction phase.
	The salary received by the employed community members will be used to buy food, clothes, etc. from the shops in the nearby vicinity. Thus, the community in general will benefit economically from the project.

**10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES**

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environment Conservation Act (Act 73 of 1989)	DENC	1989
National Environmental Management Act (Act 107 of 1998)	DENC	1998
National Roads Act (Act 54 of 1971)	Roads and Public Works, NC	1971
National Heritage Resources Act (Act 25 of 1999)	SAHRA	1999
National Water Act, 1998 (Act 36 of 1998)	DWA	1998
Fencing Act, 1963 (Act 31 of 1963)	Agriculture, Land Reform and Rural Development, NC	1963
Subdivision of Agricultural Land Act (Act 10 of 1970)	Agriculture, Land Reform and Rural Development, NC	1970
Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)	Agriculture, Land Reform and Rural Development, NC	1983

**11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT**

**11(a) Solid waste management**

Will the activity produce solid construction waste during the construction/initiation phase?

YES	
2m <sup>3</sup>	

If yes, what estimated quantity will be produced per month?

How will the construction solid waste be disposed of (describe)?

The solid construction waste will be disposed of at an authorised solid waste disposal site, by the contractor

Where will the construction solid waste be disposed of (describe)?

At an authorized solid waste disposal site in Upington

Will the activity produce solid waste during its operational phase?		NO
If yes, what estimated quantity will be produced per month?	m <sup>3</sup>	
How will the solid waste be disposed of (describe)?		

NA
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Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?
NA

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?		NO
--	--	----

If yes, inform the competent authority and request a change to an application for scoping and EIA. Is the activity that is being applied for a solid waste handling or treatment facility?		NO
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If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

**11(b) Liquid effluent**

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?		NO
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If yes, what estimated quantity will be produced per month?		m <sup>3</sup>
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Will the activity produce any effluent that will be treated and/or disposed of on site?		NO
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?		NO
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If yes, provide the particulars of the facility:

Facility name:	NA		
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

**NOTE:**  
Employees will be provided with temporary toilet facilities (such as port-a-loos) during the construction phase of the proposed project. The temporary toilets will be serviced regularly and the waste associated with the toilet facilities will be removed from site by a contractor, according to best practices.

**11(c) Emissions into the atmosphere**

Will the activity release emissions into the atmosphere?		NO
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If yes, is it controlled by any legislation of any sphere of government?		
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

**NOTE:**  
The only emissions associated with the project during the construction phase will be exhaust emission and dust. Dust will be controlled during the construction phase, when necessary. The vehicles travelling on the road will contribute to the emissions released into the atmosphere during the operational phase of the proposed project. However, these emissions are not controlled by any legislation.

**11(d) Generation of noise**

Will the activity generate noise?	YES	
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If yes, is it controlled by any legislation of any sphere of government?

	NO
--	----

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

**NOTE:**

Noise will be associated with the proposed project during the construction phase. However, the noise will be limited to normal daytime hours. Vehicles travelling on the road during the operational phase may contribute to the noise levels in the area. However, it is not anticipated that this will have a significant impact on the surrounding environment.

**12. WATER USE**

**NOTE:**

Municipal water will be used during the construction activities for the following:

- Providing clean drinking water to the employees
- Dust suppression measures, when required
- As part of the preparation of the road surface before paving is undertaken

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

<b>municipal</b>	water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

Unknown
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Does the activity require a water use permit from the Department of Water Affairs?

	NO
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If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

**13. ENERGY EFFICIENCY**

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

NA

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

NA

## SECTION B: SITE/AREA/PROPERTY DESCRIPTION

**Important notes:**

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A):

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

	NO
--	----

If YES, please complete form XX for each specialist thus appointed:  
All specialist reports must be contained in Appendix D.

**1. GRADIENT OF THE SITE**

Indicate the general gradient of the site.

**Alternative S1<sub>Preferred</sub>:**

<b>Flat</b>	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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**Alternative S4<sub>Technology</sub>:**

<b>Flat</b>	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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**Alternative S3 (if any):**

<b>Flat</b>	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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**2. LOCATION IN LANDSCAPE**

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain ✓
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

**3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE**

Is the site(s) located on any of the following (tick the appropriate boxes)?

	<b>S1<sub>Preferred</sub>:</b>		<b>S4<sub>Technology</sub>:</b>		<b>Alternative S3 (if any):</b>	
Shallow water table (less than 1.5m deep)	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	YES	NO
Dolomite, sinkhole or doline areas	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	YES	NO
Seasonally wet soils (often close to water bodies)	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	YES	NO
Dispersive soils (soils that dissolve in water)	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	YES	NO
Any other unstable soil or geological feature	<input type="checkbox"/>	NO	<input type="checkbox"/>	NO	YES	NO
An area sensitive to erosion	YES	<input type="checkbox"/>	YES	<input type="checkbox"/>	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

**4. GROUNDCOVER**

Indicate the types of groundcover present on the site:

- 4.1 Natural veld – good condition <sup>E</sup> ✓
- 4.2 Natural veld – scattered aliens <sup>E</sup>
- 4.3 Natural veld with heavy alien infestation <sup>E</sup>
- 4.4 Veld dominated by alien species <sup>E</sup>
- 4.5 Gardens
- 4.6 Sport field
- 4.7 Cultivated land
- 4.8 Paved surface
- 4.9 Building or other structure
- 4.10 Bare soil ✓

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The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition <sup>E</sup>	<b>Natural veld with scattered aliens<sup>E</sup></b>	Natural veld with heavy alien infestation <sup>E</sup>	Veld dominated by alien species <sup>E</sup>	Gardens
Sportfield	Cultivated land	Paved surface	Building or other structure	<b>Bare soil</b>

If any of the boxes marked with an “<sup>E</sup>” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

**NOTE:**

The proposed road is situated on the eastern border of the Gariep Centre of Endemism. Many species occurring within this centre are unique and localised to this area. Development in such centres of endemism should be done with careful investigation of the biodiversity and species composition of the area. Areas with rare, endangered or endemic species and areas with high biodiversity should be avoided (where possible) when planning a development.

Though vegetation may seem to be uniform and low in diversity, it may still contain species that are rare and endangered. The occurrence of such species may render the development unviable. Should such a species be encountered, the development should be moved to another location or cease altogether.

The Blaauwskop Community is situated more than 500m from the R359 (tarred road). However, this community is not connected with this road and access to the settlement is only possible by foot, and it is imperative that this community is provided with a suitable access road to the mentioned tarred road.

The site and immediate surroundings are in a degraded condition. This is due to the large-scale transformation of the area for the cultivation of vineyards. The nearby settlement of Blaauwskop also uses the area as an access route although only as footway and this also degrades the area.

The dominant vegetation consists of dwarf shrubs and a variety of grasses, although these never dominate.

The site does not form part of a National Protected Areas Expansion Strategy (NPAES) Focus Area. The site is situated approximately 300m from the Orange River which is a National Freshwater Ecosystems Priority Area (NFEPA) and must be considered a sensitive area. However, the site is not considered to be situated within the floodplain of the river and does not play a vital role in the functioning of the river. The site is situated on the border of the Endangered (EN) Lower Gariep Alluvial Vegetation (AZa 3). However, this portion of the vegetation on the site is severely degraded and is not considered a viable portion of conservable vegetation.

The site and immediate surroundings are in a degraded condition. This is primarily due to the adjacent vineyards and the disturbance caused by the edge effect associated therewith. The nearby settlement of Blaauwskop also causes degradation of the site and surroundings. Furthermore, this site has been infested by the exotic invader, Mesquite (*Prosopis glandulosa*) which further degrades the site. Despite the degraded condition of the site and surroundings there are several protected species present (see table below for an indication of the protected plant species in the area).

As a result of the degraded condition of the site and immediate surroundings it is considered acceptable for the construction of the proposed Blaauwskop paved road. In order to keep any environmental impacts that the construction of the road may have to a minimum, the recommendations as listed in this document as well as the EMPr should be adhered to.

Refer to Appendix D for a copy of the Ecological Report.



Table indicating some vegetation / plant species occurring in the study area:

Vegetation / plant species	Status	Discussion	Mitigation measures
Bushmanland Arid Grassland (NKb 3)	Last Concern (LC), however		
Lower Gariep Alluvial Vegetation (AZa 3)	Small portion of study area was previously considered to be endangered (EN)	Severely degraded and infested with exotic Mesquite	
<i>Aloe calviflora</i> (Canon Aloe)	Protected	Widespread and not considered to be rare but is considered to have some conservation value	A permit must be obtained for the removal of these species. Removed specimens should be transplanted to an area adjacent to the site where they will not be affected
Mesquite ( <i>Prosopis glandulosa</i> )	Invader (Category II) according to the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)	<i>P. glandulosa</i> infested the northern parts of the studied area due to the degradation of the area caused by the access road used by Blaauwskop members, cultivation of vineyards in the nearby vicinity, etc. Major pest, especially in the Northern Cape	All specimens of this species on and around the site must be removed and destroyed and the area must be monitored for the germination of seedlings. Prior to construction the trees should be removed and all stumps must be treated with an herbicide (triclopyr or triclopyr/picloram). Area should be monitored for seedling germination and coppicing of cleared trees must be removed.
Hemi parasite, <i>Tapinanthus oleifolius</i> ,	Occurs commonly on trees and shrubs in the area		
Camel Thorn ( <i>Acacia erioloba</i> )	Protected	Widespread and not considered to be rare but are protected in the Northern Cape Province	A permit must be obtained for the removal of these species
Shepherds Tree ( <i>Boscia albitrunca</i> )	Protected	Widespread and not considered to be rare but are protected in the Northern Cape Province	A permit must be obtained for the removal of these species

**5. LAND USE CHARACTER OF SURROUNDING AREA**

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

- 5.1 Natural area
- 5.2 Low density residential ✓
- 5.3 Medium density residential
- 5.4 High density residential
- 5.5 Informal residential<sup>A</sup> ✓
- 5.6 Retail commercial & warehousing
- 5.7 Light industrial
- 5.8 Medium industrial<sup>AN</sup>
- 5.9 Heavy industrial<sup>AN</sup>
- 5.10 Power station
- 5.11 Office/consulting room
- 5.12 Military or police base/station/compound
- 5.13 Spoil heap or slimes dam<sup>A</sup>
- 5.14 Quarry, sand or borrow pit
- 5.15 Dam or reservoir
- 5.16 Hospital/medical centre
- 5.17 School
- 5.18 Tertiary education facility
- 5.19 Church
- 5.20 Old age home
- 5.21 Sew age treatment plant<sup>A</sup>
- 5.22 Train station or shunting yard<sup>N</sup>
- 5.23 Railway line<sup>N</sup>
- 5.24 Major road (4 lanes or more)<sup>N</sup>
- 5.25 Airport<sup>N</sup>
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station<sup>H</sup>
- 5.31 Landfill or waste treatment site
- 5.32 Plantation ✓
- 5.33 Agriculture ✓
- 5.34 River, stream or wetland ✓
- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site
- 5.42 Other land uses (describe)

If any of the boxes marked with an <sup>“N”</sup> are ticked, how this impact will / be impacted upon by the proposed activity.

**NOTE:**

The road reserve of the proposed road will be sub-divided, re-zoned and transferred to Kai !Garib Municipality.

If YES, specify and explain:	<p>The proposed road to be constructed will provide the local community with a link to the R359. Employment opportunities will be available during the construction phase, depending on the contractor to be used.</p> <p>The salaries received by the employed community members will be used to buy food, clothes, etc. from the shops in the nearby vicinity. Thus, the community in general will benefit economically from the project.</p> <p>Emissions associated with the project are exhaust emissions and dust to be generated due to the construction activities.</p> <p>The vehicles travelling on the road will contribute to the emissions released into the atmosphere during the operational phase of the proposed project.</p>
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If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	NA
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If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	NA
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**6. CULTURAL/HISTORICAL FEATURES**

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site?	<input type="checkbox"/>	NO
If YES, explain:	<input type="checkbox"/>	
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.	<input type="checkbox"/>	
Briefly explain the findings of the specialist:	<p>No archaeological sites, graves were found along the proposed route during the survey.</p> <p>There is also no evidence for the accumulation and preservation of intact fossil material within the residual deposits (topsoils).</p> <p>Historical buildings or structures older than 60 years are absent from the site.</p> <p>Potential impact archaeological heritage is considered very low. The probability of locating paleontological and archaeological heritage remains during the operational phase of the development is considered improbable.</p> <p>Refer to Appendix D for a copy of the Archaeological and Paleontological Report.</p>	
Will any building or structure older than 60 years be affected in any way?	<input type="checkbox"/>	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	<input type="checkbox"/>	NO
If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.		

## **SECTION C: PUBLIC PARTICIPATION**

### **1. ADVERTISEMENT**

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  - (i) the site where the activity to which the application relates is or is to be undertaken; and
  - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
  - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
  - (v) the municipality which has jurisdiction in the area;
  - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
  - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
  - (i) one local newspaper; or
  - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
  - (i) illiteracy;
  - (ii) disability; or
  - (iii) any other disadvantage.

### **2. CONTENT OF ADVERTISEMENTS AND NOTICES**

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
  - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
  - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
  - (iii) the nature and location of the activity to which the application relates;
  - (iv) where further information on the application or activity can be obtained; and
  - (v) the manner in which and the person to whom representations in respect of the application may be made.

### **3. PLACEMENT OF ADVERTISEMENTS AND NOTICES**

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

### **4. DETERMINATION OF APPROPRIATE MEASURES**

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

**5. COMMENTS AND RESPONSE REPORT**

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

**6. AUTHORITY PARTICIPATION**

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

The Department: Roads and Public Works, Northern Cape Province  
The Department of Agriculture, Land Reform and Rural Development, NC  
Siyanda District Municipality  
Kai !Garib Local Municipality  
Relevant ward councillor  
Blaauwskop Agricultural Association  
Blaauwskop Irrigation Board  
SAHRA

List of authorities from whom comments have been received:

The Department: Roads and Public Works, Northern Cape Province  
● No objection, if certain conditions are adhered to. Please refer to Appendix E3 for further information.

Blaauwskop Irrigation Board  
● No objection. Please refer to Appendix E3 for proof of comments received.

No comments from other parties have been received to date.  
All comments received will be included in the Final BAR.

**7. CONSULTATION WITH OTHER STAKEHOLDERS**

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub regulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders? NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

NA

**SECTION D: IMPACT ASSESSMENT**

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

**1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES**

List the main issues raised by interested and affected parties.

**NOTE:**

No comments from identified IAP's have been received to date, other than mentioned above.

All comments received will be included in the Final BAR.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

NA

**2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES**

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

<b>S1<sub>Preferred</sub> – Paved Road</b>		
	<b>Potential Impacts</b>	<b>Recommended Mitigation Measures</b>
<b>Planning and Design</b>	<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Cumulative Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>No-go alternative</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• No impacts expected</li> </ul>
<b>Construction</b>	<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• Destruction of vegetation</li> <li>• Noise elevation due to construction activities</li> <li>• Nuisance dust generation</li> </ul> <p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• Potential erosion of exposed soil</li> <li>• Establishment of alien / invader vegetation on disturbed areas (proposed road as well as the road reserve)</li> <li>• Dumping of construction rubble and general waste on site</li> <li>• Spillage of material to be utilised during the construction phase as well as untreated sewage to the surrounding environment</li> <li>• Surface and groundwater pollution due to spillage of potential hazardous substances such as hydraulic material and untreated sewage</li> </ul> <p><b>Cumulative Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>No-go alternative</b></p> <ul style="list-style-type: none"> <li>• Traffic congestion at the existing, poor maintained access road</li> <li>• Pedestrians will have to walk long distances to gain access</li> </ul>	<ul style="list-style-type: none"> <li>• Vegetation clearance will be limited to the area identified for the construction of the road as well as the road reserve, where needed</li> <li>• A permit for the removal of protected plant species will be obtained before the removal of these species.</li> <li>• Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place</li> <li>• Storm water measures will be implemented in order to manage storm water and this will also prevent erosion</li> <li>• Visual inspections for the occurrence of erosion should be undertaken on a weekly basis</li> <li>• Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads / pathways</li> <li>• Dust control measures will be implemented if nuisance dust generation occurs during the construction period</li> <li>• No waste (general / construction / potential hazardous / etc.) may be dumped in the veld</li> <li>• Covered receptacles will be available on site for the temporary disposal of waste</li> <li>• Waste will be removed from site and disposed of at an authorised landfill site</li> </ul>

<b>S1<sub>Preferred</sub> – Paved Road</b>		
	<b>Potential Impacts</b>	<b>Recommended Mitigation Measures</b>
	to the R359 ● No opportunity for socio-economic development that is associated with the proposed construction of the said road	
<b>Operational</b>	● This phase consists of the use of the proposed road by the public. ● This will result in the deterioration of the road in the long term ● Establishment of alien / invader species due to previous disturbance	● Maintenance and repair will be undertaken on the road, when necessary ● Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place
<b>Decommissioning and Closure</b>	● Activities associated with the decommissioning phase will be limited to the rehabilitation of areas disturbed during the construction phase, other than the constructed road. All disturbed areas will be rehabilitated to its natural status.  <b>Direct Impacts</b> ● No impact <b>Indirect Impacts</b> ● Potential erosion of exposed soil ● Potential dumping of waste on site ● Potential establishment of alien vegetation in rehabilitated areas <b>Cumulative Impacts</b> ● None <b>No-go alternative</b> ● The 'no-go' alternative will not result in any environmental impacts.	● All temporary infrastructure related to the construction phase will be removed from site ● Temporary concrete surfaces will be removed and compacted areas ripped ● The establishment of natural occurring vegetation will be encouraged in the road reserve area ● No waste will be dumped on site and any waste occurring on site will be removed and disposed of according to best practices ● Establishment of extensive alien species will be monitored ● A rehabilitation plan will be developed, if it is decided to rehabilitate the road ● The rehabilitation plan will include management and mitigation measures to be implemented during the decommissioning of the road.



<b>S4<sub>Technology</sub> – Gravel Road</b>		
	<b>Potential Impacts</b>	<b>Recommended Mitigation Measures</b>
<b>Planning and Design</b>	<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Cumulative Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>No-go alternative</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• No impacts expected</li> </ul>
<b>Construction</b>	<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• Destruction of vegetation</li> <li>• Noise elevation due to construction activities</li> <li>• Nuisance dust generation</li> </ul> <p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• Potential erosion of exposed soil</li> <li>• Establishment of alien/ invader vegetation on disturbed areas (proposed road as well as the road reserve)</li> <li>• Dumping of construction rubble and general waste on site</li> <li>• Spillage of material to be utilised during the construction phase as well as untreated sewage to the surrounding environment</li> <li>• Surface and groundwater pollution due to spillage of potential hazardous substances such as hydraulic material and untreated sewage</li> </ul> <p><b>Cumulative Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>No-go alternative</b></p> <ul style="list-style-type: none"> <li>• Traffic congestion at the existing, poor maintained access road</li> <li>• Pedestrians will have to walk long distances to gain access</li> </ul>	<ul style="list-style-type: none"> <li>• Vegetation clearance will be limited to the area identified for the construction of the road as well as the road reserve, where needed</li> <li>• Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place</li> <li>• A permit for the removal of protected plant species will be obtained before the removal of these species.</li> <li>• Storm water measures will be implemented in order to manage storm water and this will also prevent erosion</li> <li>• Visual inspections for the occurrence of erosion should be undertaken on a weekly basis</li> <li>• Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads / pathways</li> <li>• Dust control measures will be implemented if nuisance dust generation occurs during the construction period</li> <li>• No waste (general / construction / potential hazardous / etc.) may be dumped in the veld</li> <li>• Covered receptacles will be available on site for the temporary disposal of waste</li> <li>• Waste will be removed from site and disposed of at an authorised landfill site</li> </ul>

Operational	<p>to the R359</p> <ul style="list-style-type: none"> <li>• No opportunity for socio-economic development that is associated with the proposed construction of the said road</li> </ul>	
Operational	<ul style="list-style-type: none"> <li>• This phase consists of the use of the proposed road by the public.</li> <li>• This will result in the deterioration of the road in the long term</li> <li>• Establishment of alien / invader species due to previous disturbance</li> </ul>	<ul style="list-style-type: none"> <li>• Dust control measures will be implemented if nuisance dust generation occurs during the operational phase</li> <li>• The road condition will be monitored after each rainy event and repaired as soon as possible</li> <li>• This is due to the following: <ul style="list-style-type: none"> <li>• Safety hazards caused by wet road surface</li> <li>• Environmental impacts associated with storm water run-off and erosion</li> </ul> </li> <li>• Maintenance and repair will be undertaken on the road, when necessary</li> <li>• Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place</li> </ul>
Decommissioning and Closure	<ul style="list-style-type: none"> <li>• Activities associated with the decommissioning phase will be limited to the rehabilitation of areas disturbed during the construction phase, other than the constructed road. All disturbed areas will be rehabilitated to its natural status.</li> </ul>	
Decommissioning and Closure	<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• No impact</li> </ul> <p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• Potential erosion of exposed soil</li> <li>• Potential dumping of waste on site</li> <li>• Potential establishment of alien vegetation in rehabilitated areas</li> </ul> <p><b>Cumulative Impacts</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>No-go alternative</b></p> <ul style="list-style-type: none"> <li>• The 'no-go' alternative will not result in any environmental impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• All temporary infrastructure related to the construction phase will be removed from site</li> <li>• Temporary concrete surfaces will be removed and compacted areas ripped</li> <li>• The establishment of natural occurring vegetation will be encouraged in the road reserve area</li> <li>• No waste will be dumped on site and any waste occurring on site will be removed and disposed of according to best practices</li> <li>• Establishment of extensive alien species will be monitored</li> <li>• A rehabilitation plan will be developed, if it is decided to rehabilitate the road</li> </ul>



- The rehabilitation plan will include management and mitigation measures to be implemented during the decommissioning of the road.

**3. ENVIRONMENTAL IMPACT STATEMENT**

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

No major impacts are anticipated with regard to the site. Possible impacts during the construction and operational phases can be mitigated and managed if the Environmental Management Programme (EMPr) in Appendix F is adhered to.

**Alternative S1<sub>Preferred</sub>**

- Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place
- Storm water measures will be implemented in order to manage storm water and this will also prevent erosion
- Possible impacts anticipated during the construction and operational phases can be kept to a minimum with proper management and if the recommendations of the EMPr in Appendix F are adhered to.

**Alternative S4<sub>Technology</sub>**

- All of the above, including:
- Dust control measures will be implemented if nuisance dust generation occurs during the operational phase
  - The road condition will be monitored after each rainy event and repaired as soon as possible
  - This is due to the following:
    - Safety hazards caused by wet road surface
    - Environmental impacts associated with storm water run-off and erosion

**NOTE:**

Impacts associated with the construction phase of Alternative S1<sub>Preferred</sub> and Alternative S4<sub>Technology</sub> will be temporary of nature. Impacts associated with the operational phase (such as the change in natural storm water flow) will be more permanent. Impacts associated with the decommissioning and rehabilitation phase will be temporary of nature.

**No-go alternative (compulsory)**

No environmental impacts will occur if the no-go alternative is decided upon. However, the opportunity to provide members from Blaauwskop Community with an access road and temporary employment opportunities will be lost.

**SECTION E RECOMMENDATION OF PRACTITIONER**

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	
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Is an EMPr attached?

YES	
-----	--

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

NA

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

Refer to the EMPr for recommended mitigation measures.

In addition to the recommended mitigation and management measures described in Section D(2) of this document and the EMPr attached as Appendix F, the following conditions are also recommended:

- Measures to manage storm water should be implemented and maintained to limit and / or prevent erosion.
- Covered receptacles should be placed at convenient spots on site for the collection of general waste and the waste contained in these receptacles should be disposed of at an authorized landfill site.
- Special care should be taken not to pollute soil, surface and / or groundwater due to the proposed activities, including sewage from the temporary toilets.

**SECTION F: APPENDIXES**

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

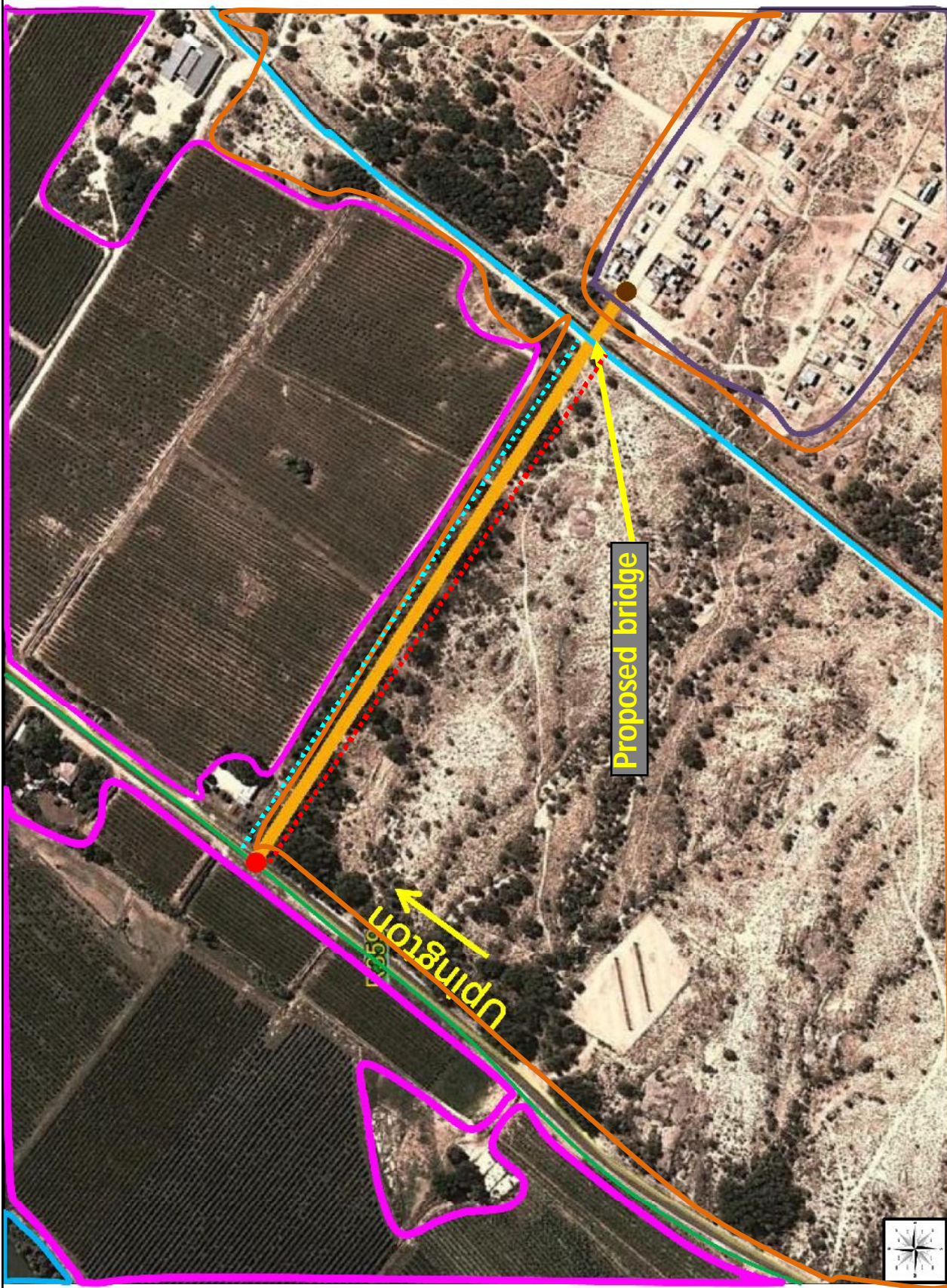
Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

# Appendix A

Site plan(s)



**Legend:**

- Orange River
- Irrigation channel
- Existing R359 road
- Blaauwskop Community
- Cultivated land
- Proposed road
- Degraded area\*

**Coordinates:**

- 28° 39' 45.3816" S,  
21° 05' 51.0012" E
- 28° 39' 53.3238" S,  
21° 06' 04.7586" E

**Other existing services:**

- ⋯ Telkom Line
- ⋯ Eskom Line

\* Degraded area, containing alien species as well as protected species

TYPE OF PLAN:

LOCALITY PLAN

**mda**  
 Town & Regional Planners,  
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PROJECT:  
**PROPOSED CONSTRUCTION OF A ROAD BETWEEN THE R359 AND BLAAUWSKOP COMMUNITY**

PROJECT BY:  
**KAJIGARIB LOCAL MUNICIPALITY**

SCALE:  
 1:1000  
 DRAWN BY:  
 JIG

# Appendix B

## Photographs

Photographs indicating the current state of the environment at the proposed road construction area:

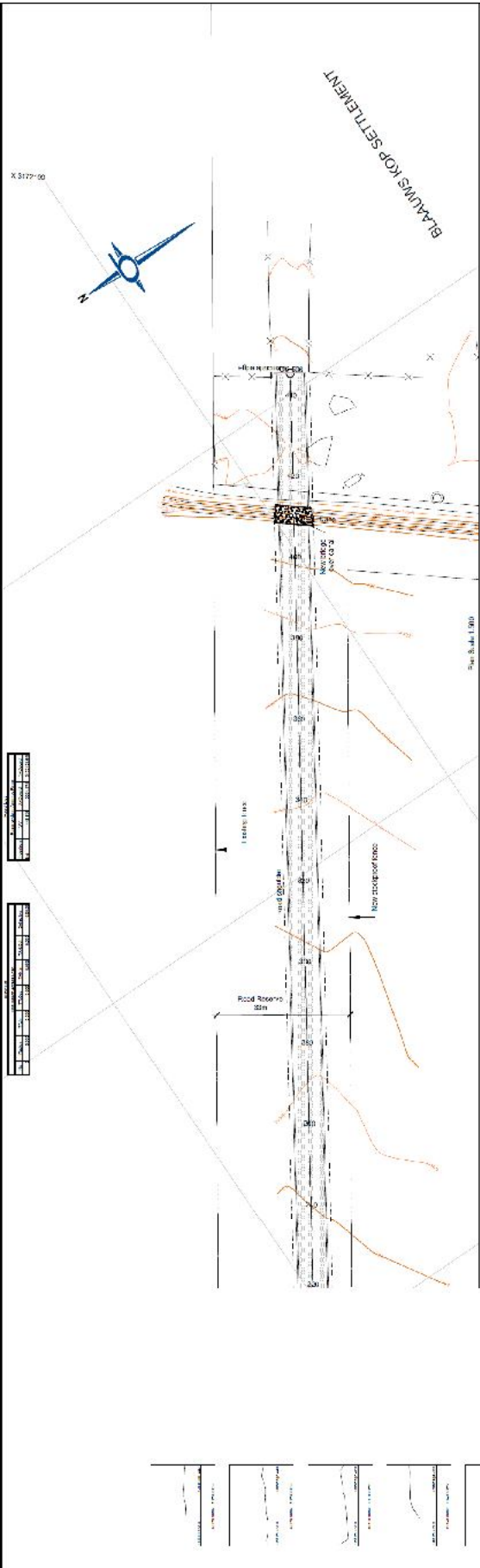




# Appendix C

Facility illustration(s)





Station	1	2	3	4	5	6	7	8	9	10
Grade										
Alignment										
Left Edge										
Right Edge										
Center Line										
Total										
Vertical Curve										
Location										

Scale: 1:500

Scale: 1:500

BLAAUWSKOP  
ACCESS ROAD

HORIZONTAL AND VERTICAL ALIGNMENT  
SHEET 2

Project: BLAAUWSKOP  
Access Road

Client: KALIGARTE

Scale: 1:500

Sheet: SK2585/B

# Appendix D

Specialist report(s)

# Appendix D<sub>1</sub>

Ecological report

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**Report on the floristic and ecological assessment of the proposed construction of the access road between the R359 Provincial Road and the Blaauws Kop Settlement, Kanoneiland, Northern Cape Province.**

July 2013

Prepared by:

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## **Vegetation and ecological assessment.**

### **1. Introduction**

#### **1.1 Background**

Natural vegetation is an important component of ecosystems. Some of the vegetation units in a region can be more sensitive than others, usually as a result of a variety of environmental factors and species composition.

South Africa has a large amount of endemic species and in terms of biological diversity ranks third in the world. This has the result that many species are rare, highly localised and consequently endangered. It is our duty to protect our diverse natural resources.

South Africa contains 19 known centres of endemism. These areas contain a high number of species endemic to this specific area. Due to the limited range of most of these species many are rare, protected or endangered. The proposed new construction of the access road is situated on the eastern border of the Gariep Centre of Endemism. Many species occurring within this centre are unique and localised to this area. Development in such centres of endemism should be done with careful investigation of the biodiversity and species composition of the area. Areas with rare, endangered or endemic species and areas with a high biodiversity should be avoided when planning a development.

Though vegetation may seem to be uniform and low in diversity it may still contain species that are rare and endangered. The occurrence of such a species may render the development unviable. Should such a species be encountered the development should be moved to another location or cease altogether.

Some vegetation units also perform vital functions in the larger ecosystem. These units are often associated with water bodies, watercourses or moisture sinks. These systems are always connected to each other through a complex pattern. Degradation of a link in this larger system, e.g. tributary, pan, wetland, usually leads to the degradation of the larger system. Therefore, degradation of such a water related system should be prevented.

Natural areas surrounding rural settlements and areas of intensive agriculture are often degraded to some extent. Although this may be the case there may still be areas which require conservation such as areas of endangered vegetation, sensitive areas such as wetlands, pans, streams or drainage lines and areas containing an endangered species of conservational importance.

The Blaauws Kop Settlement near Kanoneiland in the Northern Cape is situated approximately 500m from the R359 tarred road. However, the community is not connected to this tarred road and access to the settlement is not possible besides by foot. It is imperative that this community be provided with a suitable tarred or gravel access road to their settlement from the R359 tarred road. For this reason it is proposed to construct a tarred road from the R359 Provincial Road to the settlement.

The proposed construction of the tarred road will take place between the settlement of Blaauws Kop and the R359 Provincial Road (Map 1). A large portion of the natural vegetation have already been cleared for the construction of the proposed road. This will be taken into account



in this assessment and the surrounding natural vegetation will also be surveyed in order to compare it with the area cleared of vegetation.

For the above reasons it is necessary to conduct a vegetation and ecological assessment of an area proposed for development.

The report together with its recommendations and mitigation measures should be used to minimise the impact of the proposed development.

### **1.2 The value of biodiversity**

The diversity of life forms and their interaction with each other and the environment has made Earth a uniquely habitable place for humans. Biodiversity sustains human livelihoods and life itself. Although our dependence on biodiversity has become less tangible and apparent, it remains critically important.

The balancing of atmospheric gases through photosynthesis and carbon sequestration is reliant on biodiversity, while an estimated 40% of the global economy is based on biological products and processes.

Biodiversity is the basis of innumerable environmental services that keep us and the natural environment alive. These services range from the provision of clean water and watershed services to the recycling of nutrients and pollution. These ecosystem services include:

- Soil formation and maintenance of soil fertility.
- Primary production through photosynthesis as the supportive foundation for all life.
- Provision of food, fuel and fibre.
- Provision of shelter and building materials.
- Regulation of water flows and the maintenance of water quality.
- Regulation and purification of atmospheric gases.
- Moderation of climate and weather.
- Detoxification and decomposition of wastes.
- Pollination of plants, including many crops.
- Control of pests and diseases.
- Maintenance of genetic resources.

### **2. Scope and limitations**

- To evaluate the present state of the vegetation and ecological functioning of the area proposed for road construction.
- To identify possible negative impacts that could be caused by the proposed construction of the tarred road to the Blaauws Kop Settlement.

## 2.1 Vegetation

Aspects of the vegetation that will be assessed include:

- The vegetation types of the region with their relevance to the proposed site.
- The overall status of the vegetation on site.
- Species composition with the emphasis on dominant-, rare- and endangered species.

The amount of disturbance present on the site assessed according to:

- The amount of grazing impacts.
- Disturbance caused by human impacts.
- Other disturbances.

## 2.2 Fauna

Aspects of the fauna that will be assessed include:

- A basic survey of the fauna occurring in the region using visual observations of species as well as evidence of their occurrence in the region (burrows, excavations, animal tracks, etc.).
- The overall condition of the habitat.
- A list of species that may occur in the region (desktop study).

## 2.3 Limitations

Several bulbous species may have been overlooked as the flowering period has passed and many leaves have withered leaving no trace of the presence of a bulb.

Several herb species may have been overlooked due their annual nature (only present after rain events).

Some animal species may not have been observed as a result of their nocturnal and/or shy habits.

## 3. Methodology

### 3.1 Several literature works were used for additional information.

Vegetation:

Red Data List (Raymondo *et al.* 2009)

Vegetation types (Mucina & Rutherford 2006)

Field guides used for species identification (Adams 1976, Bromilow 1995, Coates-Palgrave 2002, Court 2010, Hartmann 2001, Le Roux 2005, Mannheimer *et al.* 2008, Roberts & Fourie 1975, Shearing & Van Heerden 2008, Van Oudtshoorn 2004, Van Rooyen 2001, Van Wyk & Van Wyk 1997)

Terrestrial fauna:

Field guides for species identification (Smithers 1986a).

### 3.2 Survey

The site was assessed by means of transects and sample plots.

Noted species include rare and dominant species.

The broad vegetation types present on the site were determined.

The state of the environment was assessed in terms of condition, grazing impacts, disturbance by humans, erosion and presence of invader and exotic species.

Animal species were also noted as well as the probability of other species occurring on or near the site according to their distribution areas and habitat requirements.

The state of the habitat was also assessed.

### 3.3 Criteria used to assess sites

Several criteria were used to assess the site and determine the overall status of the environment.

#### Vegetation characteristics

Characteristics of the vegetation in its current state. The diversity of species, sensitivity of habitats and importance of the ecology as a whole.

Habitat diversity and species richness: normally a function of locality, habitat diversity and climatic conditions.

Scoring: Wide variety of species occupying a variety of niches – 1, Variety of species occupying a single niche – 2, Single species dominance over a large area containing a low diversity of species – 3.

Presence of rare and endangered species: The actual occurrence or potential occurrence of rare or endangered species on a proposed site plays a large role on the feasibility of a development. Depending on the status and provincial conservation policy, presence of a Red Data species can potentially be a fatal flaw.

Scoring: Occurrence actual or highly likely – 1, Occurrence possible – 2, Occurrence highly unlikely – 3.

Ecological function: All plant communities play a role in the ecosystem. The ecological importance of all areas though, can vary significantly e.g. wetlands, drainage lines, ecotones, etc.

Scoring: Ecological function critical for greater system – 1, Ecological function of medium importance – 2, No special ecological function (system will not fail if absent) – 3.

Degree of rarity/conservation value:

Scoring: Very rare and/or in pristine condition – 1, Fair to good condition and/or relatively rare – 2, Not rare, degraded and/or poorly conserved – 3.

#### Vegetation condition

The sites are compared to a benchmark site in a good to excellent condition. Vegetation management practises (e.g. grazing regime, fire, management, etc.) can have a marked impact on the condition of the vegetation.

Percentage ground cover: Ground cover is under normal and natural conditions a function of climate and biophysical characteristics. Under poor grazing management, ground cover is one of the first signs of vegetation degradation.

Scoring: Good to excellent – 1, Fair – 2, Poor – 3.

Vegetation structure: This is the ratio between tree, shrub, sub-shrubs and grass layers. The ratio could be affected by grazing and browsing by animals.

Scoring: All layers still intact and showing specimens of all age classes – 1, Sub-shrubs and/or grass layers highly grazed while tree layer still fairly intact (bush partly opened up) – 2, Monolayered structure often dominated by a few unpalatable species (presence of barren patches notable) – 3.

Infestation with exotic weeds and invader plants or encroachers:

Scoring: No or very slight infestation levels by weeds and invaders – 1, Medium infestation by one or more species – 2, Several weed and invader species present and high occurrence of one or more species – 3.

Degree of grazing/browsing impact:

Scoring: No or very slight notable signs of browsing and/or grazing – 1, Some browse lines evident, shrubs shows signs of browsing, grass layer grazed though still intact – 2, Clear browse line on trees, shrubs heavily pruned and grass layer almost absent – 3.

Signs of erosion: The formation of erosion scars can often give an indication of the severity and/or duration of vegetation degradation.

Scoring: No or very little signs of soil erosion – 1, Small erosion gullies present and/or evidence of slight sheet erosion – 2, Gully erosion well developed (medium to large dongas) and/or sheet erosion removed the topsoil over large areas – 3.

#### **Faunal characteristics**

Presence of rare and endangered species: The actual occurrence or potential occurrence of rare or endangered species on a proposed site plays a large role on the feasibility of a development. Depending on the status and provincial conservation policy, presence of a Red Data species or very unique and sensitive habitats can potentially be a fatal flaw.

Scoring: Occurrence actual or highly likely – 1, Occurrence possible – 2, Occurrence highly unlikely.

### 3.4 Biodiversity sensitivity rating (BSR)

The total scores for the criteria above were used to determine the biodiversity sensitivity ranking for the sites. On a scale of 0 – 30, six different classes are described to assess the suitability of the sites to be developed. The different classes are described in the table below:

Table 1: Biodiversity sensitivity ranking

BSR	BSR general floral description	Floral score equating to BSR class
Ideal (5)	Vegetation is totally transformed or in a highly degraded state, generally has a low level of species diversity, no species of concern and/or has a high level of invasive plants. The area has lost its inherent ecological function. The area has no conservation value and potential for successful rehabilitation is very low. The site is ideal for the proposed development.	29 – 30
Preferred (4)	Vegetation is in an advanced state of degradation, has a low level of species diversity, no species of concern and/or has a high level of invasive plants. The area's ecological function is seriously hampered, has a very low conservation value and the potential for successful rehabilitation is low. The area is preferred for the proposed development.	26 – 28
Acceptable (3)	Vegetation is notably degraded, has a medium level of species diversity although no species of concern are present. Invasive plants are present but are still controllable. The area's ecological function is still intact but may be hampered by the current levels of degradation. Successful rehabilitation of the area is possible. The conservation value is regarded as low. The area is acceptable for the proposed development.	21 – 25
Not preferred (2)	The area is in a good condition although signs of disturbance are present. Species diversity is high and species of concern may be present. The ecological function is intact and very little rehabilitation is needed. The area is of medium conservation importance. The area is not preferred for the proposed development.	11 – 20
Sensitive (1)	The vegetation is in a pristine or near pristine condition. Very little signs of disturbance other than those needed for successful management are present. The species diversity is very high with several species of concern known to be present. Ecological functioning is intact and the conservation importance is high. The area is regarded as sensitive and not suitable for the proposed development.	0 - 10

#### 4. Ecological overview of the site

##### 4.1 Overview of ecology and vegetation types (Mucina & Rutherford 2006)

The vegetation on the site and immediate surroundings consists of Bushmanland Arid Grassland (NKb 3).

This vegetation type is considered to be of Least Concern (LC). The vegetation type is not currently subjected to any pronounced development pressures. The site is located approximately 300m east of the Orange River (Map 1 & 2). This area also consists of Endangered (EN) Lower Gariep Alluvial Vegetation (AZa 3). A small portion of the site is situated within this vegetation type (Map 2). However, the vegetation has been severely degraded and does no longer represent this vegetation type.

The topography of the site consists of an irregular plain, sloping slightly toward the north west. The soil is exceedingly sandy and loose with a high degree of superficial pebble deposits of varying geology. The vegetation structure is dominated by dwarf shrubs but the western portion of the site consists of woodland dominated by exotic Mesquite (*Prosopis glandulosa*).

A large portion of the vegetation on the site proposed for the construction of the tarred road has already been cleared. This portion will also be taken into account in this assessment as this area consisted of natural vegetation.

The site and surroundings are in a degraded state. This is due to extensive transformation of the surrounding area for the purpose of vineyards (Map 1). Together with the cultivation of vineyards the area also contain low density residential areas including the Blaauws Kop Settlement. This also contributes to degradation of the environment.

The dominant vegetation consists of dwarf shrubs and a variety of grasses, although these never dominate. These dwarf shrubs are dominated by *Zygophyllum decumbens* var. *decumbens*, other shrubs and herbs occurring in the area include *Suaeda fruticosa*, *Lycium pumilum*, *L. boscilifolium*, *Zygophyllum simplex*, *Helophila deserticola* var. *myriantha*, *Asparagus retrofractus*, *Justicia cuneata*, *Kleinia longiflora*, *Mesembryanthemum guerichianum* and *Atriplex semibaccata*. Grass species that are abundant on the site include *Stipagrostis uniplumis*, *S. obtusa*, *Schmidtia kalahariensis* and *Cynodon dactylon*. The site also contain numerous specimens of the protected *Aloe calviflora* (Canon Aloe) (Appendix B). This species is widespread and not considered to be rare but is considered to have some conservation value. It is not certain how many of these specimen were destroyed by vegetation clearing but several removed plants were observed (refer to Appendix A).

The area bordering the cultivated vineyards on the north of the site is highly infested with Mesquite (*Prosopis glandulosa*)(Appendix C). This area also contains numerous indigenous shrubs and trees. These include *Acacia melifera* subsp. *detinens*, *Boscia albitrunca*, *Acacia erioloba*, *Grewia retinervis*, *Ziziphus mucronata* and *Euclea pseudobenus*. The hemi parasite, *Tapinanthus oleifolius*, is also common on these shrubs and trees. Of these trees the Camel Thorn (*Acacia erioloba*) and Shepherds Tree (*Boscia albitrunca*) are protected. It cannot be said with certainty if any of these specimens were removed by vegetation clearing of the area.

As mentioned above the site contains several protected species namely *Aloe calviflora* (Canon Aloe), *Acacia erioloba* (Camel Thorn) and *Boscia albitrunca* (Shepherds Tree). These species

are widespread and not considered to be rare but are protected in the Northern Cape Province. Many of these have been removed by the premature clearing of vegetation from the site. A permit must be obtained for the removal of these species. In addition any specimens of *A. claviflora* which remain intact or have been removed but are still viable must be transplanted to an area adjacent to the site where they will not be affected.

As mentioned previously the area is infested with the exotic Mesquite (*Prosopis glandulosa*). This species is a well known invader and is listed as a category 2 invader according to the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). The species is a major pest, especially in the Northern Cape. It is recommended that all specimens of this species on and around the site must be removed and destroyed and the area must also be monitored for the germination of seedlings. Prior to construction the trees on the site and immediate surroundings must be removed and all stumps must be treated with a herbicide (preferably triclopyr or ticlopyr/picloram). During construction the site and surroundings must be monitored for seedling germination and coppicing of cleared trees; these must be removed.

In conclusion it can be said that the site and immediate surroundings are in a degraded condition. This is due to the large-scale transformation of the area for the cultivation of vineyards. The nearby settlement of Blaauws Kop also uses the area as an access route although only as footway and this also degrades the area. Due to the degradation caused by these activities the area has become infested with the exotic invader Mesquite (*Prosopis glandulosa*) (Appendix C).

The vegetation type on the site is regarded as being of Least Concern (LC). Although a small portion of an Endangered (EN) vegetation type is situated at the site it can no longer be considered as this vegetation type and is therefore not considered to be of high concern (Map 2).

The site does contain several protected species (Appendix B). These are all widespread and not considered to be rare. Several specimens have been removed by premature clearing of vegetation. A permit must be obtained for the removal of these species. In addition any specimens of *A. claviflora* which remain intact or have been removed but are still viable must be transplanted to an area adjacent to the site where they will not be affected.

The infestation by Mesquite should be controlled by removal of trees, treatment with herbicide, ongoing monitoring of seedling germination and coppicing of removed trees and removal of any seedlings or coppice.

#### **4.2 Overview of terrestrial mammals (actual & possible)**

No mammal species could be identified on the site proposed for the road construction. The site is also in a degraded condition and is situated adjacent to cultivated vineyards and human settlement. For these reasons it is considered highly unlikely that any species of concern would occur on the site. There is a likelihood that small mammals such as rodents may inhabit the area but no evidence such as burrows or scat could be identified.

List of some Red Data terrestrial mammals that could occur in the region:

Pangolin	<i>Manis teminckii</i>
South African Hedgehog	<i>Atelerix frontalis</i>
Aardwolf	<i>Proteles cristatus</i>
African Wild Cat	<i>Felis lybica</i>
Small-Spotted Cat	<i>Felis nigripes</i>
Bat-Eared Fox	<i>Otocyon megalotis</i>
Striped Weasel	<i>Poecilogale albinucha</i>

The likelihood that one or several of these endangered species may occur on the site is considered highly unlikely.

## 5. Site specific results

### Habitat diversity and species richness:

Habitat diversity on the site is relatively low. The habitat consists of a dwarf shrub and shrub/small tree layer. The habitat is in a degraded condition due to adjacent vineyards, human settlement and invader infestation by exotic Mesquite (*Prosopis glandulosa*) (Appendix C). Due to the degraded state of the habitat and the relative uniformity of the habitat the species diversity on the site is relatively low.

### Presence of rare and endangered species:

Several protected species, namely *Aloe claviflora* (Canon Aloe), *Acacia erioloba* (Camel Thorn) and *Boscia albitrunca* (Shepherds Tree), occur on the site (Appendix B). Many of these have already been removed due to premature clearing of the vegetation. Many of the Aloes that have been removed are still intact and these should be transplanted to an area adjacent to the site where they will not be affected. A permit should be obtained for any specimens that require removal. These protected species are all widespread and are not considered to be rare. The site does not contain any endangered or rare species.

### Ecological function:

The site is located 300m from the Orange River and does not form part of the floodplain (Map 1 & 2). The vegetation on the site confirm that the area does not form part of the floodplain of the river and does not play a vital role in the functioning of the Orange River. Furthermore, the vegetation does not consist of riparian vegetation.

The ecological functioning of the site has also been impaired to a large degree by the adjacent vineyards and the nearby human settlement. The vineyards impair the natural drainage of the site and due to the edge effect leads to degradation of the ecological function of the site. The nearby settlement also degrades the site and leads to impairment of the ecological functioning of the site.

### Degree of rarity/conservation value:

The Bushmanland Arid Grassland (Nk3) vegetation type on the site is considered to be of Least Concern (LC). A small portion of the vegetation on the site consist of Endangered (EN) Lower Gariep Alluvial Vegetation (AZa3) but this area is severely degraded and infested with exotic Mesquite (*Prosopis glandulosa*) (Map 2). As a consequence of the small size of the portion of this vegetation and the degraded condition it is not considered to have a significant conservation value.



**Percentage ground cover:**

Due to the aridity of the environment the percentage ground cover is relatively low. It is anticipated that the percentage ground cover would dramatically increase after high rainfall as a result of the high germination rate of annuals. The amount of disturbance also decreases the percentage vegetation cover.

**Vegetation structure:**

The vegetation structure on the site consist of a dwarf shrub layer and a shrub/small tree layer. The dwarf shrub layer has been degrade to some extent by the proximity of human settlement. The tree layer is severely degraded. This is primarily due to heavy infestation by the exotic Mesquite (*Prosopis glandulosa*) invader.

**Infestation with exotic weeds and invader plants:**

Infestation by the exotic Mesquite (*Prosopis glandulosa*) is advanced (Appendix C). This infestation is advanced to such a degree that it causes degradation and alteration of the natural habitat.

**Degree of grazing/browsing impact:**

Grazing and browsing on the site is considered to be relatively low.

**Signs of erosion:**

Erosion on the site is relatively low. This is thought to be primarily due to the low amount of mean annual precipitation as well as the absence of any drainage lines on the site..

**Terrestrial animals:**

Due to the degraded condition of the site as well as the impact of the adjacent vineyards and the nearby human settlement it is considered unlikely that any species of concern would occur on or around the site.

Table 2: Biodiversity Sensitivity Rating for the proposed Blaauws Kop tarred road.

	Low (3)	Medium (2)	High (1)
Vegetation characteristics			
Habitat diversity & Species richness	3		
Presence of rare and endangered species		2	
Ecological function	3		
Uniqueness/conservation value	3		
Vegetation condition			
Percentage ground cover	3		
Vegetation structure	3		
Infestation with exotic weeds and invader plants or encroachers	3		
Degree of grazing/browsing impact			1
Signs of erosion			1
Terrestrial animal characteristics			
Presence of rare and endangered species	3		
Sub total	21	2	2
Total		25	

#### 6. Biodiversity sensitivity rating (BSR) interpretation

Table 3: Interpretation of Biodiversity Sensitivity Rating.

Site	Score	Site Preference Rating	Value
Blaauws Kop tarred road	25	Acceptable	3

#### 7. Discussion and conclusions

The site has been rated as being Acceptable for the proposed development.

The Bushmanland Arid Grassland (Nkb 3) vegetation type on the site is considered to be of Least Concern (LC). A small portion of the vegetation on the site consist of Endangered (EN) Lower Gariep Alluvial Vegetation (AZa 3) but this area is severely degraded and infested with exotic Mesquite (*Prosopis glandulosa*) (Map 2). As a consequence of the small size of the portion of this vegetation and the degraded condition it is not considered to have a significant conservation value.

The site does not form part of a National Protected Areas Expansion Strategy (NPAES) Focus Area (Map 2). The site is situated approximately 300m from the Orange River which is a National Freshwater Ecosystems Priority Area (NFEPA) and must be considered a sensitive area, however, the site is not considered to be situated within the floodplain of the river and does not play a vital role in the functioning of the river (Map 2). The site is situated on the border of the Endangered (EN) Lower Gariep Alluvial Vegetation (AZa 3) (Map 2). However, this portion of the vegetation on the site is severely degraded and is not considered a viable portion of conservable vegetation.

The site and immediate surroundings are in a degraded condition. This is primarily due to the adjacent vineyards and the disturbance caused by the edge effect associated therewith. The

nearby settlement of Blaauws Kop also causes degradation of the site and surroundings. Furthermore, this site has been infested by the exotic invader, Mesquite (*Prosopis glandulosa*) which further degrades the site.

Despite the degraded condition of the site and surroundings there are several protected species present. These are *Aloe claviflora* (Canon Aloe), *Acacia erioloba* (Camel Thorn) and *Boscia albitrunca* (Shepherds Tree) (Appendix B). These species are all widespread and not considered to be rare. Several specimens of these species have already been removed from the site due to premature clearing of vegetation on the site. A permit must be obtained for the removal of these species. In addition any specimens of *A. claviflora* which remain intact or have been removed but are still viable must be transplanted to an area adjacent to the site where they will not be affected.

As mentioned previously the area is infested with the exotic Mesquite (*Prosopis glandulosa*) (Appendix C). This species is a well known invader and is listed as a category 2 invader according to the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). The species is a major pest, especially in the Northern Cape. It is recommended that all specimens of this species on and around the site must be removed and destroyed and the area must also be monitored for the germination of seedlings. Prior to construction the trees on the site and immediate surroundings must be removed and all stumps must be treated with a herbicide (preferably triclopyr or triclopyr/picloram). During construction the site and surroundings must be monitored for seedling germination and coppicing of cleared trees; these must be removed.

As a result of the degraded condition of the site and immediate surroundings it is considered acceptable for the construction of the proposed Blaauws Kop tarred road.

In order to keep any impacts that the construction of the road would have to a minimum the recommendations as listed below should be adhered to.

#### **8. Recommendations**

- A permit should be acquired for the removal of the protected species on the site (Appendix B). These species are *Aloe claviflora* (Canon Aloe), *Acacia erioloba* (Camel Thorn) and *Boscia albitrunca* (Shepherds Tree). Any specimens of Canon Aloe on the site which remains intact must be removed and transplanted to an area adjacent to the site where they will not be affected.
- The infestation of the exotic invader Mesquite (*Prosopis glandulosa*) must be eradicated (Appendix C). This must be done by removing the trees and treating the stumps with a triclopyr or triclopyr/picloram herbicide. The construction area must also be monitored for the germination of seedlings or coppicing of stumps, these must be eradicated.
- The natural drainage of the surrounding area should be kept in mind during road construction and the following must be adhered to:
  - Where culverts are replaced these should be adequate to allow for sufficient water flow and should not retard water flow.
  - The direction of the culvert placement should correspond to the direction of natural water runoff.

- V-drains must be implemented alongside the road. These V-drains must also be fitted with retention basins in order to prevent erosion of the V-drain.
  - Where erosion is found to be problematic geotextiles such as gabions must be used to prevent this.
- Wherever the removal of topsoil is necessary the topsoil should be stockpiled separately and protected against weed infestation and erosion.
  - Topsoil should be replaced on top of the soil surface where it has been removed as soon as possible.
  - Areas that have become compacted due to construction activities should be ripped.
  - After cessation of activities on the site the area should be rehabilitated to acceptable standards.
  - After construction has ceased all construction materials should be removed from the area.

## 9. References

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**Annexure A: Maps and Site photos**



### Locality of the proposed construction of the Blaauws Kop tarrred road, Kanoneiland, Northern Cape.



Prepared for:  
MDA Consultants  
9 Barnes Street  
Bloemfontein  
9301

Legend:  
N14 National Road  
Kanoneiland Road  
R359 Provincial Road  
Proposed new tarrred road

Blaauws Kop Settlement  
Kanoneiland Settlement

Map Information

Spheroid: WGS 84

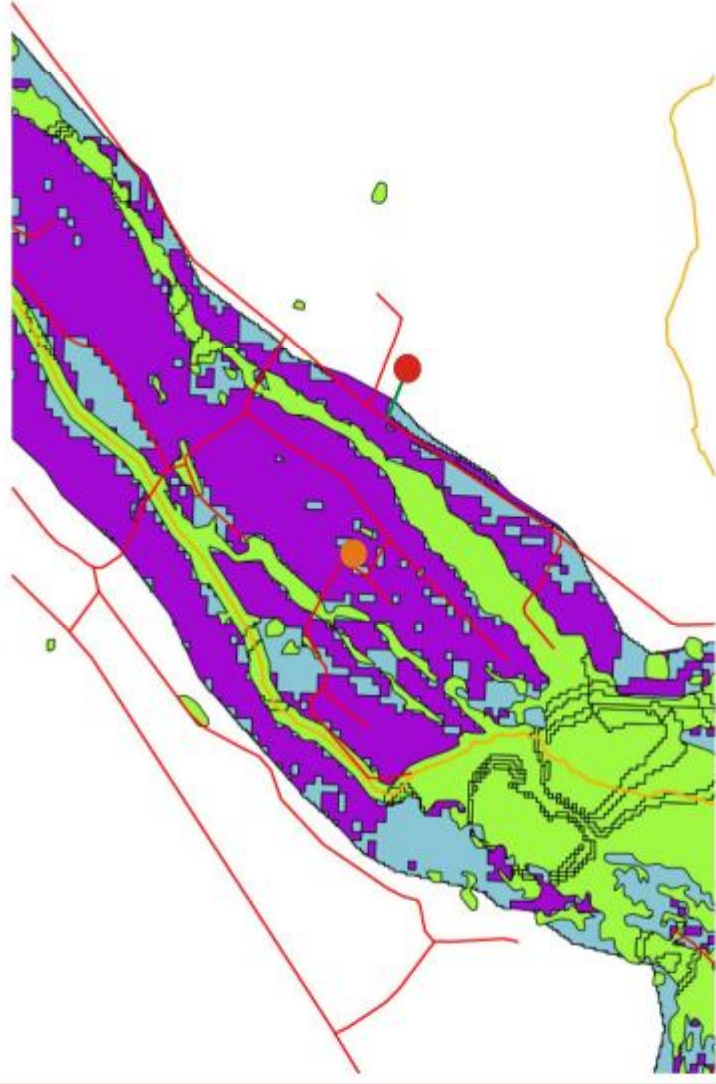


Environmental Consultant  
EKO Environmental  
Contact Darius van Rensburg at:  
darius@ekogroup.co.za  
Suite 158, P/Bag X01, Brandhof, 9324  
Tel: 051 4444 700  
Fax: 086 6976 132



Map 1: The location of the proposed construction of the Blaauws Kop tarrred road. Note the extensive vineyards adjacent to the proposed Blaauws Kop tarrred road. The Orange River, floodplain and extensive vineyards are clearly visible. The settlement of Kanoneiland is also indicated.

## Sensitivity Map of the proposed construction of the Blaauws Kop tarred road, Kanoneiland, Northern Cape.



Map 2: A Sensitivity Map illustrating sensitive areas of importance. Note that the area does not contain any National Protected Areas Expansion Strategy (NPAES) Focus Areas. The nearby Orange River is also indicated, take note that this watercourse is also considered a National Freshwater Ecosystems Priority Area (NFEPA) and must be considered a sensitive area, the proposed road however does not occur near the river. The riparian vegetation, Lower Gariep Alluvial Vegetation (AZa 3), associated with the Orange River is considered an Endangered (EN) ecosystem. The map indicates the remaining portion of this vegetation type, note that the proposed road occurs on the border of a remaining area of this vegetation type. However, due to the adjacent vineyards and the edge effect the area is severely degraded and cannot be considered a conservable portion of this vegetation type.



Prepared for:  
MDA Consultants  
9 Barnes Street  
Bloemfontein  
9301

- Legend:**
- Road Network
  - FEPA Watercourse
  - Proposed new tarred road
- Wetlands**
- NPAES Focus Area
  - Original extent
  - Threatened Ecosystem
  - Remaining extent
  - Threatened Ecosystem
  - Blaauws Kop Settlement
  - Kanoneiland Settlement

**Map Information**

Spheroid: WGS 84

Scale: 1:40 000

**Environmental Consultant**

EKO Environmental

Contact Darius van Rensburg at:

darius@ekogroup.co.za

Suite 158, P/Bag X01, Brandhof, 9324

Tel: 051 4444 700

Fax: 086 6976 132







Figure 1: View of the area proposed for the construction of the new Blaauws Kop access road. The panorama was taken from the west toward the east of the site. It is prominent that the area has already been cleared of vegetation.



Figure 2: View of the western portion of the proposed road adjoining the existing R359 road (red line). The trees in this panorama are all exotic invader Mesquite (*Prosopis glandulosa*).



Figure 3: View of the natural vegetation adjacent to the cleared area. Note that the vegetation structure consists of a dwarf shrub- and a scattered small tree layer.



Figure 4: View of the natural vegetation adjacent to the cleared area. Note that the vegetation structure consists of a dwarf shrub- and a scattered small tree layer. The Blaauws Kop Settlement is visible in the background (red circle).



Figure 5: Protected *Acacia erioloba* (Camel Thorn) damaged by vegetation clearing.



Figure 6: Protected *Boscia albitrunca* (Shepherds Tree) occurring adjacent to cleared area. It could not be ascertained if any specimens occur on the site due to premature clearing of the vegetation.



Figure 7: Protected *Aloe claviflora* (Canon Aloe) removed from the construction area. A permit must be acquired to transplant these specimens to an area adjacent where they will not be affected.



Figure 8: Large amount of vegetation cleared from the site.



Figure 9: Area adjacent to vineyards with heavy infestation by the exotic invader Mesquite (*Prosopis glandulosa*).

## Appendix B: Protected species present

Protected species on the site may not be limited to these species but these have been identified on the site. Additional sources should be consulted to confirm the presence of protected species.



***Aloe claviflora***  
**Canon Aloe/Kraal Aalwyn**

Protected species

National Red List Status: **Least Concern (LC)**

Numerous on the site and surroundings. Several specimens have been removed from the site due to premature vegetation clearing. A permit must be obtained to transplant these to an area adjacent where they will not be affected.



***Boscia albitrunca***  
**Shepherds Tree/Witgat Boom**

Protected species

National Red List Status: **Least Concern (LC)**

Due to premature clearing of the vegetation on the site it could not be ascertained if any of specimens were present on the site. However, several specimens occur adjacent to the site and it is likely that these may have occurred on the site. Obtain a permit to remove any of this species from the site.



***Acacia erioloba***  
**Camel Thorn/Kameeldoring**

Protected species

National Red List Status: **Declining**

The species is subjected to a continuing decline and is therefore listed as a **Declining** species.

Due to this listed category the species must be left intact wherever possible. A permit must be obtained to remove those specimens that are situated on the site. Due to premature clearing of the vegetation on the site it could not be ascertained if any of specimens were present on the site. However, several specimens occur adjacent to the site and it is likely that these may have occurred on the site.



### Appendix C: Likely invader weed species

The site and surroundings have become severely infested with Mesquite (*Prosopis glandulosa*) and although possible weeds on the site may not be limited to this species it is considered the most significant invader. Additional sources should be consulted to confirm invader weed species as well as the best method to eradicate them.



***Prosopis glandulosa***  
**Mesquite/Muskietboom/Prosopis**

**Type:** Invader  
**Category:** 2

The species is highly problematic in the Northern Cape and is not easily eradicated.

Trees should be cut and the stumps immediately treated with a ticlopyr or ticlopyr/picloram herbicide.

Afterwards the area must be monitored for the germination of any seedlings which must be pulled out and disposed of. The area must also be monitored for the coppicing of any of the stumps which must be cut and treated with a herbicide.



**eko** ENVIRONMENTAL is a Bloemfontein based company with extended expertise in specific environmental fields but also in the coordination of larger environmental management projects that involve outside contracted expertise for specialist investigations.

We provide our clients with a professional service and cost effective solutions to their environmental problems to conduct their activities, development or explore natural resources like minerals, surface and ground water, without adversely impacting on the environment.

**eko** ENVIRONMENTAL endeavours to provide a high quality service and prompt completion of deliverables.

### services ...

- Biodiversity / Ecological assessments
- Environmental impact assessments
- Environmental management plans
- Water use license applications
- Environmental monitoring
- Waste license applications
- Environmental auditing
  - Mining Authorizations
  - Heritage assessments

# Appendix D<sub>2</sub>

Heritage report



Phase 1 Heritage Impact Assessment of a proposed new  
road at Blaauwskop near Uppington, NC Province.

Lloyd Rossouw  
PO Box 38806  
Langenhovenpark  
9330



Report prepared for MDA Environmental Consultants  
PO Box 20298  
Willows  
9320

## **Executive Summary**

- a Phase 1 Heritage Impact Assessment was conducted as a prerequisite for the construction of a 660 m section of road between the R359 and a farm workers' village on the farm Blaauwskop 36, south of Uppington.
- The affected area is underlain by weathered Keimoes Suite granites (Kanoneiland Granite) blanketed by a thin layer of gritty, brown topsoils composed of an admixture of weathered bedrock and Kalahari sand.
- A 540 m long section of the proposed route has been extensively disturbed by vegetation-stripping activities while rest of the will be constructed within the vicinity of a farm workers' village.
- No archaeological sites, graves were found along the proposed route during the survey. There is also no evidence for the accumulation and preservation of intact fossil material within the residual deposits (topsoils). Historical buildings or structures older than 60 years are absent from the site.
- Potential impact archaeological heritage is considered very low. The probability of locating palaeontological and archaeological heritage remains during the operational phase of the development is considered improbable.

## Introduction

At the request of MDA Environmental Consultants, a Phase I Heritage Impact Assessment was conducted as a prerequisite for the construction of a 660 m section of road between the R359 and a farm workers' village on the farm Blaauwskop 36, south of Uppington, Northern Cape Province (Fig. 1).

The survey is called for in terms of the National Heritage Resources Act 25 of 1999. In terms of Section 38 of the National Heritage Resources Act 25 of 1999 the survey is required as a prerequisite for any form of linear development or barrier exceeding 300 m in length. A site visit and subsequent assessment took place in July 2013.

## Description of the Affected Area

### Details of area surveyed

#### Locality data

1:50 000 scale topographic map: 2821 CA Kanoneiland

1:250 000 scale geological map 2822 Uppington

Site coordinates (Fig. 2):

- A) 28°39'47.32"S 21° 5'49.69"E
- B) 28°39'54.47"S 21° 6'1.94"E
- C) 28°39'57.01"S 21° 6'6.30"E
- D) 28°39'54.13"S 21° 6'8.64"E

The site is located south of Kanoneiland, next to the R359 between Uppington and Keimoes on the Farm Blaauwskop 36 (Fig. 2). Section A-B between the R359 and the irrigation canal is flanked by a vineyards and undeveloped farmland to the north and south respectively, and has been stripped of vegetation to make way for the new road (Fig. 3 & 4). Section B – D is located on a pre-existing pathway that runs through the farm workers' village (Fig. 5).

Sparse lithics made from brown jasper, are present as individual surface occurrences in the open veld south of Section A-B and are mainly represented by chips and irregular flakes. The stone tools appear to be fresh with little sign of intentional faceting or formal preparation and are almost certainly attributed to the LSA (Fig 6).

### Geology

The affected area is underlain by weathered Keimoes Suite granites (Kanoneiland Granite) blanketed by a thin layer of gritty, brown topsoils composed of an admixture of weathered bedrock and Kalahari sand (**Fig. 7**).

### **Methodology**

A pedestrian survey was conducted in the affected area. A Garmin Etrex Vista GPS hand model (set to the WGS 84 map datum) and a digital camera, were used to record relevant data. Relevant palaeontological and archaeological information were assimilated for the report and integrated with data acquired during the on-site inspection.

## **Background**

The Middle Orange River region has been populated continuously during prehistoric times. ESA stone tools have been recorded *in situ* at Kalkgaten on the farm Ratel Draai and MSA and LSA sequences have been recorded from a number of cave sites at Zoovoorbij, Droegrond and Waterval. Archaeological and historical evidence also show that the area was extensively occupied by Khoi herders and San hunter-gatherers during the last 2000 years. Khoi groups such as the Einiqua occupied the area around and east of the Augrabies Falls while the Korana occupied the Middle-Upper Orange River further to the east. A large number of burial cairns were excavated in the Kakamas area and appear to be related to Korana herders.

## **Results of Survey**

The substrate along section A – B has been extensively disturbed by vegetation-stripping activities. Section B – D is located within the vicinity of a farm workers' village. No archaeological sites, graves were found along the proposed route during the survey. There is also no evidence for the accumulation and preservation of intact fossil material within the residual deposits (topsoils). Historical buildings or structures older than 60 years are absent from the site.

## **Statement of Significance**

The area demarcated for development has been suitably recorded, mapped and documented in accordance with the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999).

Potential impact archaeological heritage is considered very low. The probability of locating palaeontological and archaeological heritage remains during the operational phase of the development is considered improbable.

## **Recommendations**

The proposed site is not considered to be palaeontologically or archaeologically sensitive, vulnerable or threatened and can be accessed for development.

## **References**

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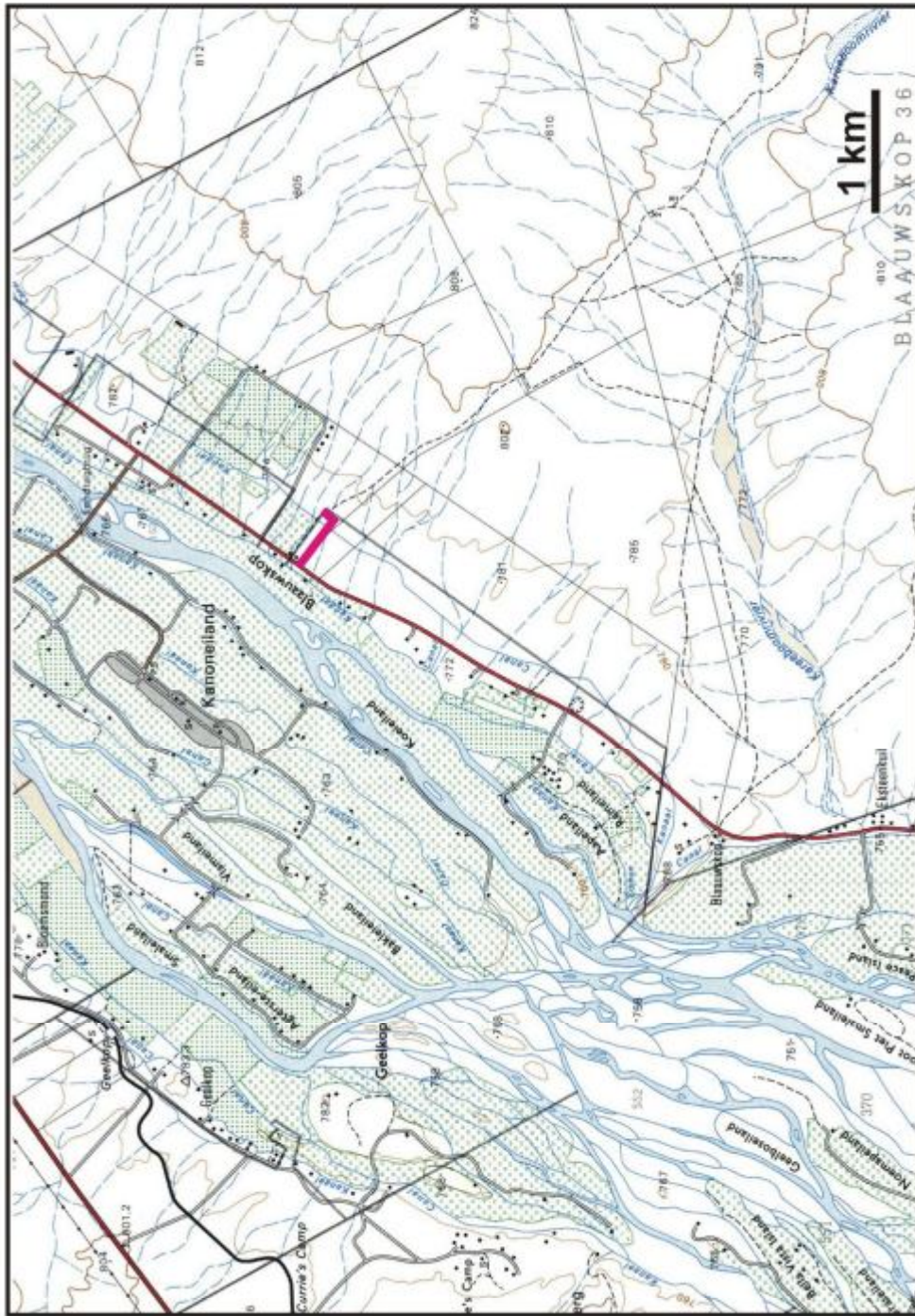


Figure 1. Portion of 1 : 50 000 scale topographic map (2821 CA Kanonieland) showing the location of the proposed development in red.

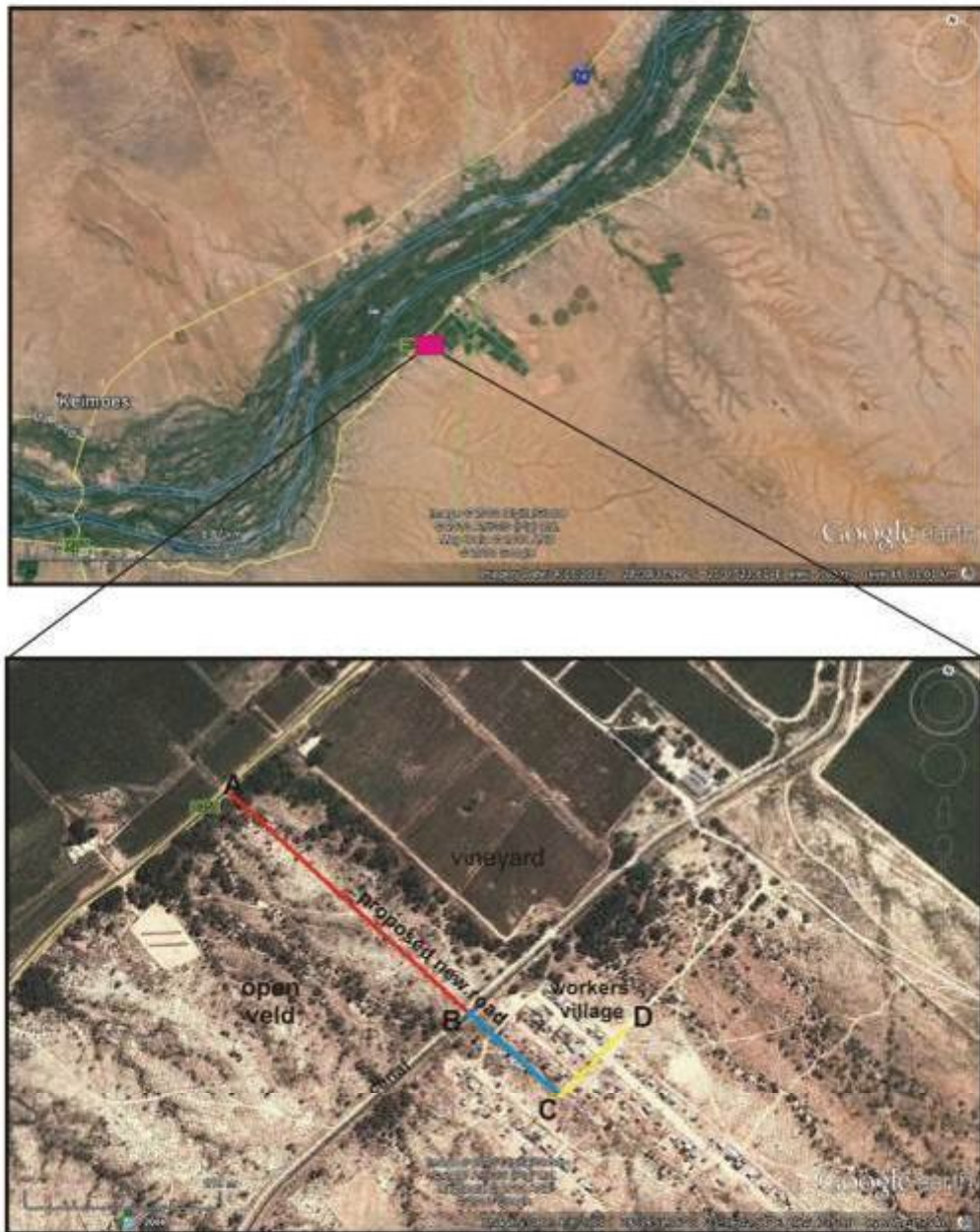


Figure 2. Aerial view of the proposed development.



Figure 3. ). The proposed road will cross a water canal (above) that is used to irrigate the vineyards in the area (below).





Figure 4. A 540 m long section between the R359 and the village (section A - B) has been stripped of vegetation to make way for the new road; looking southeast towards the village (above) and northwest towards the R359 (below).



Figure 5. The farm workers' village and surrounding area.



Figure 6. A survey of the open veld (top) adjacent to the proposed site revealed the occasional occurrence of lithics distributed as individual surface occurrences (middle & below).

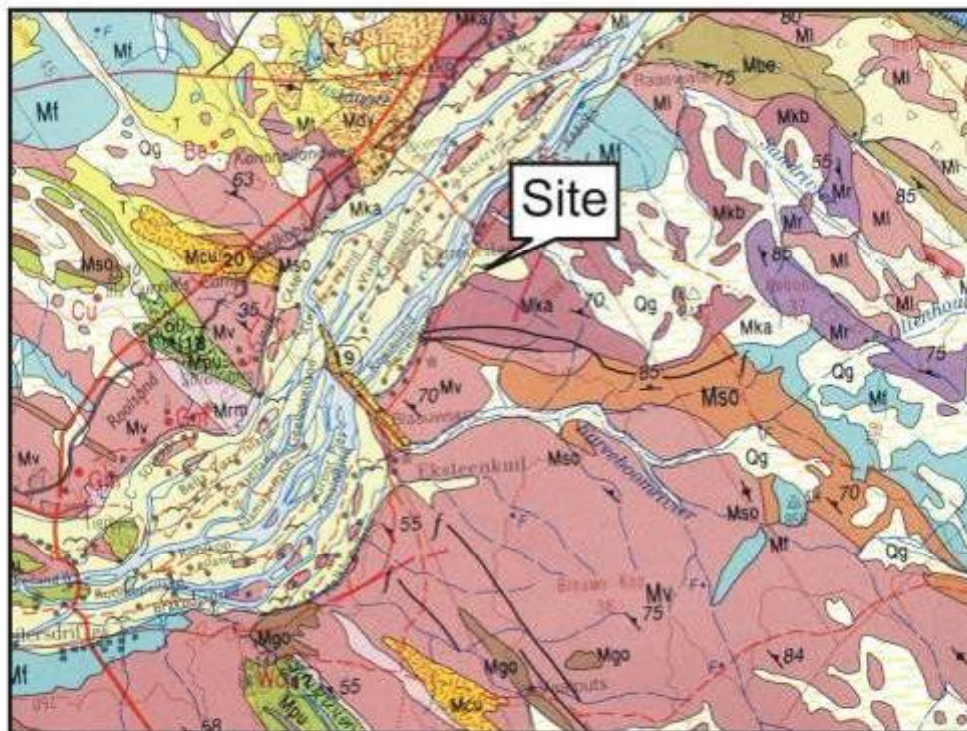


Figure 7. Portion of 1 : 250 000 scale geological map (2822 Uppington). The affected area is underlain by weathered Keimoos Suite granites (Kanoneiland Granite) blanketed by a thin layer of gritty, brown topsoils composed of an admixture of weathered bedrock and Kalahari sand.

# Appendix E

Comments and responses report

# Appendix E<sub>1</sub>

List of identified interested and / or affected parties

List of identified interested and / or affected parties:

Organisation	Contact person and contact detail	Manner of notification
<b>Authorities &amp; Stakeholders</b>		
Blaauwsekop Irrigation Board	The Secretary Blaauwsekop Irrigation Board P.O. Box 21 Kanoneiland 8806  Tel: 054 491 1201 Fax: 054 491 1201 E-mail: kanoneiland@vodamail.co.za	E-mail on 2013/08/02
Blaauwsekop Agricultural Association	Andre Oberholzer andre@oberholzerfarms.co.za Tel: 082 923 7202	E-mail on 2013/08/02
The Department: Roads and Public Works, Northern Cape Province	I. Bulane Acting Director: Roads P.O. Box 3132 Kimberley 8301 Tel: 053 861 9600 Fax: 053 861 9626	Faxed on 2013/08/02
The Department of Agriculture, Land Reform and Rural Development, NC	Extension Officer, P.O. Box 52, Upington 8800. Tel: 054 337 8000, Fax: 054 337 8001	Posted letter to Extension Officer in Upington on 6 August 2013.
Siyanda District Municipality	Mr Eric Ngxanga The Municipal Manager Private Bag X6039 Upington 8800  Cnr of Hill and Le Roux streets Upington 8800  Tel: 054 337 2800 Fax: 054 337 2888	Faxed notification on 2013/08/02
Kai !Garib Local Municipality	Mr Abraham Vosloo The Municipal Manager Private Bag X6 Kakamas 8870  Tel: 054 431 6328 Fax: 054 431 6338	Faxed notification on 2013/08/06
Ward councilor	Councilor Lorinda Tities	Faxed notification on 2013/08/06

Organisation	Contact person and contact detail	Manner of notification
	The Municipal Manager Private Bag X6 Kakamas 8870  Tel: 054 431 6328 Fax: 054 431 6338	
SAHRA		Application was lodged electronically on 9 October 2013.

**Adjacent Landowners**

**NOTE:**

Adjacent landowners were notified of the proposed construction of a road by means of a pamphlet distribution process that was undertaken on 18 July 2013.



# Appendix E<sub>2</sub>

Proof of notification

Site notices placed on site:



Adjacent landowners were notified by means of a pamphlet distribution process:



**Uppies 1973 reünie**  
 UPINGTON: Die matrieks van 1973 hou ook hierdie naweek 'n reünie. Vir meer inligting oor al die aktiwiteite en saamkuiers gedurende die naweek, kom Bea (Visser) Swart by 082 415 8772 geskakel word.

**REKENMEESTER**

Hanno Logistics (PTY) Ltd Kimberley kantoor benodig die dienste van Boegenoemde.

Die gesikhte kandidaat moet oor die volgende beskik:

- Tinasiale Diploma/Graad
- Deeglike kennis van Pastel Accounting en Pastel Payroll
- Minimum van 5 jaar toepaslike praktiese ondervinding
- Daarom en voorraadbeheer ondervinding sal voorkeur geniet
- Moet deeglike kennis van FTW, IRP's, PAYE, SDF, UIF en e-filing hê
- Bankrekonstruksies, bestuurstate saamstel en skakeling met outleure
- Ondervinding van brandstof en vervoerbedryf sal dien as aanbeveling
- Moet onafhanklik kan werk, dinamies en hardwerkend wees

Ons bied aan:

- Mededingende, markverwante salarispakket
- Aangename werksomstandighede

Slegs persone wat beskik oor die nodige vereistes word vriendelik gevra om aansoek te doen.

Skakel die bestuurder by 083-541 0935/6 of 082 377 2417 gedurende kantoorure.

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Abengoa and its new South African subsidiary, Teyma South Africa (Pty) Ltd, are looking for a local **Site Administrative** with wide proven experience in construction or mine sites. For purchases related to civil and construction and general administrative works. The current position we are offering will be based in either one of the projects under execution in Upington or Potladder. Responsibilities are those related to the job and the salary is to be negotiated with the candidates. Please send your CV in pdf format to: [comunicacion@teyma.abengoa.com](mailto:comunicacion@teyma.abengoa.com)

**TEYMA SOUTH AFRICA**

**ENVIRONMENTAL IMPACT ASSESSMENT BASIC ASSESSMENT PUBLIC PARTICIPATION PROCESS**

Notice is given in terms of Regulation 54(2)(c) of the Environmental Impact Assessment Regulations of 2010 No. R. 543 published in Government Notice No. 33306 of 18 June 2010 of the National Environmental Management Act (Act No. 107 of 1998) that an Application for Environmental Authorisation has been submitted to the Department of Tourism, Environment and Conservation (Northern Cape) for the following:

**Project:** The proposed construction of a road and associated infrastructure to link Blaauwskop Community with the existing R359 road.

**Locality:** Portion 3 of the farm Blaauwskop 36. The road will be constructed from the Blaauwskop Community, towards the existing R359 road.

**Project by:** Kai Kgari Municipality

If you have any information or comments regarding the environmental impact of the proposed development or need additional information regarding the proposed development, please submit your name, contact information and interest to the following consultants, within 30 days of date of notice.



PO Box 20298, Willows, Bloemfontein 9320

Tel: 051 447 1583; Fax: 051 448 9839  
 E-mail: [hanlie@mdgroup.co.za](mailto:hanlie@mdgroup.co.za)  
 Contact person: Hanlie Groenewald

**"Big Latch On" - die Vrydag**

UPINGTON: Borsvoedingsweek vind jaarliks vanaf 1 – 7 Augustus plaas.

Neem hierdie jaar deel aan die Big Latch On aktiwiteite om borsvoeding te help bevorder. Dit sal by die volgende klinieke plaasvind op Vrydag, 2 Augustus, by die Sarah Simons Kliniek, Babbelklokkies, Raaswater Kliniek, Groblershoop Kliniek, Progress Kliniek, Lingeleith Kliniek, Postmansburg, Louisa de Weeg Kliniek, Brandboom Kliniek, Riemvrouenske Kliniek, Kélanos Kliniek en by Naba Lodge op 3 Augustus. Kaartjies beskikbaar by De Duine Apoteek. Vir verdere navraag, kontak die diensknagtes by Departement Gesondheid Distrik Kaarsoor by 084 3370500 of Gordonia Hospital by 054 3386130.

**Vrouekonferensie op Upington**

UPINGTON: Die Kerk van God Herlewingsentrum Gemeente hou op 9, 10 en 11 Augustus 'n Vrouekonferensie by die Piet Thole Gemeenskapaal in Rosedale. Die tema is "God verander jou". Die gaspreekster is prof. Dr. Corné Deltie van Moedershand. Vrydag om 10:00 word 'n Verwelkomingsdiens gehou en die aanddiens is om 19:00. Die Saterdag se oggenddiens begin om 10:00 en die Jeerdagdiens is om 14:00. Die saterdag begin om 19:00. TRIO vir kinders en R15 vir volwassenes. Sondagoggend, 11 Augustus se diens begin om 10:00. Vir meer inligting kan suster Sarah Olivier by 073 909 4570 geskakel word.

**Opwindende ACVV vrouedag eersdaags**

UPINGTON: Die ACVV Upington beplan 'n opwindende Vrouedag funksie om fondse in te samel ten bate van verskeie van hulle projekte.

Die belofte om 'n hand te wees gevolg betroubaar. 'n geleentheid wat nie misgeloop kan word nie.

Die gaspreekster, op 25 Augustus 2013 om 19:00 in die Hoërskool Upington skoolaal, is die voormalige Skoepie/Checkers Vrou van die Jaar, Madeline Le Roux.

Sy is tans betrokke by die Kinatsekap, en is ook 'n motivasiespreker, vrytime aktiwiteite vir vroueteams en mensie met 'n gesondheidslewe. Ook die kommissaris vir die bestemming en bevordering van kultureel, taal en godsdiens vir die Wes-Kaap.

Haar boek oor vroue met gestremde en sensuïteit, *Look at Me* was 'n bestverkopende. Marlene het ook saam met dr. Michael Le



Madeline Le Roux, voormalige Skoepie/Checkers Vrou van die Jaar is die spreker.

Cordeur, die boek *The Wellingtons Klips* 100 jaar se onontdekte stories vasgestel.

Die koskamp-ouie sluit 'n smaaklike era in.

Die ACVV Upington wil ook van hierdie geleentheid gebruik maak om te versorg om 'n hant oop te maak sa hulle in hierdie fondsinamelingsprojekte te ondersteun, sodat hulle weer op hul hart hulle hant kan oopmaak en die gemeenskap laat bestaan.

Besprekings kan gedoen word by Christiella McKittrick by telefoon nommer 084 332 1402 of per e-pos by [acvv@upit.co.za](mailto:acvv@upit.co.za). Kaartjies is ook verligbaar direk by ons kantore.

**Gebedsontbyt vir susters**

UPINGTON: Die Susters Vereniging van Rosedale Congregational Kerk hou 'n Gebedsontbyt op 9 Augustus.

Tulle moet alle susters uit na die geleentheid om te hoor wat God ons belooft wanneer die lewe ons ontmoet.

Die ontbyt begin om 08:00 by die Rosedale Kerk. Kaartjies is beskikbaar by die lokaal. Kontaknommer: 079 502 1752.

**WEBATELJEE**

**VAKANTE BETREKKING ADMIN**

VERANTWOORDELIKHEDE: Krediteure, debiteure, Salarisse, Kleinkas, Bankrekonstruksie VEREISTES DEEGLIKE KENNIS VAN PASTEL E FILING

Ondervinding in 'n soortgelyke pos sal tot voordeel strek.

VOORDELE: 'n Mededingende salaris & voordele gekoppel aan ondervinding.

CV voor 14 Augustus. Faks 0866156374 [info@webateljee.co.za](mailto:info@webateljee.co.za) of ons kantore Schridderstraat 59 Upington



P.O. Box 620 | Upington | Northern Cape | South Africa | 8200  
 Office: 027 54 338 0145 | Fax: 027 54 338 0056 | [www.cavalier.co.za](http://www.cavalier.co.za)

**VEILING ± 500 BEES**  
**WOENSDAG 14 AUGUSTUS 2013 om 13H00**  
**TE UITKOMS VOERKRALE UPINGTON**

VERDERE INSKRYWINGS WORD VERWAG EN SAL VERWELKOM WORD KONTAK U AGENT

PIET MAASS	084 491 0104
DE WET THIRION	082 776 6635
JANNIE KRUGER	082 564 6304
JOHAN OPPERMAN	082 564 6302
KRAPPIES CARSTENS	082 377 6212
LIEB LIEBENBERG	082 457 4362
RUDI OBERHOLZER	082 825 0424
JAN VD WESTHUIZEN	082 374 7977
CORNE NEL	082 855 7745
DAVID VD LINDEN	076 161 0520

**AFSLAER: CHRIS HENDRIKS 083 449 0852**



Example of notification:



Town & Regional Planners,  
Environmental &  
Development Consultants

Makecha Development Associates trading as MDA, CC 1995/030752/23, Member: SAPI, SACTRP

P O Box 20298  
Willows 9320  
Tel: +27 (51) 447 1583  
Fax: +27 (51) 448 9839  
e-mail: [admin@mdagroup.co.za](mailto:admin@mdagroup.co.za)  
9 Barnes Street, Westdene  
BLOEMFONTEIN

Our ref: 40641  
Contact person: Hanlie Groenewald  
2 August 2013

**The Secretary**

Blaauwsekop Irrigation Board  
P.O. Box 21  
Kanoneiland  
8806

**ATTENTION:** Members of the Blaauwsekop Irrigation Board

**NOTIFICATION OF AN ENVIRONMENTAL IMPACT ASSESSMENT (BASIC ASSESSMENT)  
FOR THE PROPOSED ESTABLISHMENT OF A ROAD NEAR THE BLAAUWSEKOP  
COMMUNITY**

Notice is given in terms of Regulation 54(2)(b) of the Environmental Impact Assessment Regulations of 2010 No. R. 543 published in Government Notice No. 33306 of 18 June 2010 of the National Environmental Management Act (Act No. 107 of 1998) that an Application for Environmental Authorisation to the Department of Tourism, Environment and Conservation (Northern Cape) for the following:

***Project:*** The proposed construction of a road and associated infrastructure to link Blaauwsekop Community with the existing R359 road.

***Locality:*** Portion 3 of the farm Blaauwsekop 36. The road will be constructed from the Blaauwsekop Community, towards the existing R359 road.  
(refer to map attached hereto)

***Project by:*** Kai !Garib Municipality

If you have any information or comments regarding the environmental impact of the proposed development or need additional information regarding the proposed development, please submit your name, contact information and interest to Hanlie Groenewald at 051 447 1583 / [hanlie@mdagroup.co.za](mailto:hanlie@mdagroup.co.za), within 30 days of date of notice.

Kind regards

**MDA**

**NEIL DEVENISH Pr. Pln A/1133/1999**

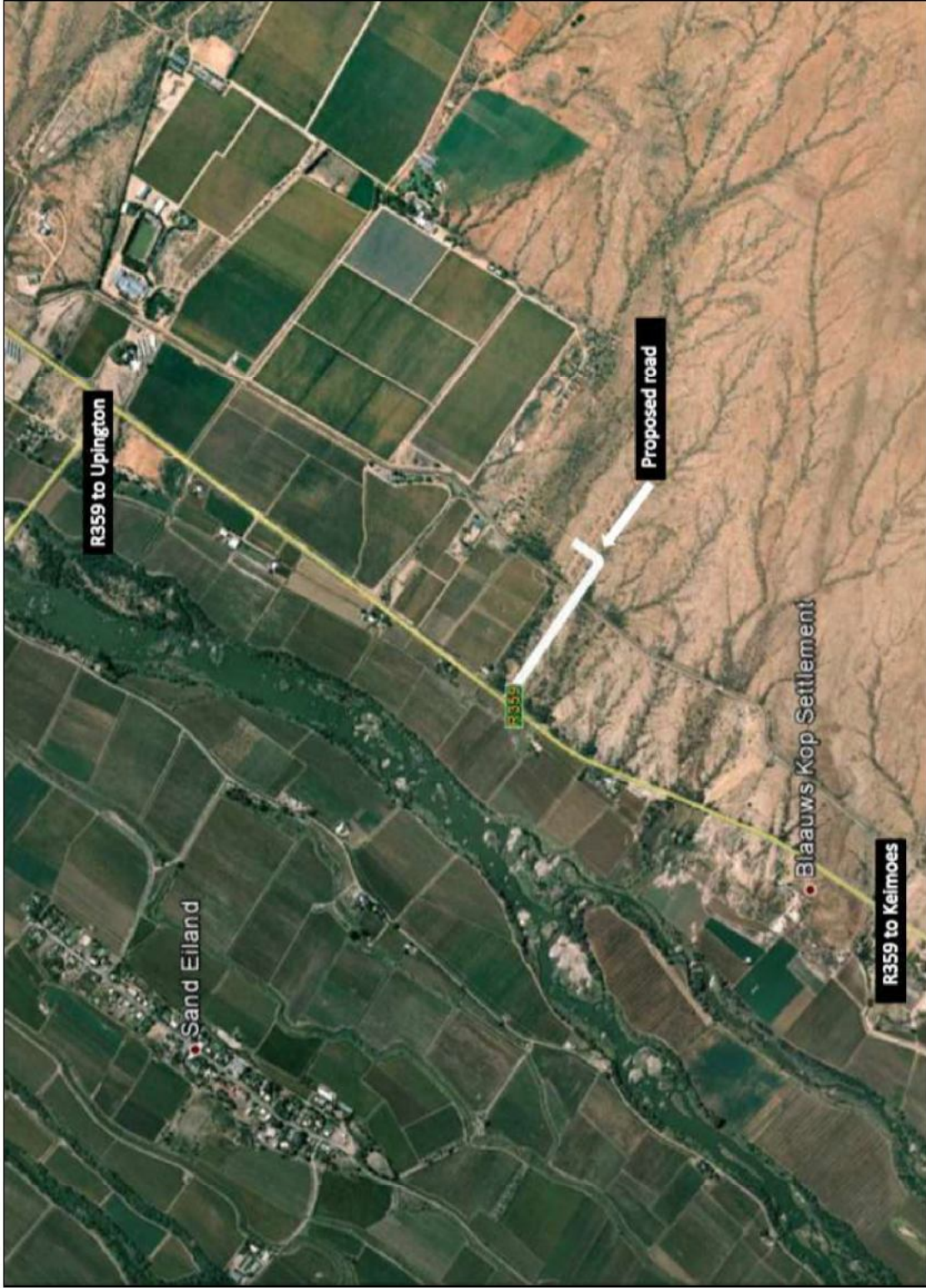
Manager: Town Planning/Environmental

**Managing Members:**

**H.F. Prinsloo**, Pr. Pln (A/765/1994), B.Sc., M.TR.P. (UFS)  
**N. Devenish**, Pr. Pln (A/1133/1999), B.A., M.TR.P. (UFS)

**Assisted by:**

**A.C. Rohrbeck**, Pr. Pln (A/153/2009), B.Soc.Sc., M.TR.P. (UFS)  
**M.H. du Plessis**, B.Sc. Geology, B.Sc. Hons. Geology (UFS)  
**H. Groenewald**, B.Sc. Zoology, B.Sc. Hons. Zoology, M.Sc. Zoology (UFS)



<b>LOCALITY PLAN</b>	
<p><b>TYPE OF PLAN:</b> Town &amp; Regional Planners, Environmental &amp; Development Consultants</p> <p><b>PROJECT:</b> PROPOSED CONSTRUCTION OF A ROAD AND ASSOCIATED INFRASTRUCTURE, BLAAUWSEKOP COMMUNITY AND R359</p> <p><b>PROJECT BY:</b> KAI IGARIEP MUNICIPALITY</p>	<p><b>SCALE:</b> 1:850 m</p> <p><b>REF. NO:</b> 40641</p> <p><b>DRAWN BY:</b> HG</p>



Proof of notification to:  
Ward Councilor:

Fax Send Report

06-AUG-2013 08:34 TUE

Fax Number :  
Name :

Name/Number : 0544316338  
Page : 2  
Start Time : 06-AUG-2013 08:32 TUE  
Elapsed Time : 01'26"  
Mode : STD BCM  
Results : [O.K.]



Town & Regional Planners,  
Environmental &  
Development Consultants

P O Box 20208  
Willows 5320  
Tel: +27 (51) 447 1583  
Fax: +27 (51) 448 9839  
e-mail: [admin@mdagroup.co.za](mailto:admin@mdagroup.co.za)  
9 Bernés Street, Wessdene  
BLOEMFONTEIN

Makacha Development Associates trading as MDA, CC 1995/030752/23, Member: SAPI, SACTRP

Our ref: 40641  
Contact person: Hanlie Groenewald  
2 August 2013

The ward councilor  
Kai !Garib Local Municipality  
Private Bag X6  
Kakamas  
8870  
Fax: 054 431 9388

**ATTENTION:** Councilor Lorinda Tities

**NOTIFICATION OF AN ENVIRONMENTAL IMPACT ASSESSMENT (BASIC ASSESSMENT)  
FOR THE PROPOSED ESTABLISHMENT OF A ROAD NEAR THE BLAAUWSEKOP  
COMMUNITY**

Notice is given in terms of Regulation 54(2)(b) of the Environmental Impact Assessment Regulations of 2010 No. R. 543 published in Government Notice No. 33306 of 18 June 2010 of the National Environmental Management Act (Act No. 107 of 1998) that an Application for Environmental Authorisation to the Department of Tourism, Environment and Conservation (Northern Cape) for the following:

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**Locality:** Portion 3 of the farm Blaauwsekop 36. The road will be constructed from the Blaauwsekop Community, towards the existing R359 road.  
(refer to map attached hereto)

**Project by:** Kai !Garib Municipality

If you have any information or comments regarding the environmental impact of the proposed development or need additional information regarding the proposed development, please submit your name, contact information and interest to Hanlie Groenewald at 051 447 1583 / [hanlie@mdagroup.co.za](mailto:hanlie@mdagroup.co.za), within 30 days of date of notice.

Kind regards

MDA

**NEIL DEVENISH Pr. Pin A/1133/1999**  
Manager: Town Planning/Environmental

**Managing Members:**  
H.F. Prinsloo, Pr. Pin (A/765/1994), B.Sc., M.TRP. (UFS)  
H. Devenish, Pr. Pin (A/1133/1999), B.A., M.TRP. (UFS)

**Assisted by:**  
A.C. Reirbeck, Pr. Pin (A/153/2009), B.Sc.Sc., M.TAP (UFS)  
M.H. du Plessis, B.Sc. Zoology, B.Sc. Hons. Zoology (UFS)  
H. Groenewald, B.Sc. Zoology, B.Sc. Hons. Zoology, M.Sc. Zoology (UFS)

Local Municipal Manager:

Fax Send Report

06-AUG-2013 08:38 TUE

Fax Number :  
Name :

Name/Number : 0544316338  
Page : 2  
Start Time : 06-AUG-2013 08:37 TUE  
Elapsed Time : 01'24"  
Mode : STD ECM  
Results : [O.K]



Town & Regional Planners,  
Environmental &  
Development Consultants

P O Box 20298  
WILLOW 5320  
Tel: +27 (51) 417 1583  
Fax: +27 (51) 448 9839  
e-mail: admin@mdagroup.co.za  
9 Barnes Street, Westdene  
BLOEMFONTEIN

Makekia Development Associates trading as MDA, CC 1995/030752/23, Member: SAPI, SACTRP

Our ref: 40641  
Contact person: Hanlie Groenewald  
6 August 2013

The Municipal Manager  
Kai !Garib Local Municipality  
Private Bag X6  
Kakamas  
8870  
Fax: 054 431 6338

**ATTENTION:** Mr Abraham Vosloo

**NOTIFICATION OF AN ENVIRONMENTAL IMPACT ASSESSMENT (BASIC ASSESSMENT)  
FOR THE PROPOSED ESTABLISHMENT OF A ROAD NEAR THE BLAAUWSEKOP  
COMMUNITY**

Notice is given in terms of Regulation 54(2)(b) of the Environmental Impact Assessment Regulations of 2010 No. R. 543 published in Government Notice No. 33306 of 18 June 2010 of the National Environmental Management Act (Act No. 107 of 1998) that an Application for Environmental Authorisation to the Department of Tourism, Environment and Conservation (Northern Cape) for the following:

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(refer to map attached hereto)

**Project by:** Kai !Garib Municipality

If you have any information or comments regarding the environmental impact of the proposed development or need additional information regarding the proposed development, please submit your name, contact information and interest to Hanlie Groenewald at 051 447 1583 / hanlie@mdagroup.co.za, within 30 days of date of notice.

Kind regards  
MDA

**NEIL DEVENISH Pr. Pln A/1133/1999**

**Managing Members:**  
N.P. Prinsloo, Pr. Pln (A/765/1994), B.Sc., M.TRP. (UFS)  
N. Devenish, Pr. Pln (A/1133/1999), B.A., M.TRP. (UFS)

**Assisted by:**  
A.C. Rohrbach, Pr. Pln (A/153/2009), B.Sc.Sc., M.TRP (UFS)  
M.H. du Plessis, B.Sc. Geology, B.Sc. Hon. Geology (UFS)  
H. Groenewald, B.Sc. Zoology, B.Sc. Hon. Zoology, M.Sc. Zoology (UFS)

Department of Agriculture:



A RD 854 525 343 ZA



1st RD 854 525 343 ZA



D RD 854 525 343 ZA



RECIPIENT NAME (please print clearly)

The Extension Officer  
Northern Cape Department of Agriculture, Lan  
P.O. Box 52  
Upington  
8300

ATTENTION: Mr Nico Toerien

REGISTERED LETTER  
(with a domestic insurance option)  
RD 854 525 343 ZA

REGISTERED LETTER  
(with a domestic insurance option)  
ShortCall 0800 111 802 www.spcpa.co.za  
RD 854 525 343 ZA

A BOOK COPY

CUSTOMER COPY 301028R



Department of Roads:

Fax Send Report

02-AUG-2013 15:29 FRI

Fax Number :  
Name :

Name/Number : 0538619626  
Page : 2  
Start Time : 02-AUG-2013 15:24 FRI  
Elapsed Time : 01' 26"  
Mode : STD ECM  
Results : [O.K.]



Town & Regional Planners,  
Environmental &  
Development Consultants

P O Box 20298  
Willows 9320  
Tel: +27 (51) 447 1583  
Fax: +27 (51) 448 9839  
e-mail: admin@mdagroup.co.za  
9 Barnes Street, Westdene  
BLOEMFONTEIN

Makecha Development Associates trading as MDA, CC 1996/030752/23, Member: SAPI, SACTRIP

Our ref: 40641  
Contact person: Hanlie Groenewald  
2 August 2013

Acting Director: Roads  
P.O. Box 3132  
Kimberley  
8301  
Fax: 053 861 9826

**ATTENTION:** I. Bulane

**NOTIFICATION OF AN ENVIRONMENTAL IMPACT ASSESSMENT (BASIC ASSESSMENT)  
FOR THE PROPOSED ESTABLISHMENT OF A ROAD NEAR THE BLAAUWSEKOP  
COMMUNITY**

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(refer to map attached hereto)

**Project by:** Kal IGarib Municipality

If you have any information or comments regarding the environmental impact of the proposed development or need additional information regarding the proposed development, please submit your name, contact information and interest to Hanlie Groenewald at 051 447 1583 / hanlie@mdagroup.co.za, within 30 days of date of notice.

Kind regards

MDA

**NEIL DEVENISH Pr. Pln A/1133/1999**  
Manager: Town Planning/Environmental

**Managing Members:**  
M.F. Prinsloo, Pr. Pln (A/765/1994), B.Sc., M.TR.P. (UFS)  
N. Devenish, Pr. Pln (A/1133/1999), B.A., M.TR.P. (UFS)

**Assisted by:**  
A.C. Redrueck, Pr. Pln (A/153/2009), B.Sc.Sc., M.TR.P. (UFS)  
M.H. du Plessis, B.Sc. Geology, B.Sc. Hons. Geology (UFS)  
H. Groenewald, B.Sc. Zoology, B.Sc. Hons. Zoology, M.Sc. Zoology (UFS)

District Municipality:

Fax Transmission Report

02-AUG-2013 15:20 FRI

Fax Number :  
Name :

No.	Name/Number	Start Time	Time	Mode	Page	Results
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Total Time : 00:30:44

## Agricultural Association:

### Hanlie Groenewald

---

**From:** Hanlie Groenewald <hanlie@mdagroup.co.za>  
**Sent:** 02 August 2013 03:37 PM  
**To:** 'andre@oberholzerfarms.co.za'  
**Subject:** Notification on the proposed construction of a road  
**Attachments:** Blaauwsekop.AgriculturalAssociation 2013.08.02.pdf

**Attention:** Blaauwsekop Agricultural Association

Find attached hereto a notification of an environmental impact assessment (basic assessment) for the proposed establishment of a road near the Blaauwsekop Community.

Please do not hesitate to contact me should you require additional information on the said project.

Kind regards,

**Hanlie Groenewald**  
Environmental Assessment Practitioner  
for MDA  
Tel.: +27 51 447 1583  
Fax.: +27 51 448 9839  
9 Barnes Street, Westdene, Bloemfontein, 9301  
PO Box 20298  
Willows, 9320



### Hanlie Groenewald

---

**From:** Mail Delivery Subsystem <MAILER-DAEMON@ns.netcons.co.za>  
**Sent:** 02 August 2013 03:39 PM  
**To:** hanlie@mdagroup.co.za  
**Subject:** Return receipt  
**Attachments:** details.txt; Untitled attachment 00098.txt

The original message was received at Fri, 2 Aug 2013 15:38:28 +0200 from mda01.vpn.local [172.16.1.130]

----- The following addresses had successful delivery notifications ----- <[andre@oberholzerfarms.co.za](mailto:andre@oberholzerfarms.co.za)> (relayed to non-DSN-aware mailer)

----- Transcript of session follows ----- <[andre@oberholzerfarms.co.za](mailto:andre@oberholzerfarms.co.za)>... relayed; expect no further notifications

Irrigation Board:

---

**Hanlie Groenewald**

**From:** Hanlie Groenewald <hanlie@mdagroup.co.za>  
**Sent:** 02 August 2013 03:35 PM  
**To:** 'kanoneiland@vodamail.co.za'  
**Subject:** Notification on the proposed construction of a road  
**Attachments:** Blaauwsekop.Irrigation 2013.08.02.pdf

**Importance:** High

**Attention:** Blaauwsekop Irrigation Board

Find attached hereto a notification of an environmental impact assessment (basic assessment) for the proposed establishment of a road near the Blaauwsekop Community.

Please do not hesitate to contact me should you require additional information on the said project.

Kind regards,

**Hanlie Groenewald**  
Environmental Assessment Practitioner  
for MDA  
Tel.: +27 51 447 1583  
Fax.: +27 51 448 9839  
9 Barnes Street, Westdene, Bloemfontein, 9301  
PO Box 20298  
Willows, 9320



Town & Regional Planners,  
Environmental &  
Development Consultants

---

**Hanlie Groenewald**

**From:** Mail Delivery System <MAILER-DAEMON@vodamail.co.za>  
**Sent:** 02 August 2013 03:39 PM  
**To:** hanlie@mdagroup.co.za  
**Subject:** Successful Mail Delivery Report  
**Attachments:** details.txt; Message Headers.txt

This is the mail system at host mx1.vodamail.co.za.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<[kanoneiland@vodamail.co.za](mailto:kanoneiland@vodamail.co.za)>: alias expanded

**SAHRA:**

An on-line application was lodged on 9 October 2013.  
Proof thereof will be made available in the Final BAR.

# Appendix E<sub>3</sub>

List of registered parties

No parties registered to date.

However, comments were received from the following parties:

- The Department of Roads and Public Works
- Blaauwskop Irrigation Board

Refer to Appendix E<sub>4</sub> for a copy of the comments received.

Please note that any further comments received will be included in the Final BAR.

## Appendix E<sub>4</sub>

List of comments received





**the dr&pw**

Department:  
Roads & Public Works  
**NORTHERN CAPE PROVINCE**  
REPUBLIC OF SOUTH AFRICA

**DIRECTOR: ROADS**  
P.O. Box 3132, KIMBERLEY, 8301  
45 Schmidtsdriif Road  
KIMBERLEY, 8301  
Tel : 053 861 9600  
Fax : 053 861 9626

**ENQUIRIES: Rabele Matsoso**

**REFERENCE: L2.1.2.8.1- MR857**

**DATE: 20 September 2012**

**The Stabilis Development (Pty)Ltd**  
**P.O. Box 861**  
**Kimberley**  
**8300**

**Attention: Mr. CJ Botha**

**RE: PROPOSED ACCESS TO BLAAUWSKOP SETTLEMENT**

Your letter dated 07 May 2012 refers;

The Department does not have any objections towards the proposed access road to the Blaauwskop settlement. The approval is hereby granted for the **intersection of proposed access** with Main Road 857.

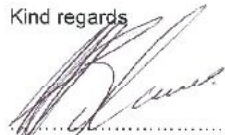
The following conditions will apply:

1. The applicant agrees to indemnify the Department against any claim due to the construction or existence of the facility.
2. The applicant will submit the intersection design drawing for Department's approval.
3. The applicant will submit the as-built drawings on completion of the project.
4. The existing vertical alignment of the MR857 will not be affected.
5. The requirements of other authorities are met.
6. The applicant will liaise with any affected stakeholders and service provider.
7. All construction risks lie with the applicant.
8. The applicant will be liable for the maintenance of the access after construction. This will be for the lifespan of the access since the access road will not be transferred to the Department.
9. The applicant will inform the Departmental Regional Engineer of the planned commencement of the project at least fourteen (14) days in advance.

10. The Regional Engineer will together with the applicant, inspect the project at the end of construction.
11. The Regional Engineer or his representative has the right to visit the site at any time during construction and has the right to stop any work that does not comply with this approval.
12. The applicant will repair the damages to the existing road due to the existence of the access.

I hope you will find the above to be in order.

Kind regards



**Bulane**  
Acting Director: Roads

**From:** Kanoneiland [<mailto:kanoneiland@vodamail.co.za>]  
**Sent:** 19 June 2013 10:22 AM  
**To:** Patrick Wells  
**Subject:** pad informele nedersetting

Blaauwsekopbesproeiingsraad  
Posbus 21  
Kanoneiland  
8806  
tel en faks 054 4911201  
epus: [kanoneiland@vodamail.co.za](mailto:kanoneiland@vodamail.co.za)

19 Junie 2013

mmr. P. Wells  
Siyanda Distriksmunisipaliteit  
Kcimoos

I/s pad na informele nedersetting:

Hiermee gee bogenoemde raad toestemming vir die bou van 'n pad na informele nedersetting te Blaauwsekop soos bespreek met raadslede en uitgewys tydens 'n vergadering op die terrein op 19 Junie 2013.

1

Dankie

Sekretaresse

Information from ESET NOD32 Antivirus, version of virus signature database 8464 (20130618)

The message was checked by ESET NOD32 Antivirus.

<http://www.eset.com>

# Appendix E<sub>5</sub>

Proof of response to comments received

The client was informed of the comments received.

# Appendix F

Environmental management programme (EMPr)

---

# ENVIRONMENTAL MANAGEMENT PROGRAMME

---

## THE PROPOSED CONSTRUCTION OF A ROAD AND ASSOCIATED INFRASTRUCTURE TO LINK BLAAUWSKOP COMMUNITY WITH THE EXISTING R359 ROAD

**Applicant:** Kai !Garip Local Municipality  
**MDA Ref No:** 40641  
**Date:** October 2013



Town & Regional Planners,  
Environmental & Development  
Consultants

Physical Address: 9 Barnes Street,  
Westdene, Bloemfontein, 9301  
Postal Address: PO Box 20298,  
Willows, 9320  
Tel: 051 4471583, Fax: 051 4489839  
E-mail: [admin@mdagroup.co.za](mailto:admin@mdagroup.co.za)

---

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## 1. INTRODUCTION

### 1.1. Proposed project and associated construction activities

The proposed project will consist of the construction of a road and associated infrastructure to link Blaauwskop Community with the existing R359 road.

The scope of works for the proposed project will include:

- Clearance of vegetation within the proposed construction area.
- The construction of a road that is 7m wide, with a road reserve of 33m.
- The construction of a bridge over a man-made water channel that forms part of an irrigation scheme of the area.
- Implementation of storm water management measures, where necessary.

The site, as referred to in this Environmental Management Programme (EMPr), pertains to Portion 3 of the Farm Blaauwskop 36, Kenhardt RD.

### 1.2. Objectives of the EMPr

The EMPr aims to fulfill the requirements as specified in Section 33 of Regulations No. R. 543 (18 June 2010) in terms of the National Environmental Management Act (Act 107 of 1998), with the following objectives:

- To identify, predict and evaluate actual and potential impacts on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits and promoting compliance with the principles of environmental management;
- To identify and employ the modes of environmental management best suited to ensuring that the activity is pursued in accordance with best environmental management practices;
- To be able to respond to unforeseen events;

- To provide feedback on compliance.

### 1.3. Implementation of the EMPr

The project applicant, namely Kai !Garib Local Municipality, is responsible for the implementation of the EMPr. All construction contractors and operation phase facility managers / supervisors should be supplied with a copy of the EMPr and should ensure that construction staff adheres to the mitigation measures.

## 2. PREPARATION OF THE EMPr

### 2.1. Person(s) who prepared the EMPr

- Mr. Neil Devenish
- Me. Hanlie Groenewald

MDA  
P.O. Box 20298  
Willows  
Bloemfontein  
9320  
Tel: 051 4471583  
Fax: 051 4489839

### 2.2. Expertise of the person(s) who prepared the EMPr

- Mr. Neil Devenish

Key qualifications:

- Key competencies and experience include development control applications (applications and appeals pertaining to rezoning, consolidations, subdivisions etc.) township establishment applications, environmental management and control applications.

Education:

- B. A. (Sociology, Geography) University of the Free State, SA, 1994
- Master of Town and Regional Planning, University of the Free State, SA, 1996

- Managing the Environmental Impact Assessment Process, Environmental Management Unit, PU for CHE, 2000
- Environmental Management Consulting, South African Institute of Ecologists & Environmental Scientists, 2001
- Water Law of South Africa, The South African Institution of Civil Engineers (SAICE), 2006

ii. Me. Hanlie Groenewald

Key qualifications:

- Key competencies and experience include environmental management and research in zoology.

Education:

- B.Sc. (Zoology), University of the Free State, South Africa, 2005
- B.Sc. Honnours (Zoology), University of the Free State, South Africa, 2006
- M.Sc. (Zoology), University of the Free State, South Africa, 2012

### **3. RECOMMENDED MANAGEMENT AND MITIGATION MEASURES DURING THE PLANNING PHASE / SITE PREPARATION**

- i. A dedicated person will be appointed to ensure compliance with the approved EMPr, Environmental Authorisation (EA) and best practices on site.
- ii. The contractor will ensure that the environment within the site area is protected.
- iii. Controlled access will be implemented to ensure that no unlawful entry to site is obtained and will prevent degradation of the environment in the nearby vicinity.

### **4. RECOMMENDED MANAGEMENT AND MITIGATION MEASURES DURING THE CONSTRUCTION PHASE**

#### **4.1. General**

- i. The EMPr and EA will be available on site during the construction phase.

- ii. The applicant will ensure that the contractor complies with the conditions stipulated in the EMPr and EA, as well as best practices.
- iii. The applicant will be held responsible for all environmental issues on site during construction.
- iv. Any factors that contribute to negative environmental impacts will be corrected as soon as possible.
- v. A compliant -, environmental incident - and safety incident reports will be available on site, during the construction phase.
- vi. Clean water will be made available daily to workers on site.
- vii. Drainage of water on the site, as well as the water outlet drain to bordering areas, will be properly designed according to the nature of the site so that the existing flow pattern is not disturbed but copied.
- viii. No additional activities will be undertaken without the investigation of the potential necessity to perform an EIA in terms with the NEMA Regulations of 2010.

#### **4.2. Layout plan**

- i. A copy of the layout plan will be available on site during the construction phase.

#### **4.3. Demarcation of development area**

- ii. All activities related to the proposed construction of the said road will be limited to the area as per layout plan.
- iii. The construction site will be fenced off to ensure that no activities take place in areas not indicated on the layout plan.

#### **4.4. Monitoring system to detect any leakage or spillages of hazardous material**

- i. All chemicals used during the development, including fuel for the construction vehicles, will be stored in a proper store room or protected area to prevent pollution.

- ii. Bund walls will have a capacity of at least 110% of the total capacity of the stored volume.
- iii. Drip trays will be used during the transfer of any substances from transportation vehicles.
- iv. No oil, diesel or other chemicals may be spilled or discharged anywhere.
- v. The contractors must ensure that all relevant national, regional and local legislation regarding storage, transport, use and disposal of petroleum, chemical, harmful or hazardous substances and materials are adhered to, where necessary.
- vi. Cement and concrete mixing should only take place within the construction site. No concrete may be mixed directly on the ground.
- vii. All environmental problems occurring on the site such as chemical spillage, wasteful water disposal, etc. should be reported to the Applicant or Environmental Consultant.
- viii. Suitable covered receptacles will be available at all times and conveniently placed for the disposal of hazardous waste (if any).
- ix. Visual inspections will be undertaken regularly by the ECO to ensure that all leakages / spillages are cleaned up and the place of spillage / leakage will be rehabilitated as soon as possible.
- x. No major services may be undertaken on site. In the event of small repair and services on machines on site, drip trays will be used to prevent spillage.
- xi. Spills of any product (such as paint, oil, cleaning agents, etc.) will be cleaned up immediately by removing the spillage together with the polluted soil and by disposing it at a recognized facility.
- xii. All used oils, grease, hydraulic fluids, etc. that cannot be re-used shall be placed in a hazardous waste container to be disposed of at a recognized facility.

#### **4.5. Waste management, including toilet facilities and waste water**

- i. Waste streams will be identified and will be separated (e.g. general waste, hazardous waste, recyclable waste, etc.) and a sufficient number of suitable receptacles will be placed at the construction site.
- ii. The contractor will be responsible for the removal of construction waste.
- iii. All general solid waste produced will be disposed of at an authorized landfill site.
- iv. Recyclable waste will be sold or re-used, where possible.
- v. No burning or burying of waste may take place on site.
- vi. Proper sanitation, water and waste facilities will be in place for construction workers.
- vii. Chemical toilet facilities will be provided on site during the construction phase.
- viii. Toilet facilities must be implemented in such a way that they do not cause water or other pollution. Disposal of untreated effluent in the environment will be prohibited.
- ix. Chemical toilets will be cleaned regularly and proof thereof will be available on site.

#### **4.6. Soil management**

- i. Topsoil will be removed from all areas where physical disturbance of the surface will occur.
- ii. Topsoil will be kept separate and not be utilized for any construction activities.
- iii. Topsoil will be re-used during the rehabilitation of disturbed road reserve areas as soon as possible.
- iv. Removed topsoil is to be stockpiled in an area where it will not be disturbed by vehicles. One layer of bricks or stones is to be placed around the stockpiled topsoil to protect topsoil from

washing away during rainstorms. Re-spreading is to be done preferably to a maximum of 100 mm.

#### **4.7. Erosion and storm water management plan**

- i. Erosion management is important. Rehabilitation of disturbed areas is important to help the recovery of the vegetation. Any barren soil patches will be ripped and seeded with a seed mixture of the natural occurring vegetation of the specific region or landscaped, should the natural vegetation growth not return to normal at a given time.
- ii. Soil erosion occurrences should be attended to immediately.
- iii. Access roads, if any will be maintained so that no erosion will occur.
- iv. Erosion berms should be designed so that the intervals between them ensure maximum soil retention during heavy rains.
- v. Drainage of water on the site will be properly designed according to the nature of the site so that the existing flow pattern is not disturbed but rather copied.
- vi. Areas prone to damming and problematic storm water flow areas will be addressed by the implementation of appropriate storm water control measures.
- vii. Stockpile areas will be kept leveled to ensure free-drainage as this will prevent ponding of surface water and limit erosion.
- viii. Stockpile areas will not be situated within natural drainage systems or areas prone to erosion.
- ix. Where culverts are constructed, it will be adequate to allow for sufficient water flow and will not slow water flow.
- x. The direction of the culvert placement will correspond to the direction of natural water runoff.
- xi. Culverts and / or drifts will be fitted with retention basins in order to prevent erosion, where required.
- xii. Where erosion is found to be problematic geotextiles such as gabions must be used to prevent this.

#### **4.8. Protection of animal life**

- i. No animals will be hunted or hurt during the construction phase.
- ii. Animals that live within the construction site will be removed and translocated to areas where the animals will not be disturbed, where possible.

#### **4.9. Establishment of access roads on the site and maintenance of access roads**

- i. In the case of dual or multiple uses of access roads, arrangements for multiple responsibilities must be made with the other users.
- ii. If not, the maintenance of the access roads will be the responsibility of the applicant.

#### **4.10. Dust control**

- i. The formation of dust will be controlled if it becomes problematic by the use of water spraying and / or other dust-allying agents.
- ii. The speed of vehicles making use of the access road and / or construction site will be limited to 35 km/h to avoid dangerous conditions, the formation of dust and the excessive deterioration of the roads being used.

#### **4.11. Noise control**

- i. Noise will be associated with the proposed project during the construction phase.
- ii. Construction activities will be limited to normal daytime hours.

#### **4.12. Traffic management plan**

- i. The public will make use of the existing access road to gain access to Blaauwskop Community.

#### **4.13. Safety and security**

- i. The site will be fenced for security as well as biosecurity purposes.



- ii. Controlled access will be implemented to ensure that no unlawful entry to site is obtained and will prevent degradation of the environment in the nearby vicinity.
- iii. The contractors must comply with the Occupational Health and Safety Act, National Building Regulations and any other national, regional or local regulations with regard to safety on site. Construction contracts must include safety and security measures for staff.
- iv. If activities that can cause a fire are carried out, fire extinguishers will be available on site and in the construction camp.

#### **4.14. Open space management plan**

- i. No waste will be dumped into the road reserve or adjacent property.
- ii. Visual inspections for possible erosion will be undertaken on a regular basis.
- iii. No construction activities will be undertaken outside the demarcated construction area or as per the design layout plan.

#### **4.15. Plant rescue and protection plan**

- i. Natural vegetation will not be disturbed unnecessarily.
- ii. The appointed ECO will survey the site prior to any construction activities for the presence of any protected bulb species.
- iii. Protected bulb species will be transplanted to a suitable area where no disturbance will occur.
- iv. No open fires will be allowed on site. If fires are lit, provision will be made that no accidental fires are started.
- v. No firewood will be collected on site or in surrounding areas.
- vi. The establishment of alien vegetation will be monitored and areas with extensive growth of alienated species will be cleared thereof.

- vii. Heavy vehicles will use the same routes / roads on the site throughout the construction period, in order to prevent any unnecessary damage to surrounding vegetation.

#### **4.16. Re-vegetation and habitat rehabilitation plan**

- i. All activities will be undertaken within an area approved by the ECO, within the area indicated in the BAR and EA.
- ii. Topsoil will be stockpiled separately with the natural seed bank intact.
- iii. The topsoil will be protected against weed infestation and erosion.
- iv. Topsoil will be used for the rehabilitation of the disturbed areas in the road reserve as soon as possible.
- v. After cessation of the activities, the disturbed areas in the road reserve will be rehabilitated to acceptable standards.
- vi. Compacted areas in the road reserve will be ripped before covered with topsoil.
- vii. Hydro-seeding will be investigated for the rehabilitation of the road reserve if the natural establishment of vegetation does not occur within a reasonable time period.

#### **4.17. Alien invasive management plan**

- i. The road reserve will be inspected regularly for the presence of invader weed species.
- ii. Areas with extensive growth of alien species will be cleared thereof by hand or by prescribed chemicals, prior to seeding thereof.
- iii. Topsoil stockpile areas will be monitored for excessive growth of alien species.

#### **4.18. Protection of environmental sensitive areas from construction impacts**

- i. Environmental sensitive areas will be identified by the ECO.

- ii. Proper mitigation measures to protect the identified areas from construction activities will be implemented and monitored by the ECO.

#### **4.19. Site clean-up and rehabilitation of construction activities**

- i. Temporary structures and office sites shall be dismantled and removed after completion of the construction phase of the project.
- ii. All waste, equipment, materials, etc. used during construction must be cleared from the site. The contractors must ensure that the site is cleared and rehabilitated to the satisfaction of the Applicant.

### **5. RECOMMENDED MANAGEMENT AND MITIGATION MEASURES DURING THE OPERATIONAL PHASE**

- i. Maintain the proposed road and associated infrastructure in good working order.
- ii. The occurrence of alien vegetative growth will be monitored.
- iii. Soil erosion occurrences will be attended to immediately.
- iv. Any factors that contribute to negative environmental impacts will be rectified as soon as possible.

### **6. RECOMMENDED MANAGEMENT AND MITIGATION MEASURES DURING THE DECOMMISSIONING / CLOSURE PHASE**

- i. It is not anticipated that the proposed project will cease in the nearby future. However, if decommissioning is decided upon, a rehabilitation plan will be developed and will amongst other, include the following:
  - The demolishing of infrastructure and the rehabilitation of the site.
  - The removal of construction rubble and other solid waste.
  - No structures (mobile or otherwise) will be left behind, unless indicated in the rehabilitation plan.
  - The area will be ripped and levelled by using topsoil.
  - Seeding with natural occurring vegetation will take place if the tempo of natural re-vegetation is insufficient.
  - The end-use of the area will be kept in mind during the compilation of the rehabilitation plan.

- ii. However, activities that will be associated with the decommissioning of the proposed project, will be limited to the rehabilitation of areas disturbed during the construction of the said road.
- iii. The applicant will:
  - Ensure that proper mitigation measures are implemented to protect the environment against long term negative environmental impacts.
  - The environment is cleaned up of any contaminants.
  - Ensure that erosion is prevented through regular monitoring and the implementation of rehabilitation measures at degraded areas.
  - Prevent alien plant species to spread in the area.
  - Minimise the negative visual impacts associated with the road.

## **7. COMPLIANCE AND MONITORING**

- i. The contractors will be responsible for ensuring EMPr compliance during the construction phase.
- ii. The Applicant will ensure that the contractors adhere to the recommendations of the EMPr, EA and best practices during construction.
- iii. Regular monitoring and / or spot inspections at least every fortnight during the construction phase is recommended.
- iv. Inspections will be documented and any shortcomings addressed immediately.
- v. Visual inspections on erosion and physical pollution shall be carried out on a regular basis.

## **8. REPORTING**

- i. Any changes of the layout plan or technology will be submitted to the relevant environmental department for attention.
- ii. Reports confirming compliance with various points identified in the EMPr will be kept and made available when requested.
- iii. Any emergency or unforeseen impact will be reported to the relevant environmental department within 24 hours after identification for telephonic approval and will be confirmed in writing.

# Appendix G

Additional information

# Appendix G<sub>1</sub>

Copy of Application form (including EAP Declaration)



**APPLICATION FORM FOR AUTHORIZATION**  
in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998),  
as amended and the Environmental Impact Assessment Regulations, 2010

File Reference Number:  
NEAS Reference Number:  
Date Received:

(For official use only)


Kindly note that:

1. This application form is current as of 02 August 2010.
2. The application must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. It is in the form of a table that can expand itself as each space is filled with typing.
3. Where applicable black out the boxes that are not applicable in the form.
4. Incomplete applications may be returned to the applicant for revision.
5. The use of "not applicable" in the form must be done with circumspection as if it is used in respect of material information that is required by the competent authority for assessing the application, and may result in the rejection of the application as provided for in the regulations.
6. This application must be handed in at the offices of the Northern Cape Department of Environment and Nature Conservation.
7. No faxed or e-mailed applications will be accepted.
8. The application must be completed by an independent environmental practitioner.
9. Unless protected by law, all information filled in on this application will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this application on request, during any stage of the application process.

**SITE IDENTIFICATION AND LINKAGE**

Please indicate all the Surveyor-General 21 digit site (erf/farm/portion) reference numbers for all sites (including portions of sites) that are part of the application.

C	0	3	6	0	0	0	0	0	0	0	0	0	0	3	6	0	0	0	0	3

If there are more than 10, please attach a list with the rest of the number  
(These numbers will be used to link various different applications, authorisations, permits etc. that may be connected to a specific site)

## 1. BACKGROUND INFORMATION

Project applicant:	<i>Kai !Garib Local Municipality</i>		
Trading name (if any):			
Business reg. no./ID. no.:			
Contact person:	<i>Mr Abraham Vosloo</i>		
Physical address:	<i>11 Avenue, Kakamas</i>		
Postal address:	<i>Private Bag X6, Kakamas</i>		
Postal code:	<i>8870</i>	Cell:	
Telephone:	<i>054 431 6328</i>	Fax:	<i>054 431 6338</i>
E-mail:			

Project consultant/firm:			
Business reg. no./ID. no.:			
Contact person:			
Postal address:			
Postal code:		Cell:	
Telephone:		Fax:	
E-mail:			
Qualifications:			

Landowner:	<i>Blaauwskop Irrigation Board</i>		
Business reg. no./ID. no.:			
Contact person:			
Postal address:	<i>P.O. Box 21, Kanoneiland</i>		
Postal code:	<i>8806</i>	Cell:	
Telephone:	<i>054 491 1201</i>	Fax:	<i>054 491 1201</i>
E-mail:			

In instances where there is more than one landowner, please attach a list of landowners with their contact details to this application.

District Municipality	<i>Siyanda District Municipality</i>		
Local authority in whose jurisdiction the proposed activity will fall:	<i>Kai !Garib Local Municipality</i>		
Contact person:	<i>Mr Abraham Vosloo</i>		
Postal address:	<i>Private Bag X6, Kakamas</i>		
Postal code:	<i>8870</i>	Cell:	
Telephone:	<i>054 431 6328</i>	Fax:	<i>054 463 6401</i>
E-mail:			

Please note that a complete list of all organs or state and or any other applicable authority with their contact details must be appended to this application.

Project title:	<i>The proposed construction of a road and associated infrastructure to link Blaauwskop Community with the existing R359 road.</i>
----------------	--

Brief project description	<i>The proposed tar road will be constructed from the Blaauwskop Community, towards the existing R359 road.</i>
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**Project Location:** *Portion 3 of the farm Blaauwskop 36. Please refer to map attached hereto for more information on the locality.*  
(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

**Closest Town(s) or district(s):**

<i>Sand Eiland</i>	Distance (in km):	
<i>Rooi Rand</i>	<i>1.5 km</i>	
<i>Uppington</i>	<i>3 km</i>	
	<i>26 km</i>	

**Physical address:** *Portion 3 of the farm Blaauwskop 36*  
In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

**Current land-use zoning:** *Agriculture*  
In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

**Coordinates:**

Latitude:	<i>28°</i>	<i>39'</i>	<i>50.97"</i>	South
Longitude:	<i>21°</i>	<i>05'</i>	<i>57.05"</i>	East

**Property size:**

Is a change of land-use or a consent use application required?  NO

Must a building plan be submitted to the local authority?  NO

**Locality map:** A locality map must be attached to back of this document, as Appendix A. The scale of the locality map must be at least 1:50 000. The scale must be indicated on the map. The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow.

**2. ACTIVITIES APPLIED FOR**

An application may be made for more than one listed or specified activity that, together, make up one development proposal. All the listed activities that make up this application must be listed.

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity:
<i>R544</i>	<i>22</i>	<i>The construction of a road, outside urban areas, (i) with a reserve wider than 13.5 m, (ii) where no reserve exists where the road is wider than 8 m or (iii) for which an environmental authorisation was obtained for the route determination in terms of Activity 5 in Government Notice 387 of 2006 or Activity 18 in Notice 545 of 2010.</i>

Please note that any authorisation that may result out of this application will only cover activities applied for. Omissions may render any authorisation that is based on incomplete information to be nil and void.

### 3. OTHER AUTHORISATION REQUIRED

3.1 Do you need any Authorisation in terms of any of the following laws?

3.1.1	National Environmental Management Act: Waste Act	<input type="checkbox"/>	No
3.1.2	National Environmental Management Act : Air Quality Act	<input type="checkbox"/>	No
3.1.3	National Environmental Management Act : Protected Areas	<input type="checkbox"/>	No
3.1.4	National Environmental Management Act : Biodiversity Act	<input type="checkbox"/>	No
3.1.5	Mineral Petroleum Development Resources Act	<input type="checkbox"/>	No
3.1.6	National Water Act	<input type="checkbox"/>	No
3.1.7	National Heritage Resource Act	<input type="checkbox"/>	No
3.1.8	Other ( Please Specify )	<input type="checkbox"/>	No

3.2 Have such applications been lodged already?

No

### 4. TYPE OF APPLICATION

4.1. Application for Basic Assessment (BA)

Is this an application for conducting a basic assessment (as defined in the regulations)?

YES  NO

If, YES, is a basic assessment report attached?

YES  NO

If, NO, please indicate when the basic assessment report will be submitted:

*This application form is submitted to the NC DENC prior to the compilation of the BAR. The public participation process (PPP) is currently undertaken. As the input from the I&AP'S are highly valued and will therefore be included in the BAR. The BAR will only be submitted to the DENC upon completion of the PPP.*

4.2. Application for Scoping and Environmental Impact Assessment (EIA)

Is this an application for Scoping and EIA (as defined in the regulations)?

YES  NO

If, YES, is a Scoping Report and Plan of Study for EIA attached?

YES  NO

If, NO, please indicate when the Scoping Report and Plan of Study for EIA will be submitted:

The scoping report and/or the plan of study for EIA will be submitted after consultation with the competent authority:

YES  NO

A consultation with the competent authority is hereby requested:

YES  NO

## 5. Declarations

### 5.1 The Applicant

I, ANDREW JAWELLS declare that I -

- am, or represent<sup>1</sup>, the applicant in this application;
- have appointed / will appoint (delete that which is not applicable) an environmental assessment practitioner to act as the independent environmental assessment practitioner for this application / will obtain exemption from the requirement to obtain an environmental assessment practitioner<sup>2</sup>;
- will provide the environmental assessment practitioner and the competent authority with access to all information at my disposal that is relevant to the application;
- will be responsible for the costs incurred in complying with the Environmental Impact Assessment Regulations, 2010, including but not limited to -
  - costs incurred in connection with the appointment of the environmental assessment practitioner or any person contracted by the environmental assessment practitioner;
  - costs incurred in respect of the undertaking of any process required in terms of the Regulations;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the Regulations;
  - costs in respect of specialist reviews, if the competent authority decides to recover costs; and
  - the provision of security to ensure compliance with conditions attached to an environmental authorisation, should it be required by the competent authority;
- will ensure that the environmental assessment practitioner is competent to comply with the requirements of these Regulations and will take reasonable steps to verify whether the EAP complies with the Regulations;
- will inform all registered interested and affected parties of any suspension of the application as well as of any decisions taken by the competent authority in this regard;
- am responsible for complying with the conditions of any environmental authorisation issued by the competent authority;
- hereby indemnify the Government of the Republic, the competent authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action which the applicant or environmental assessment practitioner is responsible for in terms of these Regulations;
- will not hold the competent authority responsible for any costs that may be incurred by the applicant in proceeding with an activity prior to obtaining an environmental authorisation or prior to an appeal being decided in terms of these Regulations;
- will perform all other obligations as expected from an applicant in terms of the Regulations;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act.

  
Signature of the applicant / ~~Signature on behalf of the applicant~~

Name of company (if applicable):

Date

<sup>1</sup> If this is signed on behalf of the applicant, proof of such authority from the applicant must be attached.

<sup>2</sup> If exemption is obtained from appointing an EAP, the responsibilities of an EAP will automatically apply to the person conducting the environmental impact assessment in terms of the Regulations.

<sup>3</sup> If the applicant is a juristic person, a signature on behalf of the applicant is required as well as proof of such authority.

Signature of the Commissioner of Oaths: [Signature]

Date: 8/8/13

Designation: Kennes Klerk Vld Hof

Official stamp (below):

KLERK VAN DIE HOF
PVT. BAG / PRIVAATBAG X2
08 AUG 2013
STENOGR. 0660
C. K. THE COURT

5.2 The Environmental Assessment Practitioner

I, \_\_\_\_\_, declare that –

- I act as the independent environmental practitioner in this application
- I act independently
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 9 of the regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;

Signature of the environmental assessment practitioner: [Signature]

Name of company: MOA

Date: 29 August 2013