

**Northern Cape Province
DEPARTMENT OF
ENVIRONMENT & NATURE
CONSERVATION**



**Porofensi Ya Kapa Bokone
LEFAPHA LA TIKOLOGO LE
TSHOMARELO YA TLHAGO**

BASIC ASSESSMENT REPORT

**PROPOSED LOW COST HOUSING
DEVELOPMENT, RIETFontein
NORTHERN CAPE**

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(For official use only)

File Reference Number:

Application Number:

Date Received:

BASIC ASSESSMENT REPORT

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? YES

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 National Environmental Management Act (NEMA, Act 107 of 1998), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the competent authority based on the findings of an Environmental Assessment. NEMA is a national act, which is enforced by the Department of Environmental Affairs (DEA). In the Northern Cape, these powers are delegated to the Department of Environmental & Nature Conservation (DE&NC). According to the regulations of Section 24(5) of NEMA, authorisation is required for the following:

Government Notice [R544](#) listed activities (Listing Notice 1):

11: The construction of:

- (i) Buildings exceeding 50 square meters in size; or**
- (ii) Infrastructure or structures covering 50 square meters or more;**

Where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

18: The infilling or depositing of any material of more the 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from

- (i) a watercourse;**
but excluding where such infilling, depositing, dredging, excavation, removal or moving

- (i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or occurs behind the development setback line.**

22: The construction of a road, outside urban areas,

- (i) With a reserve wider than 13,5 meters or,**
- (ii) Where no reserve exists where the road is wider than 8 meters, or**
- (iii) For which an environmental authorization 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.**

23: The transformation of undeveloped, vacant or derelict land to residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares

Government Notice [R546](#) listed activities (Listing Notice 3):

13: The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.

Project Description

It is proposed that Remainder of Farm No. 585, Gordonia Rd, Rietfontein, be rezoned and subdivided for the development of serviced low cost housing, including associated infrastructure in Rietfontein.

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The property (Remainder of Farm No. 585, Gordonia Rd) is owned by the Mier Municipality (Applicant). No formal land use management system has been adopted by the Mier Municipality at this stage and the land use rights on the property may be described as being undetermined.

The development is located over two sites:

The Northern site is located in the northern parts of Rietfontein, to the west of Eland Street. The site coordinates as follows: S 26° 44.200', E 20° 01.674'.

The Southern site is located to the south of Rietfontein, west of the existing neighbourhood. The site coordinates as follows: S 26° 45.076', E 20° 01.144'. Please see figure 1 below.

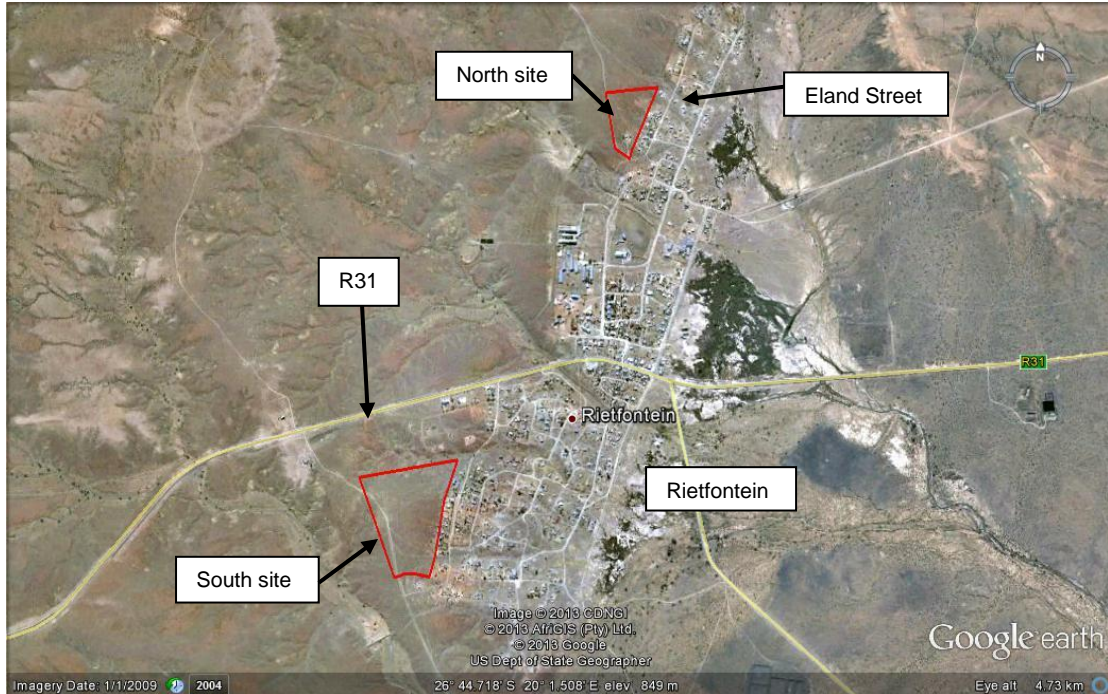


Figure 1: Aerial image showing the site locality.

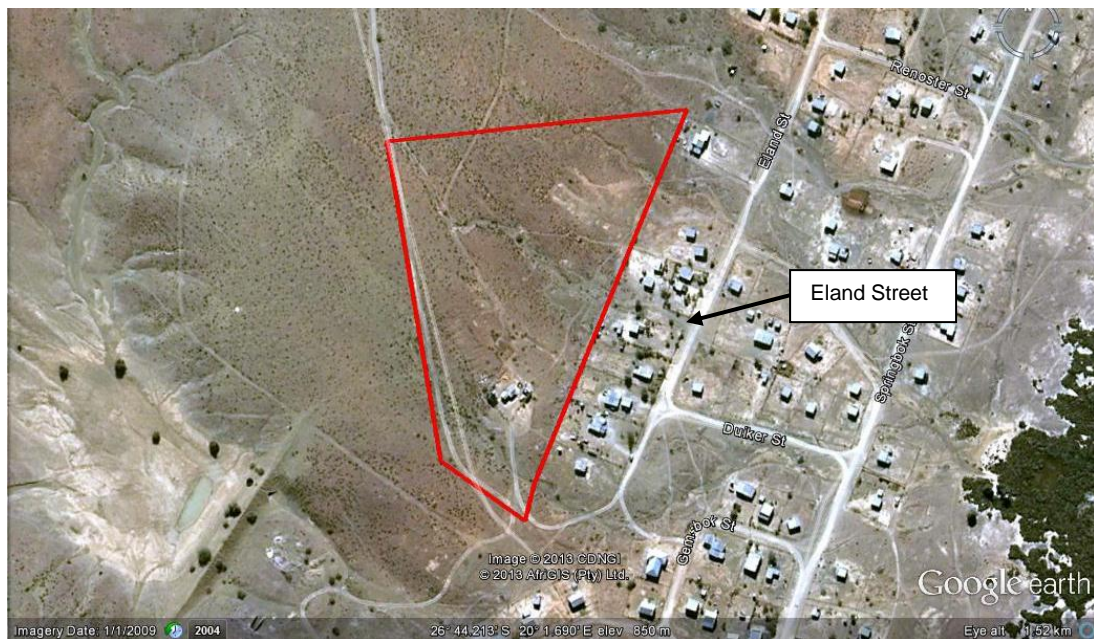


Figure 2: Aerial view of the northern site. The proposed site is depicted by the red polygon.

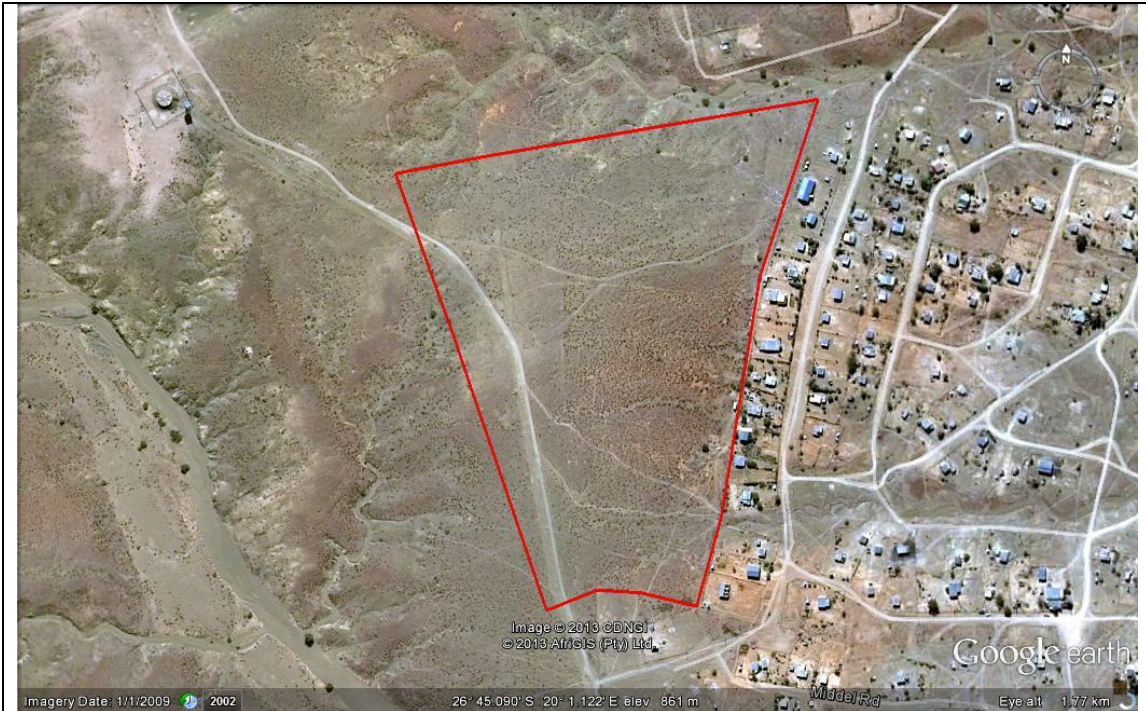


Figure 3: Aerial view of the southern site. The proposed site is depicted by the red polygon.

Remainder of Farm No. 585 has a total area of 1627.3752ha and does not carry any specified zoning at this stage. Only approximately 8.5ha portion of the property is involved in this development proposal. One hundred and twenty (120) individual land units are proposed, 109 of which are single residential erven, in response to the growing housing need in the municipality.

The associated infrastructure is as follows:

- **Water**

The provision of water to the proposed development will be the responsibility of the local authority.

- **Road network**

The proposed development includes an extended internal road network which will link with the existing road infrastructure of Rietfontein. The northern section will primarily link with Eland Street, but additional linkages will have to be considered in future planning. The southern section has fewer problems in his regard and will link up with 2 well defined roads in the area, one linking the development to the R31 and the other with the southern neighbourhoods of Rietfontein.

- **Sewerage**

A septic tank will be installed for each household/erf of the development. This will be emptied cleared once a month by a licenced service provider. It is estimated that each household will produce approximately 15 500l (15.5m³) per month.

This will be a temporary solution, until Authorisation is received for the construction and operation of a waste water treatment works for the town of Rietfontein (separate application).

- **Stormwater**

Storm water drainage will be accommodated above ground and in the streets of the proposed development layout, where the layout has been planned along the topography of the development site in such a way as to facilitate continued freedom of flow. Unlike was proposed

in other towns, the storm water furrows will be placed in small sections of public space as opposed to in undetermined zones. This was due to these furrows being well defined and easily isolatable as development no-go areas with no future development potential. No problems are foreseen in this regard.

- **Electricity**

The provision of electricity to the proposed development will be the responsibility of the local authority.

The proposed development includes the following land uses (**Appendix D1**):

- **Residential Zone I**

The primary use will be for dwelling houses (detached building containing only one dwelling unit). One hundred and nine (109) land units created will be given this zoning with the objective being residential opportunity in Rietfontein. This zoning will cover 4.0ha of the study area with each unit having an average size of 370m². This will constitute 46.9% of the total development.

- **Institutional Zone II**

The primary use is a House of Worship (a church, synagogue, mosque, temple, chapel or any other place for practising religion and includes any building in connection therewith, but does not include a funeral parlour with related chapel). One (1) unit of this zoning will be provided for within the proposed development, providing opportunity for religion within Rietfontein. The unit will be 1290m² in size, representing 1.5% of the total development.

- **Open Space Zone I**

The primary use is Public open space (land which is under or will be under the ownership of the local authority, which is not leased nor will be leased on a long-term basis, and which is utilised or will be utilised as an open space or a park, garden, picnic area, playground or square and includes a public space). Five (5) land units created will be given this zoning within the layout, accommodating storm water flow. This zoning will cover 7723m² of the study area with each unit having an average size of 1545m². This will constitute 9.1% of the total development.

- **Transport Zone II**

Primary use will be Public Road (any road or street for public use or any land intended for such purposes). Two (2) land units created will be given this zoning within the layout, accommodating the internal road network. This zoning will cover 3.1ha of the study area with each unit having an average size of 1.5ha. This will constitute 36% of the total development.

- **Undetermined Zone**

Three (3) land units created will be given this zoning with the objective of future development and storm water accommodation. This zoning will cover 5496m² of the study area with each unit having an average size of 1832m². This will constitute 6.5% of the total development.

Please refer to **Appendix A1** for the Site Development Plans.

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. Please note that the only feasible and reasonable alternative that has been identified and assessed is a design/layout alternative. The proposed development layout of the preferred and alternative layout will generally be over the same site, and will therefore have similar impacts (unless otherwise specified).

Site alternatives were considered, but these were deemed unfeasible. The site was selected as it was considered ideal from a planning perspective, as can be seen in Figure 4 of the Town planning report (**Appendix D1**).

The Paragraphs 3 - 13 will therefore be the same for each of the layout alternatives described below (unless otherwise specified).

Layout alternatives:

- Alternative 1 (preferred layout alternative) (**Appendix A1**)

The proposed development will be over 8.5ha and 120 new development stands are proposed, 109 of which are single residential erven, in response to the growing housing need in the municipality. An Institutional Zone II, Transport Zone (roads), Open Space Zone I and three Undetermined Zones are included.

- Alternative 2 (layout alternative) (**Appendix A2**)

The proposed development will be over 8.5ha and 121 new development stands are proposed, 110 of which are single residential erven, in response to the growing housing need in the municipality. Two Transport Zones (roads), Open Space Zone I and three Undetermined Zones are included.

This layout has a similar layout to the preferred layout.

However, no allowance has been made for Institutional Zone I, and there is less open space zoning to accommodate more residential erven. The road layout is also different, especially in the southern site.

Alternative 1 is the preferred layout as it not only provides 109 residential opportunities, it also provides an opportunity for an Institutional Zone II in order to cater in potential future community service needs. The road layout is also more simple and easier to navigate on the southern site.

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It therefore complies with the general principles as prescribed in Chapter 1, of the Development Facilitation Act (Act 67 of 1995), by:

- promote the integration of the social, economic, institutional and physical aspects of land development;
- promoting a diverse combination of land uses, also at the level of individual erven or subdivisions of land;
- The development must discourage the phenomenon of "urban sprawl" in urban areas and contribute to the development of more compact towns and cities.

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. *N/A*

Alternative:

Alternative S1¹ (preferred or only site alternative) North
 South
 Alternative S2 (if any) North
 South

Latitude (S):

Longitude (E):

26°	44.200'	20°	01.674'
26°	45.076'	20°	01.144'
26°	44.200'	20°	01.674'
26°	45.076'	20°	01.144'

Alternative S3 (if any)

In the case of linear activities:

Alternative:

Alternative S1 (preferred or only route alternative)

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

Latitude (S):

Longitude (E):

°	'	°	'
°	'	°	'
°	'	°	'

Alternative S2 (if any)

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

°	'	°	'
°	'	°	'
°	'	°	'

Alternative S3 (if any)

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

°	'	°	'
°	'	°	'
°	'	°	'

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:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

85000m ² (8.5ha)
85000m ² (8.5ha)
m ²

Length of the activity:

m

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

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Size of the site/servitude:

m ²
m ²

¹ "Alternative S.." refer to site alternatives.

² "Alternative A.." refer to activity, process, technology or other alternatives.

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Alternative A3 (if any)

m ²

5. SITE ACCESS

Does ready access to the site exist?

YES	
N/A	

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

Describe the type of access road planned:

N/A

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);
- 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?

Approximately R8 400 000
Unknown at this stage
YES
YES
± 75
Unknown at this stage
80%

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

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

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

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

What percentage of this will accrue to previously disadvantaged individuals?

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How many permanent new employment opportunities will be created during the operational phase of the activity?	Unknown at this stage
What is the expected current value of the employment opportunities during the first 10 years?	Unknown at this stage
What percentage of this will accrue to previously disadvantaged individuals?	Unknown at this stage

9(b) Need and desirability of the activity

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

According to the Town Planning Motivational report (**Appendix D1**), the South African economy has experienced a stable growth rate during the earlier parts of the past decade, contributing to the continued stability of the country. This has had numerous positive impacts, nationally, on provincial level and locally. Since 2008, instability of the world economy has led to a slumber of this tendency and we have been experiencing the consequences of a global economic recession. The beginning of the year 2010 showed a perceptible, albeit slow, process of repair to the South African economy, resulting in an increase in investment trust. The mentioned recession was felt to a lesser extent in South Africa, than in the overall global sphere and when the recession started to subside, the country was quick to positively respond. The above mentioned aspect is mostly due to the fact that local mining- and construction activities experienced on-going growth during the recession.

The Mier Local Municipality has not at this stage been party to the significant mining boom experienced in the province, but has also seen development, albeit on a smaller scale. This growth has been brought about through a focus on the tourism sector of the economy with attractions such as game farming, hospitality infrastructure and, of course, the Kgalagadi Transfrontier Park.

These mentioned aspects have not only had an economic impact, but has also contributed to population increases in the municipality, be it from immigration or natural growth. With this in mind, the Mier Municipality has felt the need to provide housing opportunity throughout its area of jurisdiction and identified the towns of Askham, Welkom, Groot Mier, Loubos and Rietfontein as areas of focus.

This application for 120 new development stands in Rietfontein, 109 of which are single residential erven, in response to the growing housing need in the municipality.

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

The activity will provide much needed additional housing opportunities, which is a local, provincial and national need. The proposed development will also formalize the town.

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

The activity will provide much needed additional housing opportunities, as well as providing job opportunities (approximately 75 jobs, 80% of which will be to previously disadvantaged individuals) during the construction phase of the development.

DESIRABILITY:			
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	NO
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 /		

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	<p>explanation:</p> <p>According to the Town Planning motivational report (Appendix D1), no SDF has been compiled for the Mier Municipality, thereby ruling out the possibility of development evaluation in these terms on a local level. This project has however been a directive from a Provincial level of planning and was commissioned by the Department of Co-Operative Governance, Human Settlements and Traditional Affairs (COGHSTA).</p> <p>However, it may be said that the proposed application for land use change and its associate layout is in line with the principles of the PSDF, seen as a tool for development evaluation where no local SDF exist. The local authority is therefore asked to evaluate this project upon its individual merit of providing additional housing opportunity in the Mier Municipality within the context of due legislative procedure.</p>	
5.	Will the proposed land use / development impact on the sense of place?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
6.	Will the proposed land use / development set a precedent?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
7.	Will any person's rights be affected by the proposed land use / development? See below	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
8.	Will the proposed land use / development compromise the "urban edge"?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
9.	<p>If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.</p> <p>Development and expansion of the town is inevitable as the population grows and the need for housing increases. However, the developers have been carefully as to where expansion of the town occurs, with emphasis on the environmental and heritage aspects, as well as consolidation of the town and its resources/services, and thus can be seen as setting a precedent for future expansion of Rietfontein.</p> <p>No person's rights are expected to be negatively affected by the proposed development. The activity is expected to have a general positive impact on the residents of the Rietfontein area.</p> <p>The proposed development is located within the "town commonage" of Rietfontein (please refer to Figure 3 of the Town Planning report (Appendix D1)).</p>	

BENEFITS:		
1.	Will the land use / development have any benefits for society in general?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
2.	<p>Explain: : The activity will provide much needed additional housing opportunities, which is a local, provincial and national need, as well as by providing job opportunities during the construction phase of the development.</p>	
3.	Will the land use / development have any benefits for the local communities where it will be located?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
4.	<p>Explain: The activity will provide much needed additional housing opportunities and by providing job opportunities during the construction phase of the development.</p>	

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: _____

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The National Heritage Resources Act, 1999 (Act 25 of 1999)	SAHRA – Northern Cape	
Northern Cape Planning and Development Act (Act 7 of 1998); - rezoning and subdivision	Local Municipality	Not yet

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?
If yes, what estimated quantity will be produced per month?

YES	<input type="checkbox"/>
Unknown at this stage	<input checked="" type="checkbox"/>

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

Solid waste will be disposed of in the municipal waste stream.

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

General waste will be consolidated on site and removed to the nearest registered landfill site as often as required.

Will the activity produce solid waste during its operational phase?
If yes, what estimated quantity will be produced per month?
How will the solid waste be disposed of (describe)?

YES	<input type="checkbox"/>
m ³	<input type="checkbox"/>

Solid waste removal will be disposed of in the municipal waste stream.

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

N/A

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?

<input type="checkbox"/>	NO
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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?

<input type="checkbox"/>	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?
If yes, what estimated quantity will be produced per month?

YES	<input type="checkbox"/>
15.5m ³ per household per month	<input checked="" type="checkbox"/>
NO	<input type="checkbox"/>

Will the activity produce any effluent that will be treated and/or disposed of on site?

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?

<input type="checkbox"/>	NO
--------------------------	----

If yes, provide the particulars of the facility:

Facility name:			
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:

N/A

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

<input type="checkbox"/>	NO
YES	<input type="checkbox"/>

If yes, is it controlled by any legislation of any sphere of government? N/A

If yes, the applicant should consult with the competent authority to determine whether it is

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necessary to change to an application for scoping and EIA.
If no, describe the emissions in terms of type and concentration:

N/A

11(d) Generation of noise

Will the activity generate noise?

If yes, is it controlled by any legislation of any sphere of government? N/A

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:

N/A

	NO
YES	NO

12. WATER USE

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

municipal	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: N/A

Does the activity require a water use permit from the Department of Water Affairs? To be determined

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.

litres	
YES	NO

13. ENERGY EFFICIENCY

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

Solar water heating will be considered for all residential houses.

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

N/A

SECTION B : SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- 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):

- Paragraphs 1 - 6 below must be completed for each alternative. **The Paragraphs 1 - 6 will be the same for each of the alternatives described below (unless otherwise specified) as the site is the same.**

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

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:

Flat	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 S2 (if any):

Flat	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):

Flat	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)?

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)		NO	NO
Dolomite, sinkhole or doline areas		NO	NO
Seasonally wet soils (often close to water bodies)		NO	NO
Unstable rocky slopes or steep slopes with loose soil		NO	NO
Dispersive soils (soils that dissolve in water)		NO	NO

BASIC ASSESSMENT REPORT

Soils with high clay content (clay fraction more than 40%) Any other unstable soil or geological feature An area sensitive to erosion		NO	YES	NO	YES	NO
		NO	YES	NO	YES	NO
		NO	YES	NO	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).

There are no formal rivers on the proposed site, but both sites are traversed by some drainage lines and small streams draining water from the slightly higher ground west of Rietfontein. These drainage lines are basically storm water channels with little riparian vegetation. The layout has taken these drainage lines into consideration, and they are located within erven zoned as Public Open Space and Undetermined, as well as possibly being incorporated into the stormwater planning (please refer to **Appendix A1**).



Figure 4: View of one of the drainage lines traversing the northern site



Figure 5: View of one of the drainage lines traversing the southern site.

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

- 4.1 Natural veld – good condition^E
- 4.2 Natural veld – scattered aliens^E
- 4.3 Natural veld with heavy alien infestation^E
- 4.4 Veld dominated by alien species^E
- 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

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s). [Please refer to Table 6 of the Biodiversity Assessment \(Appendix D2\).](#)

Natural veld – good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an “E” 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.

According to the Biodiversity Assessment ([Appendix D2](#)), the proposed sites are situated within the Nama Karoo Biome (Northern Bushmanland). All of these properties are used mainly for livestock grazing and or game farming. No intensive farming has been observed (lack of irrigation water). It is expected that natural fauna and avi-fauna may still be present, although limited or impacted as a result of the urban activities of the nearby town. Very little game is expected to be encountered (none was observed).

Both sites are still covered by natural vegetation, of which that on the northern site is in relative good condition, while that on the southern site is more degraded and impacted as a

result of urban associated activities.

According to the Biodiversity Assessment (**Appendix D2**), in accordance with the 2006 Vegetation map of South Africa, Lesotho and Swaziland only one broad vegetation type is expected on the property, namely Kalahari Karroid Shrubland (see figure 4 below).

According to the *National list of ecosystems that are threatened and in need of protection* (GN 1002, December 2011), Kalahari Karroid Shrubland is classified as "Least Threatened".

The natural veld encountered on the northern site can be described as a sparse karroid type vegetation on a very rocky substrate. The vegetation found on the southern site was very similar to that of site 1 one, but even less dense. Species encountered and species composition was also similar.

Please refer to Table 4 of the Biodiversity Assessment (**Appendix D2**) for a list of vegetation encountered on both sites.

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^A
- 5.6 Retail commercial & warehousing
- 5.7 Light industrial
- 5.8 Medium industrial^{AN}
- 5.9 Heavy industrial^{AN}
- 5.10 Power station
- 5.11 Office/consulting room
- 5.12 Military or police base/station/compound
- 5.13 Spoil heap or slimes dam^A
- 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 Sewage treatment plant^A
- 5.22 Train station or shunting yard^N
- 5.23 Railway line^N
- 5.24 Major road (4 lanes or more)^N
- 5.25 Airport^N
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station^H
- 5.31 Landfill or waste treatment site
- 5.32 Plantation
- 5.33 Agriculture –
- 5.34 River, stream or wetland – **Dry drainage channels**
- 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 ^N "are ticked, how this impact will / be impacted upon by the proposed activity.

BASIC ASSESSMENT REPORT

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

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

If YES, specify and explain:	N/A
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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?	[REDACTED]
If YES, explain:	Uncertain
<div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Please see below</div>	
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.	

BASIC ASSESSMENT REPORT

Briefly explain the findings of the specialist:

According to Heritage Impact Assessment (**Appendix D3**), the site of the proposed Rietfontein residential development has archaeological remains spanning the Earlier Stone Age (ESA), Middle Stone Age (MSA) and the Later Stone Age (LSA). It is very rare to find all three stone tool technologies on one site. Five possible burials were also located on the property. It is unclear if these are recent or historical burials, and they bare further investigation.

Seven ESA lithics were found, representing the Acheulian Technological period. All Acheulian pieces were made on sandstone. The MSA contributed the bulk of the findings. 77 flakes and various descriptions and 38 cores were photographed during the foot survey. Material included: sandstone, quartz, quartzite, jasper and chert. The LSA was not very well represented: only one flake (sandstone) and one core (quartzite) were found.

The burials are all located to the west of the gravel road traversing the property.

The impacts are therefore considered highly likely and permanent.

The following mitigation measures are proposed:

- Stone Tools

The wide dispersal and the relative density of the finds necessitates some measure of mitigation.

The wide area covered by the stone stools means that establishing a no-go zone for development is not practical. Further investigation is therefore suggested as a way of conserving a representative sample of archaeological material from this site. Once the site has been sampled it could potentially be destroyed and development could continue without any archaeological constraints. Sampling would entail the following:

- Application for a sampling/excavation permit from SAHRA.
- Development of a sampling strategy to ascertain the dispersal and density of the stone tools and collect a representative sample of the lithics and any other cultural material.
- Test pit sampling to ascertain the depth of the deposits. No more than five would be needed.

An application for destruction of the site could then be obtained from SAHRA, should they deem the sampling satisfactory.

- Graves

The best way forward regarding the graves would be to find out if they are graves. If not, then only the stone tools need be mitigated. Should the graves be viable then further measures must be enacted. The area surrounding the graves must be fenced off, before and after development, with the necessary signage.

Will any building or structure older than 60 years be affected in any way?
 Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

	NO
YES	

BASIC ASSESSMENT REPORT

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 (Please refer to Appendix E2 for proof of Advertisements and Site notices)

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
 - (iv) 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.

BASIC ASSESSMENT REPORT

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 following authorities were notified of the application.

- SAHRA Northern Cape
- Northern Cape Department of Agriculture and Land Reform
- Department of Co-operative Governance, Human Settlements and Traditional Affairs
- Department of Environment and Nature Conservation
- Department of Water Affairs – Northern Cape
- Department of Roads and Public Works
- Siyanda District Municipality
- Mier Local Municipality

Please refer to **Appendix E1** for the I&AP list and proof of notifications.

List of authorities from whom comments have been received:

No comments were received during the initial round of public participation from the authorities.

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):

No comments were received during the initial Public Participation round

BASIC ASSESSMENT REPORT

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.

No issues were raised by Interested and Affected Parties thus far. All potential issues have been identified by the EAP, specialists (Biodiversity and Heritage), town planners, engineers and landowner.

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):

N/A at this stage

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.

Alternative (preferred alternative)

Direct impacts:

Archaeological heritage

According to Heritage Impact Assessment (**Appendix D3**), the site of the proposed Rietfontein residential development has archaeological remains spanning the Earlier Stone Age (ESA), Middle Stone Age (MSA) and the Later Stone Age (LSA). It is very rare to find all three stone tool technologies on one site. Five possible burials were also located on the property. It is unclear if these are recent or historical burials, and they bare further investigation.

Seven ESA lithics were found, representing the Acheulian Technological period. All Achaean pieces were made on sandstone. The MSA contributed the bulk of the findings. 77 flakes and various descriptions and 38 cores were photographed during the foot survey. Material included: sandstone, quartz, quartzite, jasper and chert. The LSA was not very well represented: only one flake (sandstone) and one core (quartzite) were found.

The burials are all located to the west of the gravel road traversing the property.

The impacts are therefore considered highly likely and permanent.

The following mitigation measures are proposed:

- Stone Tools

The wide dispersal and the relative density of the finds necessitates some measure of mitigation.

The wide area covered by the stone stools means that establishing a nogo zone for development is not practical. Further investigation is therefore suggested as a way of conserving a representative sample of archaeological material from this site. Once the site has been sampled it could potentially be destroyed and development could continue without

any archaeological constraints. Sampling would entail the following:

- Application for a sampling/excavation permit from SAHRA.
- Development of a sampling strategy to ascertain the dispersal and density of the stone tools and collect a representative sample of the lithics and any other cultural material.
- Test pit sampling to ascertain the depth of the deposits. No more than five would be needed.

An application for destruction of the site could then be obtained from SAHRA, should they deem the sampling satisfactory.

- Graves

The best way forward regarding the graves would be to find out if they are graves. If not, then only the stone tools need be mitigated. Should the graves be viable then further measures must be enacted. The area surrounding the graves must be fenced off, before and after development, with the necessary signage.

Biodiversity

The proposed housing development is considered to have a permanent, but localised impact on wildlife and avi-fauna. Taking the above into account it is clear that the proposed project will have an impact on natural vegetation which is considered to be of high conservation value and might be located within a proposed future conservation area. In addition a number of small drainage lines/streams were also encountered on both sites.

On the other hand, because of the localised nature of the impact the impact on ecosystem function is regarded as very low, cumulative impact on ecology is regarded as very low and finally the impact on economic use of the vegetation is regarded as very low.

The impact on threatened or protected ecosystems is thus rated as low-medium.

Mitigation:

- All larger watercourses should be protected by a 32 m river corridor as per Siyanda EMF.
- Special habitats

The vegetation itself is not considered to belong to a threatened or protected ecosystem. However, shrubland in this area is classified as of high conservation priority within the Draft Siyanda EMF, and the southern site may fall within a proposed future conservation area. However, the specific site was given a relative low sensitivity index in the same report. No special habitats, were encountered on site (e.g. quartz patches or broken veld), which could sustain significant smaller ecosystems.

There are no formal rivers on any of the proposed site, but various drainage furrows were encountered on both proposed sites. Although most of these drainage lines are basically storm water channels with little riparian vegetation they should still be seen as significant biodiversity features, which should be protected by adequate river corridors or suitably incorporated within the storm water planning for these town additions.

It is considered unlikely that the proposed project will have a significant impact on special habitats if the impact mitigation recommendations are adhered to.

The impact is thus rated as low-medium.

Mitigation:

- Protect the smaller furrow within or incorporate it into a storm water system.

- Corridors and/or conservation networks

Looking at the larger site and its surroundings it shows excellent connectivity with remaining natural veld in almost all directions. Corridors and natural veld networks are still relative unscathed (apart from road networks).

Because of the localised impact of the housing project and because the site are already impacted by the Rietfontein settlement it is highly unlikely that it will have any significant additional impacts on corridors or conservancy networks. **The impact is thus rated as very low.**

- Threatened or endangered species

No threatened or endangered species were recorded during the site visit, however, this does not rule out their presence as they may be subject to seasonable rainfall and may not have been observable during the time of the site visit, since the composition of the vegetation layers will fluctuates with seasonal rainfall. However, it must be noted that the vegetation type is considered "Least Threatened" and that this classification is based on plant species diversity and turnover as well as habitat transformation. The number of species per broad geographical levels for these biomes is low. It is therefore very unlikely that any red data species will be confined to the proposed site alone.

Taking the above into account it is highly unlikely that the proposed project will have a significant or long term effect on threatened or endangered species.

The impact is thus rated as low.

- Protected Species

According to the Biodiversity Assessment (**Appendix D2**), the National Forests Act (NFA) of 1998 (Act 84 of 1998) provides for the protection of forests as well as specific tree species (GN 716 of 7 September 2012). In addition to the NFA the Northern Cape Nature Conservation Act 9 of 2009 (NCNCA) came into effect on the 12th of December 2011, which also provides for the sustainable utilization of wild animals, aquatic biota and plants. Schedule 1 and 2 of the act give extensive lists of specially protected and protected fauna and flora species in accordance with this act.

No protected species was encountered during the site visit. This does not rule out their presence as they may be subject to seasonable rainfall and may not have been observable during the time of the site visit.

It is thus considered possible but unlikely that the project will have a significant impact on protected species.

The impact is thus rated as low.

Mitigation:

- As a pre-cautionary measure all viable herb-, bulbs- and succulent plant species encountered within the footprint should be removed and replanted through a dedicated search and rescue operation.
- Permits must be obtained for the removal of any protected species which are encountered.

- Direct loss of vegetation

Both sites still support natural vegetation (shrubland) which, according to the draft Siyanda EMF is considered to be of high conservation value. In addition the southern site might be located within a proposed future conservation area. However, the impact will be localised, no special habitats were encountered, no protected species were encountered, it will not lead to significant loss of ecological processes, biodiversity or ecosystem connectivity and is not expected to have any significant impact on wildlife or avi-fauna.

Taking the above into account the direct impact on the environment is **rated as low-medium.**

Mitigation: The following is some mitigation which will minimise the impact of the development:

- Although most of these drainage lines are basically storm water channels with little riparian vegetation they should still be seen as significant biodiversity features, which should be protected by adequate river corridors or suitably incorporated within the storm water planning for these town additions.
- Permits must be obtained for the removal of any protected species which might be encountered.
- As a pre-cautionary measure all viable herb-, bulbs- and succulent plant species encountered within the footprint should be removed and replanted through a dedicated search and rescue operation.
- Only existing access roads should be used for access to the terrain. Access roads must be clearly demarcated and access must be tightly controlled (deviations may not be allowed).
- Indiscriminate clearing of areas must be avoided (all remaining areas to remain as natural as possible).
- All topsoil (at all excavation sites) must be removed and stored separately for re-use for rehabilitation purposes. The topsoil and vegetation should be replaced over the disturbed soil to provide a source of seed and a seed bed to encourage re-growth of the species removed during construction.
- Once the construction is completed all further movement must be confined to the access tracks to allow the vegetation to re-establish over the excavated areas.
- Rehabilitation must be done after construction.

Freshwater ecosystems

There are no formal rivers on the proposed site, but the site is traversed by some drainage lines and small streams draining water from the slightly higher ground just west of Rietfontein onto the relative flat area in the general location of the Rietfontein settlement. These drainage lines are basically storm water channels with little riparian vegetation. The layout has taken these drainage lines into consideration, and is located within erven zoned as Public Open Space and Undetermined, decreasing the potential impact on these. **The impact is thus rated as low.**

Visual and noise impacts

The activity will impact on the visual character of the area. The presence of construction plant during the construction phase will have a visual impact, but this will only be during the construction phase and is expected to have a low impact.

The activity will create some noise during the construction phase of the development. Noise

mitigation measures will be dealt with in the EMP. With the mitigation measures, as described in the EMP (**Appendix F**), the potential noise impacts are also expected to be negligible.

Indirect impacts:

According to the Biodiversity Assessment (**Appendix D2**), the following possible indirect impacts were associated with the proposed project:

- Establishment of a temporary construction associated infrastructure or facilities.
- Temporary storage areas (e.g. pipe's and fittings and concrete mixing material).
- Waste management.

It is very likely that the proposed project will have indirect impacts. It is considered that indirect impacts will have a similar impact as direct impacts, which will lead to a cumulative effect on the environment. However, indirect impacts can be much reduced through good environmental control during construction.

On its own the impact is considered to be low-medium.

Mitigation:

- Appoint a suitably experience ECO during the construction phase of the project.

Cumulative impacts:

Having discussed the various possible environmental impacts above, it is concluded that:

- The proposed sites are both located on relative natural veld (slightly impacted by grazing and urban creep).
- The number of species per broad geographical levels for this biome is low and it is therefore very unlikely that any single species will be confined to any of the proposed sites alone. In addition no protected species were encountered. The impact on individual species is thus regarded as very low.
- The impact on sensitive habitats, however, is regarded as low-medium, because of the fact that shrubland has a high conservation value within the draft Siyanda EMF and site 2 may be located within a future conservation area as well as the presence of various small drainage lines/streams.
- On the other hand, because of the localised nature of the impact the impact on ecosystem function is regarded as very low, cumulative impact on ecology is regarded as very low and finally the impact on economic use of the vegetation is regarded as very low.

The proposed project will thus have a permanent, but localised impact, which can, through the implementation of impact minimisation actions, be controlled and further reduced.

On the whole the cumulative impact is considered to be low-medium.

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.

Alternative A (preferred alternative)

The following is a summary of the potential impacts, and their ratings, after mitigation:

Construction phase.

Potential impacts on archaeological heritage – **Medium, highly likely, permanent.**

Impact on threatened or protected ecosystems - **Low (negative), highly unlikely.**

Special habitats – **Low-medium (negative), highly unlikely.**

Corridors and/or conservation networks – **Very Low (negative), highly unlikely.**

Threatened or endangered species – **Low (negative), very unlikely.**

Protected species – **Low (negative), very likely, only during construction phase.**

Freshwater ecosystems – **Low (negative), probable, only during construction phase.**

Job creation – **Low (Positive), definite.**

Noise impact - **Negligible, definite, only during construction phase.**

Visual impact – **Low (negative), definite, during construction**

Operational Phase

Potential impacts on archaeological heritage – **Negligible**

Loss of vegetation and associated habitat - **Negligible**

Impact on threatened vegetation - **Negligible**

Freshwater ecosystems – **Negligible**

Job creation – **Low (Positive), definite**

Noise impact - **Negligible**

Visual impact – **Low (negative), definite, permanent**

Decommissioning

The project as proposed does not require 'decommissioning' or 'closure', as such the potential impacts thereof is considered irrelevant.

BASIC ASSESSMENT REPORT

No-go alternative (compulsory)

According to the Biodiversity Assessment (**Appendix D2**), the “No-Go alternative” does not signify significant biodiversity gain or loss especially on a regional basis. However, it will ensure that none of the potential impacts above occur. The current status quo will remain and there will be no immediate additional impact on the vegetation, protected species or river corridors. However, normal growth within the town and its associated urban activities will over time have a further impact, which might be better managed through controlled development.

On the other hand the local municipality and governments have a socio-economic responsibility to provide basic living. Over the long term the proposed project is likely to be one of the viable solutions with acceptable environmental impact.

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

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):

N/A

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:

The following is a list of recommended conditions and mitigation measures from a biodiversity and heritage perspective:

- All construction must be done in accordance with an approved construction and operational phase Environmental Management Plan (EMP), which must be developed by a suitably experienced Environmental Assessment Practitioner.
- A suitably qualified Environmental Control Officer must be appointed to monitor the construction phase in terms of the EMP and the Biodiversity study recommendations as well as any other conditions which might be required by the Department of Environmental Affairs.
- An integrated waste management system must be implemented during the construction phase.
- All rubble and rubbish (if applicable) must be collected and removed from the site to a suitable registered waste disposal site.
- All alien vegetation should be removed from the larger property.
- All efforts must be made to protect all mature indigenous trees within the proposed final footprint (and any other protected species that might be encountered on site). On-site micro- adjustment of the final Ervin must be done in order to minimise the impact on as many of the protected species as possible.
- Only existing access roads should be used for access to the terrain. Access roads must be clearly demarcated and access must be tightly controlled (deviations may not be allowed).
- A suitably qualified ECO or botanist must inspect the final site with the aim of mapping the protected plant species listed in the NCNCA. Should any protected or specially protected plant be located within the final footprint, approval must be obtained from the DAFF, before any work is done on the site.
- Permits must be obtained for the removal of any protected species which cannot be

avoided.

- As a pre-cautionary measure all viable herb-, bulbs- and succulent plant species encountered within the footprint should be removed and replanted through a dedicated search and rescue operation.
- Indiscriminate clearing of areas must be avoided (all remaining areas to remain as natural as possible).
- All topsoil (the top 15-20 cm at all excavation sites), must be removed and stored separately for re-use for rehabilitation purposes. The topsoil and vegetation should be replaced over the disturbed soil to provide a source of seed and a seed bed to encourage re-growth of the species removed during construction.
- Once the construction is completed rehabilitation must be implemented.
- No firewood should be collected on site. Adequate, safe, cooking equipment must be provided for workers at the construction site camp.
- Although most of the drainage lines are basically storm water channels with little associated riparian vegetation they should still be seen as significant biodiversity features and should be protected by adequate river corridors or suitably incorporated within the storm water planning for these town additions.

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