

ENVIRONMENTAL IMPACT ASSESSMENT (Planning and design phase)					
ALTERNATIVE 2: Single land use: Housing only					
Environmental Attribute	Potential impacts and risks	Assessment criteria	Assessment rating (With mitigation)	Proposed mitigation	Assessment rating (Without mitigation)
		Reversibility	High	Ensure that open trenches are demarcated as required by the Occupational Health and Safety Act.	High
		Risk	Low		Medium
Indirect impacts:					
Geographical Physical Social Economic	Plan to control dust generation from the proposed project which could impact on the surrounding area.	Duration	Short term	Spray water on open surfaces to ensure that dust does not cause air pollution during construction. Start the rehabilitation of disturbed surfaces as soon as possible	Short term
		Extent	Local		Local
		Magnitude (Intensity)	Low		Low
		Probability	Probable		Probable
		Significance	Medium		Medium
		Reversibility	High		High
	Risk	Low	Medium		
	Plan and compile method statements to implement measures for the prevention and or handling of spills of lubricants / oils that can take place on bare soil.	Extent	Local	Prevent spills of lubricants/oils that can take place on bare soil. This will include the use of drip trays for vehicles that are standing for more than 24 hours. Ensure that all construction vehicles are in good working order and not leaking oil and or fuel. No vehicles may be serviced on site.	Local
		Magnitude (Intensity)	Low		Low
		Probability	Probable		Probable
		Significance	Medium		Medium
		Reversibility	High		High
		Risk	Low		Medium
	Plan to provide method statements on the handling of waste materials such as glass, plastic, metal or paper which may present a possible pollution hazard	Extent	Local	Implement the management plan to ensure that: All construction rubble is disposed of in a safe and environmentally acceptable manner. NO concrete, gravel or other rubbish will be allowed to remain on site after the construction phase. All cement is housed as to prevent spills (due to rain and or handling errors). NO glass, plastic, metal, or paper shall be allowed to pollute the area.	Local
		Magnitude (Intensity)	Low		Low
		Probability	Probable		Probable
		Significance	Medium		Medium
		Reversibility	High		High
		Risk	Low		Medium
	Plan to ensure all involved is aware of the possible social and environmental problems that may be experienced as a result of non- compliance to the relevant legislation.	Extent	Local	Ensure that contractors (construction phase) abide by all the requirements of the Occupational Health and Safety Act. Ensure that all contractors are aware of the consequences of non-compliance to the relevant legislation regarding the above-mentioned act as well as with regard to the environment (acts, regulations, and special guidelines).	Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Probable		Probable
		Significance	Medium		Medium
		Reversibility	High		High
Risk		Low	Medium		
Plan to create new employment opportunities. Plan to use local labour to ensure local skills development will take place.	Extent	Local	No mitigation measures needed apart from the fact that contractors will have to ensure that they abide to the requirements of the Occupational Health and Safety Act and the Employment Equity Act.	Local	
	Magnitude (Intensity)	Medium		Medium	
	Probability	Definite		Definite	
	Significance	Medium		Medium	
	Reversibility	Medium		Medium	
	Risk	Low		Medium	
Cumulative impacts:					
Geographical Physical Social Economic	Plan the development to ensure the social well-being of the community for which the development is intended	Extent	Local	Ensure that the development is constructed as planned.	Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite	The demand for housing will be partially addressed in the area.	Definite
		Significance	Medium		Medium
		Reversibility	Medium		Medium

ENVIRONMENTAL IMPACT ASSESSMENT (Planning and design phase)					
ALTERNATIVE 2: Single land use: Housing only					
Environmental Attribute	Potential impacts and risks	Assessment criteria	Assessment rating (With mitigation)	Proposed mitigation	Assessment rating (Without mitigation)
	Plan to ensure that the services (Solid waste, bulk water supply water, sewage, electricity and storm water) are designed and constructed in such a manner that it will not cause Environmental degradation.	Risk	Low	Appoint a Civil Engineer to assess the availability and design of services to ensure a sustainable development. Ensure that the development is constructed as planned.	Medium
		Extent	Local		Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite		Definite
		Significance	High		High
		Reversibility	High		High
		Risk	Low		Medium
	Plan for the increase in traffic volumes that will result from the proposed development	Extent	Local	The Town and Regional Planner will have to design the layout of the development in such a way that accessibility will not become a problem.	Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite		Definite
		Significance	Medium		High
		Reversibility	Low		Low
	Risk	Medium	Medium		
	Loss of indigenous vegetation.	Extent	Local	No mitigation measures possible.	Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite		Definite
		Significance	High		High
		Reversibility	Low		Low
	Risk	Medium	Medium		

ENVIRONMENTAL IMPACT ASSESSMENT (Construction phase)					
ALTERNATIVE 1: Mixed land use township (Preferred Alternative)					
Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute
DIRECT IMPACTS:					
Geographical Physical Social Economic	361.4146 hectares of indigenous vegetation will be eradicated in order to establish the development.	Duration	Long term	Obtain the necessary environmental authorization for the development. Implement the findings of the Fauna and Flora Habitat survey. Implement the mitigation measures as described in the Environmental Management Plan.	Long term
		Extent	Local		Local
		Magnitude (Intensity)	High		High
		Probability	Definite		Definite
		Significance	Medium		Medium
		Reversibility	Low		Low
		Risk	Low		Medium
	A total of 121 households are situated on Zone III dolomite areas of which 15 are formal houses and 106 informal houses	Duration	Long term	Following a request to the Council for Geo-Science regarding the formal houses on areas designated as D4 (Zone III) in terms of the Dolomite Stability Investigation, the Council for Geo-Science did not recommend the relocation or demolishing of formal houses but recommend strict adherence the	Long term
		Extent	Local		Local
		Magnitude (Intensity)	High		High
		Probability	Definite		Definite
		Significance	Medium		Medium
		Reversibility	Low		Low
		Risk	Medium		Medium

ENVIRONMENTAL IMPACT ASSESSMENT (Construction phase)

ALTERNATIVE 1: Mixed land use township (Preferred Alternative)

Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute
				following precautionary requirements: A. Site specific Dolomite Risk Management Plan in accordance with SANS 1936-4:2012 must be compiled and implemented for these houses / formal structures in D4 Land. The owners/responsible persons must be made aware of the risks involved in building on dolomite, and be informed about how to be vigilant and act pro-actively by applying sound water management principles. B. General precautionary measures as set out in SANS 1936 Part 3: Design and construction of buildings, structures and infrastructure, must be studied and implemented.	
Foreign plant species are likely to invade disturbed areas.	Duration	Short term	Start the extermination of any invasive species as soon as possible and maintain the eradication programme.	Medium term	
	Extent	Local		Local	
	Magnitude (Intensity)	Low		Low	
	Probability	Definite		Definite	
	Significance	Medium		Medium	
	Reversibility	High		High	
	Risk	Low		Medium	
Poorly planned ablation facilities for construction workers may cause pollution of surface and underground water.	Duration	Short term	Provide portable ablation facilities that will not cause pollution during the construction phase.	Short term	
	Extent	Local		Local	
	Magnitude (Intensity)	Medium		Medium	
	Probability	Definite		Definite	
	Significance	Medium		Medium	
	Reversibility	High		High	
	Risk	Low		Medium	
The proposed project can impact on the soil and geology.	Duration	Long term	Implement the findings of the Geo-Technical Engineer. Prevent spills of lubricants/oils that can take place on bare soil. This will include the use of drip trays for vehicles that are standing for more than 24 hours.	Long term	
	Extent	Local		Local	
	Magnitude (Intensity)	Low		Medium	
	Probability	Definite		Definite	
	Significance	Medium		Medium	
	Reversibility	High		High	
	Risk	Low		Medium	
The vegetation of the area will be removed during the construction phase, which will destroy floral and faunal habitats.	Duration	Short term	Start with the rehabilitation of vegetation to minimize the negative effects of the removal of plants.	Short term	
	Extent	Local		Local	
	Magnitude (Intensity)	Medium		Medium	
	Probability	Definite		Definite	
	Significance	Medium		Medium	
	Reversibility	High		High	

ENVIRONMENTAL IMPACT ASSESSMENT (Construction phase)					
ALTERNATIVE 1: Mixed land use township (Preferred Alternative)					
Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute
		Risk	Low	The rule must be to minimize the disturbance of animal life by keeping the footprint as small as possible. No snares may be set.	Medium
	Open trenches can be dangerous as they can either collapse on people or on equipment and people- especially small children, can fall into it.	Duration	Short term	Ensure that the trenches are dug according to specifications as prescribed by the Civil Engineer.	Short term
		Extent	Local		Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite	Definite	Definite
		Significance	Medium	Medium	Medium
		Reversibility	High	High	High
		Risk	Low	Low	Ensure that the trenches stay open for as short a time as possible. Ensure that open trenches are demarcated as required by the Occupational Health and Safety Act.
Indirect impacts:					
Geographical Physical Social Economic	Dust generation from the proposed project could impact on the surrounding area.	Duration	Short term	Spray water on open surfaces to ensure that dust does not cause air pollution during construction.	Short term
		Extent	Local		Local
		Magnitude (Intensity)	Low		Low
		Probability	Probable	Probable	
		Significance	Medium	Medium	
		Reversibility	High	High	
		Risk	Low	Start the rehabilitation of disturbed surfaces as soon as possible	Medium
	Spills of lubricants / oils can take place on bare soil.	Extent	Local	Prevent spills of lubricants/oils that can take place on bare soil. This will include the use of drip trays for vehicles that are standing for more than 24 hours.	Local
		Magnitude (Intensity)	Low		Low
		Probability	Probable		Probable
		Significance	Medium	Medium	
		Reversibility	High	High	
		Risk	Low	Ensure that all construction vehicles are in good working order and not leaking oil and or fuel. No vehicles may be serviced on site.	Medium
	Waste materials such as glass, plastic, metal or paper present a possible pollution hazard	Extent	Local	Implement the management plan to ensure that: All construction rubble is disposed of in a safe and environmentally acceptable manner. NO concrete, gravel or other rubbish will be allowed to remain on site after the construction phase.	Local
		Magnitude (Intensity)	Low		Low
		Probability	Probable		Probable
		Significance	Medium	Medium	
		Reversibility	High	High	
Risk		Low	All cement is housed as to prevent spills (due to	Medium	

ENVIRONMENTAL IMPACT ASSESSMENT (Construction phase)

ALTERNATIVE 1: Mixed land use township (Preferred Alternative)

Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	
				rain and or handling errors). NO glass, plastic, metal, or paper shall be allowed to pollute the area.		
	Non-compliance to the relevant legislation may cause social and environmental problems.	Extent	Local	Ensure that contractors (construction phase) abide by all the requirements of the Occupational Health and Safety Act. Ensure that all contractors are aware of the consequences of non-compliance to the relevant legislation regarding the above-mentioned act as well as with regard to the environment (acts, regulations, and special guidelines).	Local	
		Magnitude (Intensity)	Medium		Medium	
		Probability	Probable		Probable	
		Significance	Medium		Medium	
		Reversibility	High		High	
		Risk	Low		Medium	
	New employment opportunities will be created. Local skills development will take place.	Extent	Local	No mitigation measures needed apart from the fact that contractors will have to ensure that they abide to the requirements of the Occupational Health and Safety Act and the Employment Equity Act.	Local	
		Magnitude (Intensity)	Medium		Medium	
		Probability	Definite		Definite	
		Significance	Medium		Medium	
		Reversibility	Medium		Medium	
		Risk	Low		Medium	
Cumulative impacts:						
Geographical Physical Social Economic	Enhancement of the social well-being of the local communities for which the development is intended	Extent	Local	Ensure that the development is constructed as planned. The demand for housing will be partially addressed in the area.	Local	
		Magnitude (Intensity)	Medium		Medium	
		Probability	Definite		Definite	
		Significance	Medium		Medium	
		Reversibility	Medium		Medium	
			Risk	Low		Medium
		<u>Solid waste:</u> The proposed development will add additional solid waste into the existing waste stream of the Ga-Segonyana Local Municipality. <u>Sewage:</u> The proposed development will add additional sewage into the existing sewage stream of the Ga-Segonyana Local Municipality. <u>Water supply:</u> The proposed development will add pressure to the water supply of Ga-Segonyana Local Municipality's Water.	Extent	Long term	Ensure that services are available before formalization takes place	Long term
			Magnitude (Intensity)	Local		Local
			Probability	High		High
			Significance	Definite		Definite
			Reversibility	Medium		High
			Risk	Low		Low
		<u>Traffic:</u> The proposed development will result in an increase in traffic in the immediate surroundings of the proposed development.	Extent	Local	Ensure that the development is constructed as planned by the Town and Regional Planner	Local
			Magnitude (Intensity)	Medium		Medium
			Probability	Definite		Definite
	Significance		Medium	High		

ENVIRONMENTAL IMPACT ASSESSMENT (Construction phase)					
ALTERNATIVE 1: Mixed land use township (Preferred Alternative)					
Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute	Environmental Attribute
	Indigenous vegetation will be removed.	Reversibility	Low	No mitigation measures possible.	Low
		Risk	Medium		Medium
		Extent	Local		Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite		Definite
		Significance	High		High
		Reversibility	Low		Low
		Risk	Medium		Medium
		Extent	Local		Local

ENVIRONMENTAL IMPACT ASSESSMENT (Operational Phase)					
ALTERNATIVE 1: Mixed land use township (Preferred Alternative)					
Environmental Attribute	Environmental Attribute	Environmental Attribute	Assessment rating (With mitigation)	Proposed mitigation	Assessment rating (Without mitigation)
DIRECT IMPACTS:					
Geographical Physical Social Economic Cultural	Poorly maintained and serviced infrastructure may cause environmental problems. Ensure excavations in the cemetery is carried out as set out in the layout plan	Extent	Local	It will be the responsibility of the Local Municipality to maintain the infrastructure.	Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite		Definite
		Significance	Low		High
		Reversibility	High		Medium
		Risk	Low		High
Indirect impacts:					
Geographical Physical Social Economic Cultural	Lack of rehabilitation may cause problems	Extent	Local	It will be the responsibility of the Local Municipality to ensure that the rehabilitation plan is implemented	Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite		Definite
		Significance	Medium-high		High
		Reversibility	High		Medium
		Risk	High		High
Cumulative impacts:					
Geographical Physical Social Economic Cultural	Enhancement of the social well-being of the local communities for which the development is intended	Extent	Local	No mitigation measures required.	Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite		Definite
		Significance	High		High
		Reversibility	High		High
		Risk	Medium		Medium
Geographical Physical Social Economic Cultural	Broadened tax base: The proposed development will generate more income for the Ga-Segonyana Local Municipality.	Extent	Local	No mitigation measures required.	Local
		Magnitude (Intensity)	Medium		Medium
		Probability	Definite		Definite
		Significance	High		High
		Reversibility	High		High
		Risk	Medium		Medium

**APPENDIX I:
PUBLIC PARTICIPATION**

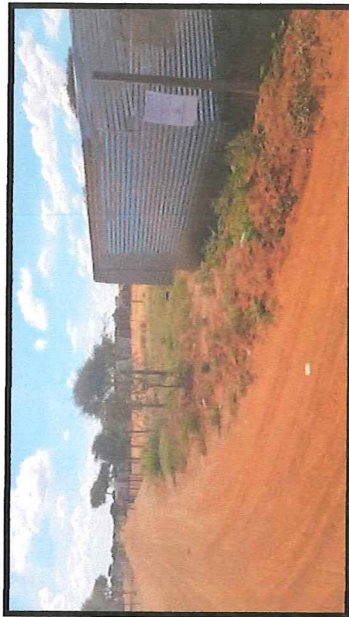
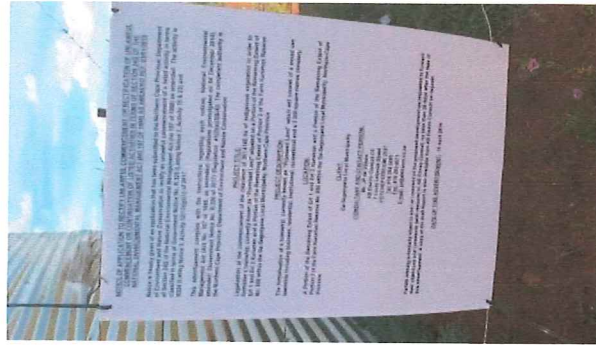
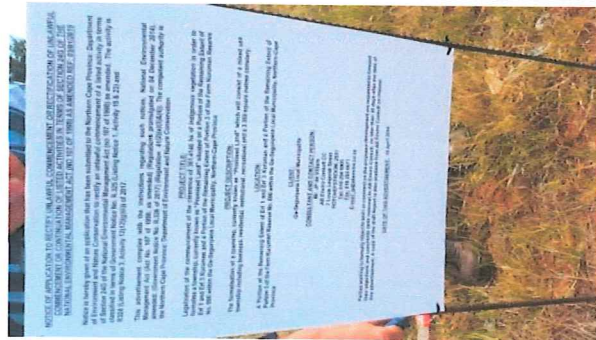
**APPENDIX I.1:
NEWSPAPER ADVERTISEMENT AND SITE NOTICES**

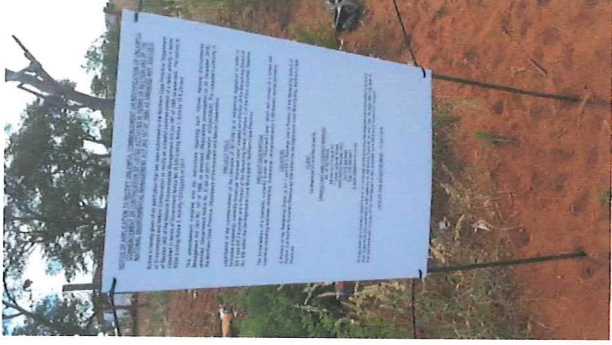
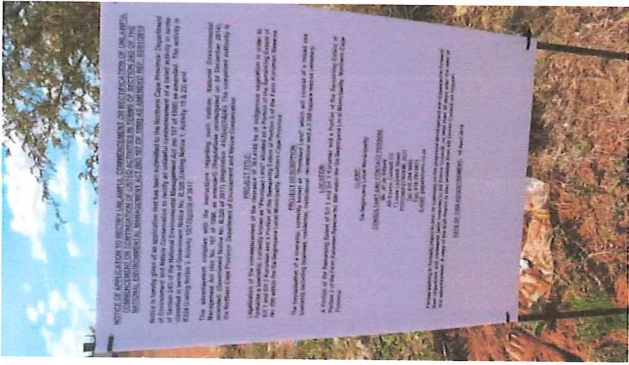
K4 10/4

NOTICE: NOTICE OF APPLICATION TO RECTIFY UNLAWFUL COMMENCEMENT OR RECTIFICATION OF UNLAWFUL COMMENCEMENT OR CONTINUATION OF LISTED ACTIVITIES IN TERMS OF SECTION 24G OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NO 107 OF 1998) AS AMENDED REF: 03/01/2019. Notice is hereby given of an application that has been submitted to the Northern Cape Province: Department of Environment and Nature Conservation to rectify an unlawful commencement of a listed activity in terms of Section 24G of the National Environmental Management Act (no. 107 of 1998) as amended. The activity is classified in terms of Government Notice No. R.325 (Listing Notice 1, Activity 15 & 23) and R324 (Listing Notice 3, Activity 12(12)(g)(ii) of 2017. This advertisement complies with the instructions regarding such notice, National Environmental Management Act (Act No. 107 of 1998, as amended) (Regulations promulgated on 04 December 2014), amended: (Government Notice No. R.326 of 2017) (Regulation 41(2)(c)(d)). The competent authority is the Northern Cape Province: Department of Environment and Nature Conservation.

PROJECT TITLE: Legalization of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province. **PROJECT DESCRIPTION:** The formalisation of a township, currently known as "Promised Land" which will consist of a mixed use township including business, residential, institutional, recreational and a 3 359 square metres cemetery. **LOCATION:** A Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province. **CLIENT:** Ga-Segonyana Local Municipality, Northern-Cape Province. **CONTACT PERSON:** Mr JP de Villiers, AB Enviro Consult CC, 7 Louis Leipoldt Street, POTCHEFSTROOM, 2531, Tel: 018-294 5005. Fax: 018293 0671. E-mail: jp@abenviro.co.za. Parties wishing to formally object to and/or comment on the proposed development are requested to forward their objections and comments (with reasons) to AB Enviro Consult, no later than 30 days after the date of this advertisement. A copy of the draft Report is also available from AB Enviro Consult on request.

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APPENDIX I.2:
PROOF OF KEY STAKEHOLDER NOTIFICATIONS

**APPENDIX I.3:
COMMENTS AND RESPONSE REPORT**

Comment received from	Summary of main issues raised by I&APs	Summary of response from EAP
<p>Directorate: Forestry Management (Other Regions) in the Department of Agriculture, Forestry and Fisheries (DAFF)</p>	<p>The Directorate: Forestry Management (Other Regions) in the Department of Agriculture, Forestry and Fisheries (DAFF) is responsible for administration of the National Forests Act, Act 84 of 1998 (NFA) and the National Veld and Forest Fires Act, Act 101 of 1998 as amended. The developer must take note of the following sections of the NFA:</p> <p>1.5 Section 12(1): "The Minister may declare-</p> <ul style="list-style-type: none"> (a) a particular tree, (b) a particular group of trees, (c) a particular woodland; or (d) trees belonging to a particular species, to be a protected tree, group of trees, woodland or species. <p>1.6 Section 15(1): "No person may-</p> <ul style="list-style-type: none"> (a) Cut, disturb, damage or destroy any protected tree; or (b) Possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, or any forest product derived from a protected tree, except- <ul style="list-style-type: none"> (i) under a license granted by the Minister; or (ii) in terms of an exemption from the provision of this subsection published by the Minister in the Gazette on the advice of the Council." <p>1.7 "Any person who contravenes the prohibition on-</p> <ul style="list-style-type: none"> (iii) The cutting, disturbance, damage or destruction of temporarily protected trees or groups of trees referred to in section 14(2) or protected trees referred to in section 15(1)(a); or (iv) The possession, collection, removal, transport, export, purchase or sale of temporary protected trees or groups of trees 	<p>The EAP acknowledges this fact and has considered the impact of this on the <i>Vachellia erioloba</i> (= <i>Acacia erioloba</i>) (Camel Thorn tree) that occurs on site.</p>

	<p>referred to in section 14(2) or protected trees referred to in section 15(1)(b), or any forest product derived from a temporarily protected tree, group of trees or protected tree, is guilty of a first category offence.</p> <p>1.8 Section 58 (1): "Any person who is guilty of a first category offence referred to in sections 62 and 63 may be sentenced to a fine or imprisonment for a period of up to three years, or to both a fine and such imprisonment."</p> <p>1.5 The list of protected tree species under section 12(1) (d) of the National Forests Act, 1998 (Act No. 84 of 1998) is published annually; the most recent publication was in GN536 of 7 September 2018.</p>	
	<p>The Draft Report mentioned the National Forest Act, Act 84 of 1998 (NFA) under applicable legislation, but refers to GN 1602 of December 2016, which is outdated. Please see number 1.5 above</p>	<p>The EAP has amended the report and has considered the most recent publication of the Act.</p>
	<p>The report confirmed the presence of nationally protected tree species <i>Vachellia erioloba</i> on site and stated that although the site is mostly transformed, some Camel thorn trees were conserved. If further development is approved and a re-layout is done to formalize the township with road construction and installation of bulk services (water, electricity and sewerage), protected trees must be avoided as far as possible</p>	<p>This has been done.</p>
	<p>In the event that protected trees cannot be avoided, the developer must apply for a Forest Act License. Getting a Forest Act License can take up to 30 days. License application forms are available on the Departmental website or at any Forestry Office</p>	<p>This will be done and has been included into the EMPr.</p>

APPENDIX I.4:
**PROOF OF WRITTEN NOTIFICATION AND REPORTS SENT TO
AUTHORITIES AND ORGANS OF STATE**

Class of parcel posted.
COD
Insured
Ordinary

Tipe van pakkele gepos.
KBA
Versekerde
Gewone



Sender's reference no. Afstuurers referensienommer	Addressee's name and address Naam en adres van geadresseerde	Type/Category of content/contents Hantwerk/inhoud waarde van gewone/ versekerde pakket		COD Insured for KBA/ versekerings- klasse		Parcel no. Pakketaanwys
		R	C	H	C	
	The Councillor Ward: 6 Ya - Segonyana Local Mem. Private Bag X 1522 Kimberley 8460					REGISTERED LETTER Small & insured (maximum weight 2kg) Maximum value R10 000 (excluding postage) CUSTOMER COPY
	The District Mem. Manager Mr. T. Matlhase P.O. Box 1480 Kimberley 8460					REGISTERED LETTER Small & insured (maximum weight 2kg) Maximum value R10 000 (excluding postage) CUSTOMER COPY
	The Councillor Ward: 13 Ya - Segonyana Local Mem. Private Bag X 1522 Kimberley 8460					REGISTERED LETTER Small & insured (maximum weight 2kg) Maximum value R10 000 (excluding postage) CUSTOMER COPY
	The Councillor Ward Ya - Segonyana Local Mem. Private Bag X 1522 Kimberley 8460					REGISTERED LETTER Small & insured (maximum weight 2kg) Maximum value R10 000 (excluding postage) CUSTOMER COPY
	N. Cape Dept. of Env. & Nature Conservation Biodiversity Management Mr. David Baderhorst Private Bag X 6120 Kimberley 8301					INTERNATIONAL INSURED PARCEL Maximum value R10 000 (excluding postage) CV 001 935 170 ZA CUSTOMER COPY
	The Municipal Manager Mr. Tsoelike Ya - Segonyana Local Mem. Private Bag X 1522 Kimberley 8460					INTERNATIONAL INSURED PARCEL CV 001 935 181 ZA CUSTOMER COPY
	N.C. Dept. of Agric., Forestry and Fisheries P.O. Box 2982 Upington 8800					INTERNATIONAL INSURED PARCEL Maximum value R10 000 (excluding postage) CV 001 935 152 ZA CUSTOMER COPY
	N.C. Dept. of Agric. & Land Reclam. & Irrigation H.O.D., Mr. V. Motshane P. Bag X 5018 Kimberley 8300					INTERNATIONAL INSURED PARCEL Maximum value R10 000 (excluding postage) CV 001 935 166 ZA CUSTOMER COPY

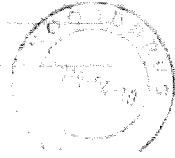
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Date/Date
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100001

Vryburg EIA




File Message

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To: Mbulelo Dala;

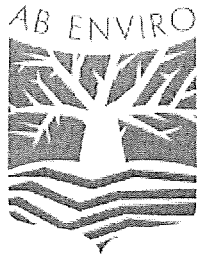
 Vryburg Draft Scoping report.pdf  eskom.pdf  vryburg.pdf

Dear Sir,

Please find attached a notification of an EIA copy of the Draft Scoping Report for your inputs

Regards,
Hannie du Plooy

AB ENVIRO CONSULT
7 Louis Leipoldt Street
Potchefstroom
2531
Tel: 018 294 5005
Fax: 018 293 0671



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10/04/2019

Northern Cape Department of Agriculture and Land Reform and Rural Development
HOD, Mr. V. Mothibi
Private Bag X5018
Kimberley
8300

Dear Sir/Madam

Legalization of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province

AB ENVIRO CONSULT was appointed by Ga-Segonyana Local Municipality to submit an application to the Northern Cape Province Department: Environment and Nature Conservation for the above mentioned proposed development.

Please find enclosed an electronic copy of the Section 24G report. We must receive your comments within a period of 30 days from the date of this letter. In the event of your organisation/department not wishing to comment on this matter, it would be appreciated if we could receive written confirmation thereof to enable us to continue with the finalisation of the application.

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Please do not hesitate to contact us should any further information or clarification be required.

Yours sincerely,

PROF. A.B. DE VILLIERS

PROF A B DE VILLIERS (M Sc, Ph D, JCD, Pr Sci Nat, EAP-EAPSA)
MR.J.P. DE VILLIERS (M Sc,HED, IAIA); MRS.J.E. DU PLOOY (M.E.M)



AB ENVIRO-CONSULT CC

Reg no. 2000/016653/23

7 Louie Leipoldt Street,
Patches@Room, 2521
Fax: + 27 (18) 293 0471
Cell: + 27 (82) 6468 105
E-mail: info@abenviro.co.za

10/04/2019

Northern Cape Department of Environment and Nature conservation
Biodiversity Management services
Mr. Dewald Badenhorst
Private Bag X6120
Kimberley
8301

Dear Sir/Madam

Legalization of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province

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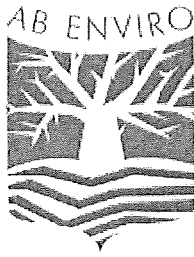
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MR.J.P. DE VILLIERS (M Sc,HED, IAIA); MRS.J.E. DU PLOOY (M.E.M)



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7 Louis Leipold Street,
Potchefstroom, 2531
Fax: + 27 (18) 293 0671
Cell: + 27 (82) 5488 105
E-mail: jp@abenviro.co.za

22/06/2018

Northern Cape Department of Agriculture, Forestry and Fisheries
FAO: J. Mans
P.O. Box 2782
Upington
880

Dear Sir/Madam

Environmental Impact Assessment for the proposed clearance of 380,8600 ha of indigenous vegetation in order to establish a township which will also include the establishment of a cemetery on Portion 1 and 2 of the farm Kalahari Gholf en Jag Landgoed No. 775 (to be known as Kathu Extension 6), Gamagara Local Municipality, Northern Cape Province

AB ENVIRO CONSULT was appointed by Gamagara Local Municipality to submit an application to the Northern Cape Province Department: Environment and Nature Conservation for the above mentioned proposed development.

Attached please find a notification of the proposed development as well as an electronic copy of the draft Scoping report for your comments. We must receive your comments within a period of 30 days from the date of this letter. In the event of your organisation/department not wishing to comment on this matter, it would be appreciated if we could receive written confirmation thereof to enable us to continue with the finalisation of the application.

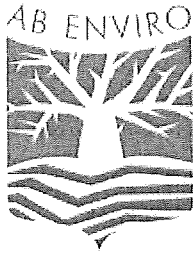
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Yours sincerely,

PROF. A.B. DE VILLIERS

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MR.J.P. DE VILLIERS (M Sc,HED, IAIA); MRS.J.E. DU PLOOY (M.E.M)



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Potchefstroom, 2631
Fax: + 27 (18) 293 0671
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E-mail: jp@abenviro.co.za

10/04/2019

Mr Abe Abrahams
28 Central Road
Beaconsfield
KIMBERLY
8301
Tel: (053) 830 8800/6 7600

Dear Sir/Madam

Legalization of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province

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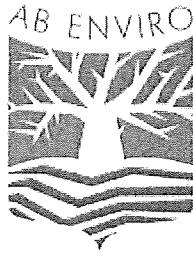
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MR.J.P. DE VILLIERS (M Sc,HED, IAIA); MRS J.E. DU PLOOY (M.E.M)



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Fax: + 27 (18) 293 0471
Cell: + 27 (83) 5488 105
E-mail: jp@abenviro.co.za

10/04/2019

The District Municipal Manager: Mr T Matlhare
John Taolo Gaetsewe District Municipality
PO BOX 1480
Kuruman
8460

Dear Sir/Madam

Legalization of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province

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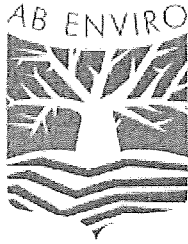
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MR.J.P. DE VILLIERS (M Sc,HED, IAIA); MRS.J.E. DU PLOOY (M.E.M)



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Fax: + 27 (18) 293 0471
Cell: + 27 (83) 5488 105
E-mail: jb@abenviro.co.za

10/04/2019

The Municipal Manager: Mr. Tsatsimpe
Ga-Segonyana Local Municipality
Private Bag X1522
Kuruman
8460

Dear Sir/Madam

Legalization of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province

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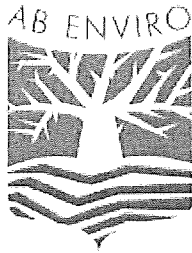
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Cell: + 27 (0) 83 345 678
E-mail: info@abenviro.co.za

10/04/2019

The Councillor Ward: 1
Ga-Segonyana Local Municipality
Private Bag X1522
Kuruman
8460

Dear Sir/Madam

Legalization of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province

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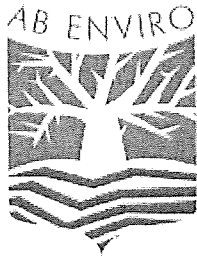
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E-mail: jp@abenviro.co.za

10/04/2019

The Councillor Ward: 6
Ga-Segonyana Local Municipality
Private Bag X1522
Kuruman
8460

Dear Sir/Madam

Legalization of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province

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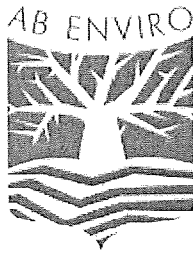
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Cell: + 27 (82) 5488 105
E-mail: ip@ab-enviro.co.za

10/04/2019

The Councillor Ward: 13
Ga-Segonyana Local Municipality
Private Bag X1522
Kuruman
8460

Dear Sir/Madam

Legalization of the commencement of the clearance of 361,4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province

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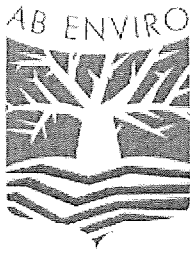
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AB ENVIRO-CONSULT CC

Reg no. 2000/016653/23

7 Louis Leipold Street,
Potchefstroom, 2531
Fax: + 27 (18) 293 0671
Cell: + 27 (82) 5468 105
E-mail: ja@abenviro.co.za

10/04/2019

Eskom
dalaME@eskom.co.za

Dear Sir/Madam

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MR.J.P. DE VILLIERS (M Sc,HED, IAIA); MRS.J.E. DU PLOOY (M.E.M)

APPENDIX I.5:
LIST OF REGISTERED I&APs

**DIRECTORATE: FORESTRY MANAGEMENT (OTHER REGIONS) IN
THE DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES
(DAFF)**



agriculture, forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Directorate: Forestry Management (Other Regions)
P.O. Box 2782, Upington, 8800, Tel 054 338 5909, Fax 054 334 0030

Enquiries: J Mans
E-mail: JacolineMa@daff.gov.za
Date: 9 May 2019
Ref: 40.8.14.2/NC/159

AB Enviro Consult CC
7 Louis Leipoldt Street
Potchefstroom
2531

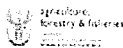
Attention: Mr JP deVilliers E-mail: (jp@abenviro.co.za)

COMMENTS ON DRAFT S24G REPORT KURUMAN RESERVE NO 690, PROMISED LAND, GA-SEGONYANA LOCAL MUNICIPALITY, NORTHERN-CAPE PROVINCE

1. DEPARTMENTAL MANDATE

The Directorate: Forestry Management (Other Regions) in the Department of Agriculture, Forestry and Fisheries (DAFF) is responsible for administration of the National Forests Act, Act 84 of 1998 (NFA) and the National Veld and Forest Fires Act, Act 101 of 1998 as amended. The developer must take note of the following sections of the NFA:

- 1.1 Section 12(1): "The Minister may declare-
 - (a) a particular tree,
 - (b) a particular group of trees,
 - (c) a particular woodland; or
 - (d) trees belonging to a particular species, to be a protected tree, group of trees, woodland or species.
- 1.2 Section 15(1): "No person may-
 - (a) Cut, disturb, damage or destroy any protected tree; or
 - (b) Possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, or any forest product derived from a protected tree, except-
 - (i) under a license granted by the Minister; or
 - (ii) in terms of an exemption from the provision of this subsection published by the Minister in the Gazette on the advice of the Council."
- 1.3 "Any person who contravenes the prohibition on-
 - (i) The cutting, disturbance, damage or destruction of temporarily protected trees or groups of trees referred to in section 14(2) or protected trees referred to in section 15(1)(a); or



- (ii) The possession, collection, removal, transport, export, purchase or sale of temporarily protected trees or groups of trees referred to in section 14(2) or protected trees referred to in section 15(1)(b), or any forest product derived from a temporarily protected tree, group of trees or protected tree, is guilty of a first category offence.

1.4 Section 58 (1): "Any person who is guilty of a first category offence referred to in sections 62 and 63 may be sentenced to a fine or imprisonment for a period of up to three years, or to both a fine and such imprisonment."

1.5 The list of protected tree species under section 12(1) (d) of the National Forests Act, 1998 (Act No. 84 of 1998) is published annually; the most recent publication was in GN536 of 7 September 2018.

2. COMMENTS ON S24G REPORT

2.1 The report mentioned the National Forest Act, Act 84 of 1998 (NFA) under applicable legislation, but refers to GN 1602 of December 2016, which is out-dated. Please see number 1.5 above.

2.2 The report confirmed the presence of nationally protected tree species *Vachellia erioloba* on site and stated that although the site is mostly transformed, some Camel thorn trees were conserved. If further development is approved and a re-layout is done to formalize the township with road construction and installation of bulk services (water, electricity and sewerage), protected trees must be avoided as far as possible.

2.3 In the event that protected trees cannot be avoided, the developer must apply for a Forest Act License. Getting a Forest Act License can take up to 30 days. License application forms are available on the Departmental website or at any Forestry Office. The Department may ask supporting documentation when assessing a license application. For activities of this nature, the following supporting documents are normally requested:

- Completed License Application Form
- Accurate estimation of the number of trees to be felled per species
- Copy of the I.D. of the applicant (developer's representative)
- Copy of the Environmental Authorisation
- Copy of final approved layout plan
- Flora Permit Reference Number
- Copy of Fauna Permit (if applicable)

2.4 Trees with bird nests may not be disturbed without a valid Fauna Permit from Nature Conservation, under the Northern Cape Nature Conservation Act, Act 9 of 2009 (NC NCA), if affected.

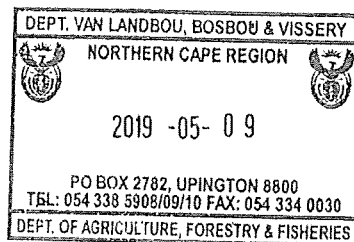
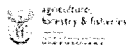
Thank you for notifying the Department of the proposed development.

Kind Regards,



Jacoline Mans (Chief Forester: NFA Regulation)

DATE: 9/05/2019



APPENDIX I.6:
COPIES OF CORRESPONDENCE RECEIVED / MINUTES OF
MEETINGS

**APPENDIX J:
ENVIRONMENTAL MANAGEMENT
PROGRAMME (EMPR)**

ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

1. INTRODUCTION

The purpose of this Environmental Management Programme (EMPr) is to ensure 'good environmental practice' by taking a holistic approach to the management of environmental impacts during the formalization and operation of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province. This EMPr therefore sets out the methods by which proper environmental controls are to be implemented by the applicant and his nominated contractor. However, where necessary, these methods have been expanded upon and additional issues addressed in order to ensure that all environmental aspects are appropriately considered and monitored.

It is important to note that this EMPr is focused primarily on the formalization (construction) and operational phases of the project. Due to the projected lifespan, a detailed Site Closure and Decommissioning has not been included in this document as it is not intended for a project of this nature. Design specifications from an environmental point of view were taken into consideration, the Environmental Assessment Practitioner (EAP) have provided input with regard to possible mitigation measures for reducing environmental impacts.

This EMPr is also intended to ensure that the principles of sound Environmental Management and the general "Duty of Care" specified in the National Environmental Management Act are promoted on site during all phases of the development

This EMPr has been designed to suit the particular activities and needs of the formalization and operation of the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province, and incorporates specific project mitigation measures. This EMPr therefore identifies the following:

- Construction and operation activities that will impact on the environment;
- Specifications with which the contractor shall comply in order to protect the environment from the identified impacts; and
- Actions that shall be taken in the event of non-compliance.

It is important to note that the EMPr is a dynamic document subject to similar influences and changes as are brought by variations to the provisions of the project specification. Any substantial changes shall be submitted to the contractor, resident engineer and relevant environmental authorities in writing for approval.

A professional team consisting of the following experts have been assembled in order to ensure the success of the proposed development:

- A Geotechnical Engineer
- A Town and Regional Planner
- The Civil Engineer
- A SAHRA Specialist.
- A Ecological specialist
- Registered Environmental Assessment Practitioner (EAP)

They were responsible for the following actions:

- A Geotechnical Engineer had to determine whether the Geology and Soils of the site is suitable for the proposed development.
- A Town and Regional Planner designed the proposed development in such a way that the layout of the proposed development, takes into account the measures described by the Civil Engineer and that the layout satisfies the needs of future occupiers of the site
- The Civil Engineer had to determine the capability of existing infrastructure to be linked to proposed development and readily available bulk services. He also designed the proposed infrastructure.
- SAHRA Specialist determined the possible impact of the development on Archaeological and cultural features.
- The Ecological specialist determined the impact of the proposed development on the Fauna and Flora of the area
- The EAP must assess all possible environmental issues that may affect the proposed project and ensure that all interested and affected parties are notified in order to assist him in identifying possible impacts. He must also give mitigation measures where applicable.
- It will be essential to plan for the appointment of an Environmental Control Officer (ECO) who will be responsible to ensure that all aspects regarding the environmental issues are implemented and monitored. The ECO will also be responsible for maintaining a database of all records pertaining to the environment for the study area.
- The surveyor ensured that the cadastral information is accurate, up to date and properly mapped. The contours of the area are accurately plotted.

2. Contents of the Environmental Management Programme

The contents of an EMPr, shown below, are contained in Appendix 4 of the NEMA EIA Regulations 982 of 2014 as amended and published in Appendix 4 of Government Notice No. R 326 of 2017.

1. (1) An EMPr must comply with section 24N of the Act and include-
- (a) details of
 - (i) the EAP who prepared the EMPr; and
 - (ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;
 - (b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;
 - (c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers;
 - (d) a description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-
 - (i) planning and design;
 - (ii) pre-construction activities;
 - (iii) construction activities;
 - (iv) rehabilitation of the environment after construction and where applicable post closure;
 - and
 - (v) where relevant, operation activities;
 - (f) a description of proposed impact management actions, identifying the manner in which the impact management outcomes and outcomes contemplated in paragraphs (d) will be achieved, and must, where applicable, include actions to –
 - (i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
 - (ii) comply with any prescribed environmental management standards or practices;
 - (iii) comply with any applicable provisions of the Act regarding closure, where applicable; and
 - (iv) comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;
 - (g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);
 - (h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);
 - (i) an indication of the persons who will be responsible for the implementation of the impact management actions;

- (j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;
- (k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);
- (l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;
- (m) an environmental awareness plan describing the manner in which-
 - (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and
 - (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and
- (n) any specific information that may be required by the competent authority.

3. Details of Environmental Assessment Practitioner

Environmental Assessment Practitioner (EAP): ¹	Prof. A.B. de Villiers of AB Enviro Consult CC		
Contact person:	Mr. JP de Villiers		
Postal address:	7 Louis Leipoldt Street		
Postal code:	2531	Cell:	083 548 8105
Telephone:	018 294 5005	Fax:	018 293 0671
E-mail:	jp@abenviro.co.za		

4. Expertise of the Environmental Assessment Practitioner

AB Enviro Consult (CC) is a registered consultancy, owned and operated as an independent unit by the registered owner and consultant: **Prof. A.B. de Villiers**

- **Mr J.P. De Villiers** joined the consultancy during 2004
- **Mrs J.E. du Plooy** is a consultant since 2001

PERSONAL PARTICULARS AND CAREER HISTORY OF PROF DE VILLIERS

ACADEMIC AND PROFESSIONAL QUALIFICATIONS

Post-Matric Qualifications

YEAR	Qualification	Institution	Field of Study
1968	B.Sc.	PU FOR CHE	Geography, Geology
1970	HONNS. B.Sc.	PU FOR CHE	Soil Science
1974	M.Sc.	PU FOR CHE	Geography
1981	Ph.D.	UOFS	Geography

PROFESSIONAL QUALIFICATIONS AND REGISTRATIONS

YEAR	Qualification/ Registration	Institution	Field of Study
1986	Professional Natural Scientist	S.A. Council for Natural Scientists	Environmental Science
1994	Quality Auditor	ESKOM	Auditing
1998	Personnel & Verifying Auditor	SAATCA	Environmental Auditing
2006	Environmental Assessment Practitioner	Interim Certification Board EAPSA	Environmental Science

MEMBERSHIP AND PARTICIPATION IN SOCIETIES, COUNCILS, ETC.

Name of professional societies	YEAR	Capacity
S.A. Geographical Society.	1967-1996	Board Member
Society for Geography	1968-2004	Member
SAGS Western Transvaal	1985-1989 1987-1989 1996	Chairman
Africa Geographical Association	1993-1995	Vice-President.
Society for the Vaal River Catchment	1980-1999	Member
S.A. Society for Photogrammetry, Remote Sensing and Cartography	1984-1996	Member
Dendrological Society	1986-2005	Member
Birdlife South Africa	2003-present	Member
British Geomorphological Research Group	1985-1997	Member
Int Com on Water Resource Systems	1985-1997	Member
Int Com on Continental Erosion	1986-1990	Member
Int Com on Remote Sensing and Data Transmission	1986-1991	Member
Society for S.A. Geographers	1995-2005	Member
SA Photogrammetrical and Geo. Info.	1995-2003	Member
S.A. Association of Geomorphologists	1994-1999	Board Member and member
SADC Mine Dump Study Group	1996-2005	Member

***Chairman of the Committee for Interested and Affected Parties (CIP) (2004-2008)** for International Accreditation by the influential accrediting body of **Price, Waterhouse Coopers- International Environmental Auditors in Southern Africa.**

Member of Price Waterhouse Coopers CIP (2004-2010)

4.1. ACADEMIC COURSES TAUGHT AT POST-MATRIC LEVEL

- 1.1 The Geography of Economic Activities and Regional Geography (3rd year and honours students)
- 1.2 Weather and Climate (1st, 2nd, and 3rd year students)
- 1.3 Geomorphology (1st year up to PhD level)
- 1.4 Remote Sensing and the Environment (3rd year and Honours)
- 1.5 Quantitative Geography (3rd year up to Masters Level)
- 1.6 Environmental Management (2nd year, up to PhD level)
- 1.7 Environmental Analysis (3rd year and up to Masters Level)
- 1.8 Geography of Soil (3rd year and Honours)
- 1.9 Cartography (1st year to Honours)
- 1.10 As professor, 26 Masters & 4 PhD D students completed their studies in environmentally related subjects under his tutor- and co-tutorship.

4.2 INVOLVEMENT IN COURSES AND WORKSHOPS

4.2.1 ENVIRONMENTAL COURSES: Partially responsible for course development and taught various courses for environmental officers employed by the North West Province over a period of 3 years (1998-2001). These courses were aimed at improving their knowledge of the environment as well as their understanding of the environmental interactions specifically related to the North West province.

4.2.2 STATE OF THE ENVIRONMENT REPORT (SOE) Involved in the first SOE prepared by the North West Province and was responsible for most of the physical geographical aspects (1999).

4.3 ENVIRONMENTAL PROJECTS

The following projects are typical examples, of such projects which he co-ordinated and managed:

4.3.1 MOOI RIVER CATCHMENT STUDIES: This was a study on the impacts of the mining activities on the quality and quantity of water in the Mooi River catchments and was done for the North West Province. He co-ordinated and managed this project. The team consisted of a PhD student as well as two teams of local and international students; one responsible for the biophysical variables, and the other for socio-cultural aspects.

4.3.2 SADC MINE DUMPS STUDY GROUP: Acted as co-ordinator for the formulation of tools to assess the effects of mine dumps on the environment in the SADC region. One group was involved in the Zimbabwean copper belt region, and the other in the Tanzanian gold mining area. The studies were undertaken for the Carl Duisburg Gesellschaft (Germany). The research team consisted of geographers, ecologists and mining experts. From this study, a pilot program, the "South African Environmental Management System" (SEMS) developed, which was applied successfully by a team of researchers in a pilot study in the Carletonville region.

4.3.3 SADC DEVELOPMENT OF TRAINING MODULES FOR ENVIRONMENTAL STUDIES USING GIS: Member of the three-person team who developed these training modules. It was applied at the Copper belt

University, the University of Dar Es Salaam as well as at the Potchefstroom University as an introduction to the integration of environmental data (both biophysical and socio-economic) for the interpretation of geographical regions.

4.3.4 ENVIRONMENTAL DEGRADATION - THE RESULT OF INDISCRIMINATE LOCATION OF SLIME DAMS IN THE SADC REGION: Co-ordinated this study in the Far West Rand Area; conducted case studies in Zambia and South Africa. The team consisted of researchers from the Netherlands, Germany, Zambia and Tanzania.

4.3.5 LAND USE CHANGES IN THE NORTH WEST PROVINCE: An Environmental Management Support System for SOE North-West University Team leader. This project was undertaken for DACE (NWP) and various students participated – each involved in a specific aspect of the environment. This data was co-ordinated and eventually incorporated into the SOE report.

4.4 RESEARCH PUBLICATIONS AND CONFERENCES

He published 11 environmentally related articles in peer-reviewed magazines, and appeared professionally at 30 conferences with a direct bearing on environmental work.

ACADEMIC AND PROFESSIONAL QUALIFICATIONS MR J.P. DE VILLIERS

YEAR	Qualification	Institution	Field of Study
1993	BA	PU FOR CHE	Geography, Economics
1994	HED	PU FOR CHE	Geography Economics
2006	B.Sc.(Honns) Cum Laude	North-West University	Environmental Management
2007	M.Sc.	North-West University	Geography

PROFESSIONAL QUALIFICATIONS AND REGISTRATIONS

YEAR	Qualification/ Registration	Institution	Field of Study
2008	Basic Principles of Ecological Rehabilitation and Mine Closure	Centre for Environmental Management (North West University)	Ecological Rehabilitation

ACADEMIC AND PROFESSIONAL QUALIFICATIONS MRS J.E. DU PLOOY

YEAR	Qualification	Institution	Field of Study
1999	BA	PU FOR CHE	Geography, Tourism
2000	BA (Honns) Cum Laude	PU FOR CHE	Geography
2002	Master's degree: Environmental Management	PU FOR CHE	Environmental Management
2001	Aquabase Intro	AQUABASE	Hydrology
2001	Geomedia Professional	INTERTECH	GIS
2001	Map Info	SPATIAL TECHNOLOGY	GIS

EXPERIENCE OF THE CONSULTANCY

Over a period of 23 years (1996-2019) this consultancy has successfully applied for, and obtained positive ROD's and EA's for more than **365** projects. Environmental Control Officer's duties are also performed on various projects.

The company was involved (from 1992-1994) in evaluation of 114 applications for the subdivision of land, 23 applications for resort developments, and 54 applications for business rights for the Department of Agriculture, Conservation and the Environment - North West Province.

The consultancy is qualified to undertake professional studies in waste management and is still involved in the development of waste disposal- (solid and liquid effluent), and emission studies. These studies are conducted both academically and practically. This work relates to mine waste, domestic waste and effluent as well as to the monitoring of waste disposal. Environmental audits in this respect are undertaken on a regular basis.

5. DESCRIPTION OF THE ACTIVITY

AB Enviro Consult was appointed by the Ga-Segonyana Local Municipality to apply for Authorization for the "Proposed" Establishment of a Township on the site. A site inspection held on 22 May 2018 revealed that construction activities on site has already commenced. The EAP then arranged a meeting with Ms. Tshepiso Lekwene from the DENC and she confirmed that the process that will have to be followed will be to apply for the rectification of unlawful commencement or continuation of a listed activity in terms of Section 24G of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended.

The Applicant was not aware that they required Environmental Authorization before starting with provision of essential services in the area.

The intension of this application is thus to legalise the commencement of the clearance of 361.4146 ha of indigenous vegetation in order to formalise a township, currently known as "Promised Land" situated on a Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province.

Informal settlement has already taken place on site, as such the need for housing in the area is highlighted. As in the rest of South Africa, there is a housing shortage in the area. This is undesirable as informal settlements consist of non-conventional housing built without complying with legal building procedures. Broadly, these crude dwellings mostly lack proper indoor infrastructure, such as water supply, sanitation, drainage, waste disposal and proper road access. There is also a bond between poor housing and environmental conditions in informal settlements which also reflects poverty.

Linking basic services such as water to health is viewed as a false separation as these services are 'intimately related to housing'. It becomes a housing issue if children playing outside the house contract diarrhoea via ingesting pathogens from fecal matter which contaminates the land on which they play. Otherwise, it is the house which provides for shelter against injury, weather and disease. Improving the surroundings of the house is to limit severe health risks existing within poor quality housing.

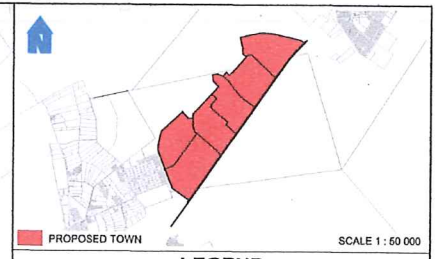
The proposed development is to formalize a township and to provide the services associated with a town to people in the area. It was envisioned to develop the proposed town as early as 2015, however, detailed site surveys had to be conducted as the area is known for dolomitic instability. These have now been completed and formalization of the town is highly desirable as it will eliminate the negatives associated with informal housing as described above.

Vegetation at much of the site is transformed or modified. Informal buildings, roads, numerous scraped areas and fences are found widespread at the site. Informal dumping occurs at site. Various alien invasive weeds are widespread at the site. Some fragmented and ecologically disturbed patches of indigenous vegetation remain at some parts. *Vachellia erioloba* (Camel Thorn) trees remain and some appear to be conserved even in areas that are otherwise cleared. A number of indigenous tree-, shrub-, herb- and grass species are present at the site; often widespread pioneer species well-adapted to disturbed areas.

The application deals with the formalization of this Township. This will include service provision and will involve re-layout of the Township. The Council for Geoscience has conducted a survey of the area and it has become apparent that some of the informal houses will have to be relocated as dolomite occurs on site. This factor will influence the final layout plan. The layout plan will determine where roads (Internal and access) roads will be constructed. The layout plan will also address the issue of storm water.



Proposed re-layout plan



PROPOSED TOWN SCALE 1 : 60 000

LEGEND

Proposed Zoning	Proposed Land use	Number of Erven	Erft Number	Area in Ha	% of Area
Residential zone III	Flats, Residential building	2	*	3.2142ha	%
Residential zone IV	Residential houses low cost housing (Minimum 350m²)	5469	*	228.7591ha	%
Business zone I	Business premises including, Institution, Authority use, Flats, Residential building	1	*	1.1450ha	%
Business zone II	Shop	11	*	2.1419ha	%
Institutional zone I	Place of Instruction (Primary School)	2	*	6.1037ha	%
Institutional zone II	Place of Instruction (Creche)	3	*	0.3520ha	%
Institutional zone III	Public place of worship (Church)	12	*	1.6972ha	%
Institutional zone III	Institution (Theatrical Centre/Community Hall)	1	*	0.4454ha	%
Open space zone I	Public open space	23	*	20.5678ha	%
Open space zone II	Private open space (Sportsfield)	2	*	2.4894ha	%
Open space zone II	Private open space (Cemetery)	1	*	0.3350ha	%
Transport zone I	Transport use (Taxi rank)	1	*	0.2054ha	%
Transport zone II	Public street	124	*	66.9733ha	%
Authority zone I	Authority use (Municipal)	5	*	6.9354ha	%
TOTAL		5662		361.4140ha	

STREETS

Reserve Width	Length in Metre	% of Street Length
m	m	%
TOTAL	m	100%

NOTES:
The figure A-B-C-D-E-F-G-H-I-J-K-L-A represents the proposed townships Promise Land Extensions 1 to 6.

Average Residential Erven Size : 418.3m²
Erft sizes and dimensions subject to final survey.

1:100 YEAR FLOODLINE
It is hereby certified in terms of the provisions of Section 144 of the National Water Act, 1998 (Act No. 36 of 1998) that the township is not affected by a public stream.

PRE ENGINEER
It is hereby certified that the town layout complies with the conditions and recommendations as stated in the Geological Report.

PRE ENGINEER

STREETS:
Maximum slope 1 :
Minimum slope 1 :
DESIGN OF TOWN LAYOUT
Maxim Planning Solutions (Pty) Ltd
K. Raubenheimer Pr. No. A3061993
Tel: (018) 468 6366

CONTOURS
The contour survey is in accordance with the standards laid down by the Regulations relating to Township Establishment and Land Use.
Digital Orthophoto by: *Azw*
Tel: (012) 6030348
Date of Photography : June 2018
System : WGS84 Central Meridian : 1023

DETAIL LAYOUT MAP
PROPOSED TOWNSHIPS
PROMISE LAND EXTENSIONS 1 TO 6

240m 180m 120m 60m 40m 20m 0m 20m 40m 60m 80m 100m 120m 140m 160m 180m 200m
SCALE 1 : 5 000















THE PROPOSED TOWN IS SITUATED ON A PORTION OF THE REMAINING EXTENT OF ERF 1 AND A PORTION OF THE REMAINING EXTENT OF ERF 3, BURUMAN TOWNSHIP AND ON A PORTION OF THE REMAINING EXTENT OF PORTION 3 OF THE FARM BURUMAN RESERVE No. 600, DIVISION KURUMAN.

GA-SEGOVYANA LOCAL MUNICIPALITY NORTHERN CAPE PROVINCE

Drawing Compiled by : A. Rossouw
Drawings Nr. : 6/34/7
Date : 2019-01-07
Revision : 0
Caddie File : Z:\PROJECTS\8-347-K.F.Promised Land Extensions\8-347-00

Tel (018) 468-6366
Fax (018) 468-6376
adv@maxim.co.za

MAXIM
planning solutions
ACCREDITED TOWN AND REGIONAL PLANNERS

LEGEND						
Proposed Zoning	Proposed Land use		Number of Erven	Erf Number	Area in Ha	% of Area
Residential zone III	Flats, Residential building		2	*	3.2142ha	%
Residential zone IV	Residential house, low cost housing (Minimum 350m ²)		5469	*	220.7591ha	%
Business zone I	Business premises including, Institution, Authority use, Flats, Residential building		1	*	1.1486ha	%
Business zone II	Shop		11	*	2.1415ha	%
Institutional zone I	Place of instruction (Primary School)		2	*	6.1037ha	%
	Place of instruction (Creche)		3	*	0.3626ha	%
Institutional zone II	Public place of worship (Church)		12	*	1.6673ha	%
Institutional zone III	Institution (Thusong Centre/Community Hall)		1	*	0.4484ha	%
Open space zone I	Public open space		28	*	20.5678ha	%
Open space zone II	Private open space (Sportsfield)		2	*	2.4894ha	%
	Private open space (Cemetery)		1	*	0.3359ha	%
Transport zone I	Transport use (Taxi rank)		1	*	0.2664ha	%
Transport zone II	Public street		124	*	80.9733ha	%
Authority zone I	Authority use (Municipal)		5	*	6.9364ha	%
TOTAL			5662	*	361.4146ha	%

Water and sewer pipelines will be installed in order to provide water and sanitation for the area.

WATER

In accordance with the water demand calculations the study area will need on average 3.8 ML per day. In accordance with the Ga-segonyana water master plan the municipality will not provide localised low-level storage and in future will have only one regional bulk water storage facility, which is the Bankhara-Bodulong reservoir complex. It is therefore recommended that a 500mm Ø pipeline be used to connect the study area to the southern bulk water system. The recommendation is also in line with current plans of the to provide a bulk ring feed from the Bankhara-Bodulong Reservoirs to all surrounding towns of Ga-Segonyana. The bulk pipeline which will be ±7.75km in length will therefore form part of this ring from Kuruman to Promised

Land via Wrenchville. The bulk line will be connected to both elevated steel tanks in Kuruman (Masl 1349m) to fed directly into highest point in the study area's future water reticulation network (Masl.1326m). It is predicted/calculated that a 500mm diameter pipe line will be able to transfer water

from the elevated steel reservoirs to the highest point in Promised Land at 150 ℓ/s with a static head of at least 27 meters or 2.7 bar (270 kpa).

Please note that these upgrades does not form part of this application.

SANITATION

The existing Kuruman and Mothibistad bulk sewer infrastructure cannot accommodate the calculated/estimated sewer inflows from the study area. The study area will therefore need dedicated main outfall sewer lines, a pump station and rising main (pump line) to a Waste water treatment works. The current planned upgrades for both the Kuruman WWTW and the Mothibistad Oxidation Ponds still result with both plants having no additional capacity to accommodate the study area's outflow sewage.

Main Outfall Pipelines

It is envisaged that the internal sewer network will require main collector sewer lines ranging from 200mm Ø to 315mm Ø to handle the PWWF of 3 282 024.33 ℓ/day or 37.986 ℓ/s. The relatively flat terrain slopes to the north west and is expected that all outfall sewer lines to confluence at this lowest point, where a pumpstation will be required to transfer the sewage to either Kuruman WWTW or Mothibistad's Oxidation Ponds via a rising main.

The following outfall sewer pipe sizes and lengths have been identified for the Study Area:

1. 200mm Ø PVC-U 400KPa = 2 500m
2. 250mm Ø PVC-U 400KPa = 1 500m
3. 315mm Ø PVC-U 400KPa = 700m

Pump Station and Rising Main

In accordance with the analysis and calculations it can be deduced that a new pump station and rising main with a pumping flow rate of at least 38 ℓ/s is needed. Good practice guidelines recommend that pump system delivery rate of a major pump station should be at least 20% more than the expected PWWF. A pump system delivery rate of 45.6 ℓ/s will therefore be will be required to effectively transfer sewage from the study area to either WWTW.

Due to the Kuruman region having potential dolomitic strata conditions, the sewer rising main will have to comprise of continues welded HDPE pipe lines in order to conform to the environmental and geotechnical requirements. The following infrastructure options have been identified for the Study Area:

Bulk Sewer Requirement Options

It is expected that the study area will have an addition loading of 1.82 Mℓ/day on a waste water treatment works.

Option 1 (transfer sewage to the Kuruman WWTW)

The existing Kuruman WWTW has a capacity of 4.0Mℓ/day. The WWTW are currently not optimally functional but the planned refurbishment will ensure that the works can operate to its design capacity once refurbished. The anticipated 1.82 Mℓ/day additional loading from Promise Land was not considered in the refurbishment. According to the Municipality's master plan the effective volume of the three reactors (concrete structures) is approximately 5 200 m³. This means if duly equipped with effective

aerators (mechanical optimization) the design capacity of the works can be increased to at least 4.8 Mℓ/day. Please note, some of the downstream processes such as secondary sedimentation (clarifiers), disinfection and sludge handling may also need to be upgraded accordingly. An additional 1.02 Mℓ/day upgrade on top of the refurbishment and mechanical optimization will still be required in order to ensure that the treatment plant is enabled to accommodate the full study area. In essence, the required upgrades should result in a treatment capacity of 5.82 Mℓ/day to accommodate Promised Land.

Requirements:

1. Dry well pump station capable of a delivering at least 45.6 ℓ/s
2. 250mm Ø HDPE PE 100, 7 300 meters in length
3. Upgrade the Kuruman WWTW from a 4.0Mℓ/day to 5.82 Mℓ/day

Option 2 : Transfer sewage to the Mothibistad Oxidation ponds

Although the Mothibistad oxidation ponds is in line for an upgrade from a 0.4 Mℓ/day to 1.4 Mℓ/day treatment facility, this refurbishment/upgrade are measures to address the immediate current over loading of the treatment works including projected population growth for the same catchment area until 2021. It there cannot accommodate any inflow from the study area unless major further upgrades are considered. The 1.82 Mℓ/day sewage that will be generated by the study area will require an upgraded Mothibistad WWTW with a design capacity of at least 3.22 Mℓ/day. The current technology used in Mothibistad makes it uneconomical to expand to 3.22 Mℓ/day. A complete new conventional module of 3.22 Mℓ/day will have to be considered.

Option 3: Seodine Regional Waste Water Treatment Works:

Ga-Segonyana Municipality confirmed that a regional waste water treatment works west of Seoding is also considered for the future. This regional treatment works will treat all existing and future sewage flows generated by all the settlements in the municipal area besides Kuruman, Wrenchville and Bankara-Bodulong. This regional works will therefore also replace the Mothibistad Oxidation Ponds as the oxidation ponds is situated in an unstable dolomitic area. The Mothibistad and Promised Land (if option 2 is selected) will then need to be rerouted/extended to be linked with the regional works.

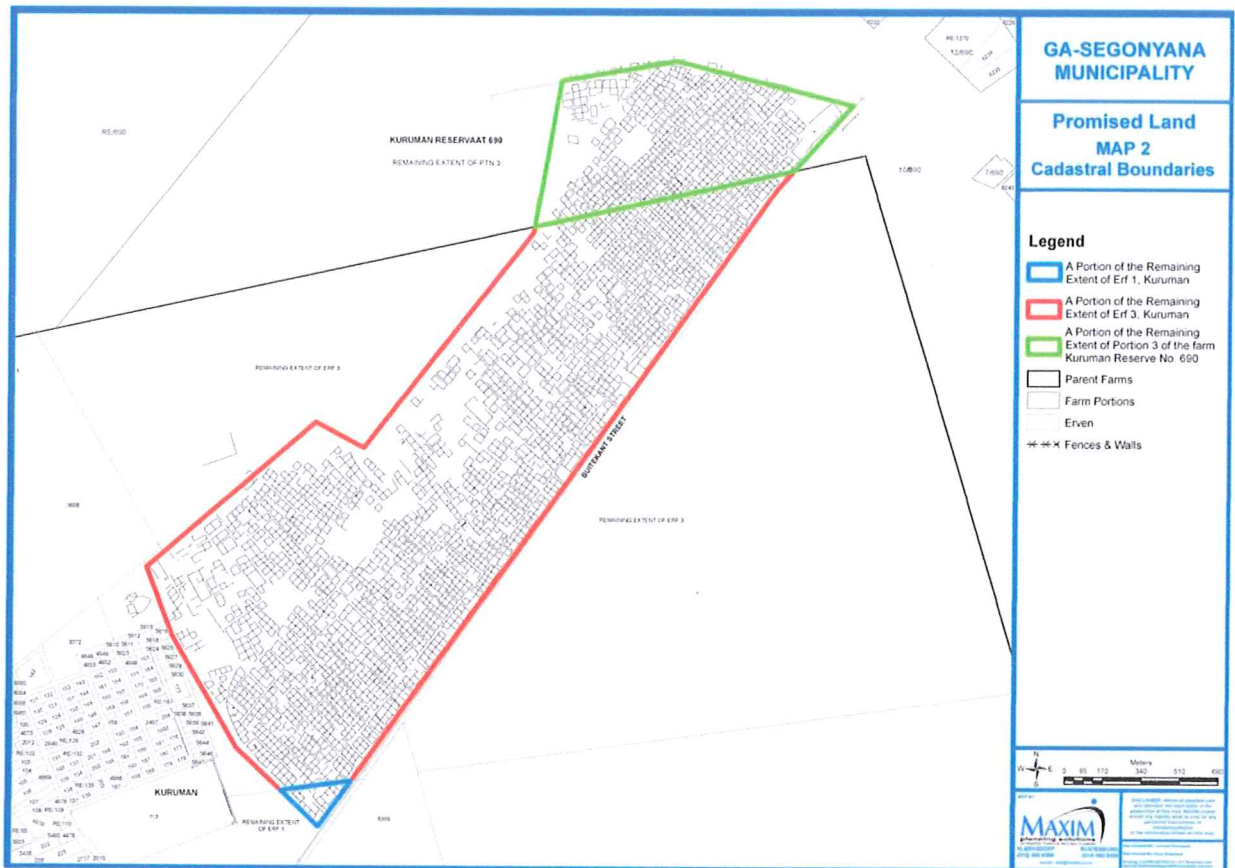
Requirements:

1. Dry well pump station capable of a delivery rate at least 45.6 ℓ/s
2. 250mm Ø HDPE PE 100, 2 250 meters in length
3. upgrading of Mothibistad oxidation ponds to conventional 3.22 Mℓ/day

Please note that these upgrades does not form part of this application.

6. DESCRIPTION OF THE PROPERTY

Portion of the Remaining Extent of Erf 1 and Erf 3 Kuruman and a Portion of the Remaining Extent of Portion 3 of the Farm Kuruman Reserve No. 690 within the Ga-Segonyana Local Municipality, Northern-Cape Province.



The coordinates of the site are:

Latitude: 27°25'05.60" South

Longitude: 23°27'38.63" East

The Surveyor-general 21 digit site reference number is:

C	0	4	1	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	1
C	0	4	1	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	3
C	0	4	1	0	0	0	3	0	0	0	0	0	6	9	0	0	0	0	0	3

Street address:	Buitekant street – see Locality Map for extent
Magisterial District or Town:	Ga-Segonyana Local Municipality and John Taolo Gaetsewe District Municipality.

Please see Appendix A.1 for a copy of the Locality map.