

**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, NOENIEPUT, MIER
MUNICIPALITY,
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 in 2010, 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:

Activities as Applied for i.t.o. NEMA Act 1998 (Act No.107 of 1998), as amended in the **Environmental Impact Assessment Regulations, 2010:**

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity:
National Environmental Management Act, 1998 (Act No. 107 of 1998). Government Notice R544 Activity (Listing Notice 1).	11	<p>The construction of:</p> <ul style="list-style-type: none"> (i) Canals; (ii) Channels; (iii) Bridges; (iv) Dams; (v) Weirs; (vi) Bulk storm water outlet structures; (vii) Marinas; (viii) Jetties exceeding 50 square meters in size; (ix) Slipways exceeding 50 square meters in size; (x) Buildings exceeding 50 square meters in size; or (xi) Infrastructure or structures covering 50 square meters or more; <p>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.</p>
National Environmental Management Act, 1998 (Act No. 107 of 1998). Government Notice R544 Activity (Listing Notice 1).	18	<p>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</p> <ul style="list-style-type: none"> (i) a watercourse; (ii) the sea; (iii) the seashore; (iv) the littoral active zone, an estuary or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is greater – <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving</p> <ul style="list-style-type: none"> (i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or (ii) occurs behind the development setback line.
National Environmental Management Act, 1998 (Act No. 107 of 1998). Government Notice R544 Activity (Listing Notice 1).	22	<p>The construction of a road, outside urban areas,</p> <ul style="list-style-type: none"> (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

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		obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Notice 545 of 2010.
National Environmental Management Act, 1998 (Act No. 107 of 1998). Government Notice R544 Activity (Listing Notice 1).	23	The transformation of undeveloped, vacant or derelict land to – (i) 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, or (ii) Residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares; - Except where such transformation takes place (i) For linear activities; and (ii) For purposes of agricultural/afforestation, in which case Activity 16 of Notice No. R. 545 applies.
National Environmental Management Act, 1998 (Act No. 107 of 1998). Government Notice R546 Activity (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 , except where such removal of vegetation is required for: (1) the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the activity is regarded to be excluded from this list; (2) the undertaking of a linear activity falling below the thresholds mentioned in Listing 1 in terms of GN R.544 of 2010.

Please Note: The regulations have since changed, end 2014, (No. R. 982 – NEMA ACT 107 of 1988, as amended in the **EIA Regulations 2014**), the triggered activities as listed according to the new regulations can be found in the table below:

Listed activity as described in No. R. 982 - NEMA ACT 107 of 1988, as amended in the **EIA Regulations 2014**

Listing Notice 1 (No.R983), Activity 12:

The development of;

- (i) canals exceeding 100 square metres in size;
- (ii) channels exceeding 100 square metres in size;
- (iii) bridges exceeding 100 square metres in size;
- (iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size;
- (v) weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size;
- (vi) bulk storm water outlet structures exceeding 100 square metres in size;
- (vii) marinas exceeding 100 square metres in size;
- (viii) jetties exceeding 100 square metres in size;
- (ix) slipways exceeding 100 square metres in size;
- (x) **buildings exceeding 100 square metres in size;**
- (xi) boardwalks exceeding 100 square metres in size; or
- (xii) **infrastructure or structures with a physical footprint of 100 square metres or more;**

where such development occurs;

- (a) within a watercourse;
- (b) in front of a development setback; or
- (c) if no development setback exists, **within 32 metres of a watercourse, measured from the edge of a watercourse;**

Excluding:

- (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;
- (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;
- (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;

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	<p>(dd) where such development occurs within an urban area; or (ee) where such development occurs within existing roads or road reserves.</p> <p><u>Listing Notice 1 (No.R983), Activity 19:</u></p> <p>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from;</p> <p>(i) a watercourse; (ii) the seashore; or (iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation, removal or moving;</p> <p style="padding-left: 20px;">(a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.</p>
	<p><u>Listing Notice 1 (No.R983), Activity 24:</u></p> <p>The development of; (i) a road for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding;</p> <p style="padding-left: 20px;">(a) roads which are identified and included in activity 27 in Listing Notice 2 of 2014; or (b) roads where the entire road falls within an urban area.</p>
	<p><u>Listing Notice 1 (No.R983), Activity 27:</u></p> <p>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for;</p> <p>(i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>
	<p><u>Listing Notice 1 (No.R983), Activity 28:</u></p> <p>Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development:</p> <p style="padding-left: 20px;">(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p>
	<p><u>Listing Notice 3 (No.R985), Activity 12:</u></p> <p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of vegetation is required for maintenance purposes undertaken in accordance with a maintenance</p> <p>Northern Cape</p> <ol style="list-style-type: none"> I. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; II. Within critical biodiversity areas identified in bioregional plans; III. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas. IV. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning management plan.

Project overview

It is proposed that Portion 18 of Farm Witkop 350, is to be rezoned and subdivided for the development of serviced low cost housing, including associated infrastructure

The property (Portion 18 of Farm Witkop 350) is owned by the Mier Municipality (Applicant). No formal land use management system has been adopted by the Mier Municipality at this stage, however, the farm on which the current town (Noenieput) is located is zoned as "Agricultural 1")

The proposed development will be approximately 11ha and 111 new development stands are proposed; in response to the growing housing need in the municipality.

Need & Desirability

The municipality has indicated that there is a pressing need for houses, especially low cost houses, as well as serviced plots within all of the communities within the Mier Municipal Area. This is reflected by the housing backlog contained in the 2009/10 version of the Mier IDP (BVi, 2011). The Mier Municipality residential project, are proposing the development of a number of low cost housing at the towns of Rietfontein, Groot Mier, Askham, Welkom, Loubos and Noenieput to alleviate some of the housing problems of the Municipality.

Noenieput is a very small town located the Northern Cape (Mier Local Municipality) in a region with low population densities. The town, which is predominantly residential does, supports other central functions such as places of worship and educational facilities to support the local community and its surroundings. Noenieput is located on the Portion 18 of the Farm Witkop No. 350, Noenieput (Mier Municipality), and is owned by the Mier Municipality. The town is situated in the western section of the Mier Municipality just east of the Namibian border, approximately 170 km north-north-west of Upington. The proposed new development site will be located to the east of the town and just north of the Noenieput Police station. 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 Mier Municipality plan to rezone and subdivide the proposed site, in order to establish new residential Ervin in response to the growing housing need in the municipality.

The specific location has been chosen for the following reasons:

1. It is located on Municipal owned land.
2. The specific location was chosen by the Municipality and local town planners in order to try and integrate the new Ervin with the rest of Noenieput.
3. It is suitably placed in terms of services.



Figure 1: Aerial view of the site. The proposed site is indicated by the green polygon.

Civil and Electrical Services

A report is being compiled by the contracted engineers regarding the associated infrastructure for the required civil and electrical services.

Land Uses

The proposed new development site will be located to the east of the town and just north of the Noenieput Police station. 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 proposed development includes the following land uses:

- *Residential Zone I*

The SR1 zone provides for predominantly single-family dwelling houses and additional use rights in low-to medium density residential neighborhoods, whether these incorporate small or large erven. Limited employment and additional accommodation opportunities are possible as primary or consent uses, provided that the impacts of such uses do not adversely affect the surrounding residential environment. The primary use will be for dwelling houses (detached building containing only one dwelling unit). One hundred and six (102) land units created will be given this zoning with the objective being residential opportunity in Noenieput.

- *Institutional Zone II*

The CO2 zone provides for a full range of institutional and community needs, which can be of a local or regional scale, and includes health and welfare as well as religious and educational services. 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

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development. The unit will be 714m² in size, representing 0.9% of the total development.

- *Open Space Zone I*

The OS1 zone provides for the conservation of environmental resources, although cultural heritage resources may also be included. Provision is made for limited, low-impact uses associated with conservation, such as environmental education, associated infrastructure and facilities for tourists and visitors with the approval of Council. Three (3) unit of this zoning will be provided for within the proposed development.

- *Open Space Zone II*

The OS2 zone provides for active and passive recreational areas on public land, as well as protection of landscape and heritage areas including woodlands, ridges, watercourses, wetlands and the coastline. It is important to recognize the interests of the general public for access to and preservation of public open space Three (3) unit of this zoning will be provided for within the proposed development.

- *Transport Zone II*

The TR2 Zone provides for public streets and roads, whether constructed or still to be constructed, as well as premises for the public parking of operable motor vehicles. Such parking may be provided in buildings or open parking areas, with or without the payment of a fee, in order to address the need for off-site parking. On-site parking for a permitted activity in any zone is considered to be an associated use and do not represent a separate use category that requires separate zoning or approval. Primary use will be Public Road (any road or street for public use or any land intended for such purposes). One (1) unit of this zoning will be provided for within the proposed development, constituting the internal road network of the proposed development.

Please refer to **Appendix A6** for the Locality Maps Site Plans and **Appendix A5** for the Layout designs.

Noenieput Concept 3		Land Units	Tot. Area (m ²)	Avg.	%
RES I	Single Home	102	36977,9	362,5	46,1
OPEN I	Public Open Space	3	3411,1	1137,0	4,3
OPEN II	Private Open Space	3	15097,7	5032,6	18,8
INST II	Worship	1	1123,4	1123,4	1,4
AUTH	Municipal Use	1	1609,3	1609,3	2,0
TRANS II	Public Street	1	21971,9	21971,9	27,4
		Total:	80191,3		100,0

Specialist Studies

A biodiversity and botanical scan was conducted to identify significant environmental features.

The proposed housing project location is situated within the Nama Karoo Biome (Bushman land). All of these properties are used mainly for livestock grazing and or game farming. No intensive farming has been observed. 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). Although the site is still covered by natural vegetation, the vegetation shows signs of degradation. A portion of this specific area was levelled at some stage and presumably used for sporting fields.

There are no formal streams or wetlands on the proposed property itself, but two very small drainage

lines (furrows) traverse the property from northwest to south east (one of which seem to be a manmade drainage channel). Just north of the property another slightly larger drainage line can be found.

The main biodiversity features of this area are:

1. Natural veld still supported by these sites (Kalahari Karroid Shrubland)
2. The seasonal drainage lines found on the site.

The main drivers in this vegetation type would be grazing pressure (herbivore), and could determine plant community composition and occurrence of species. Grazing may be an important factor in regulating competitive interaction between plants. Certain species can act as important “nursery” plants for smaller species and are also important for successional development after disturbance. Tortoises and mammals can be important seed dispersal agents. Watercourses, wetlands, upland- down land gradients or vegetation boundaries are all significant ecological features. The cumulative impact is considered to be low-medium.

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

The impact special habitats are rated as low-medium.

The impact on corridors and/or conservancy networks is rated as very low.

The impact on threatened or endangered species is rated as low.

The impact on protected species is rated as medium.

Direct and indirect impacts are both rated as low-medium.

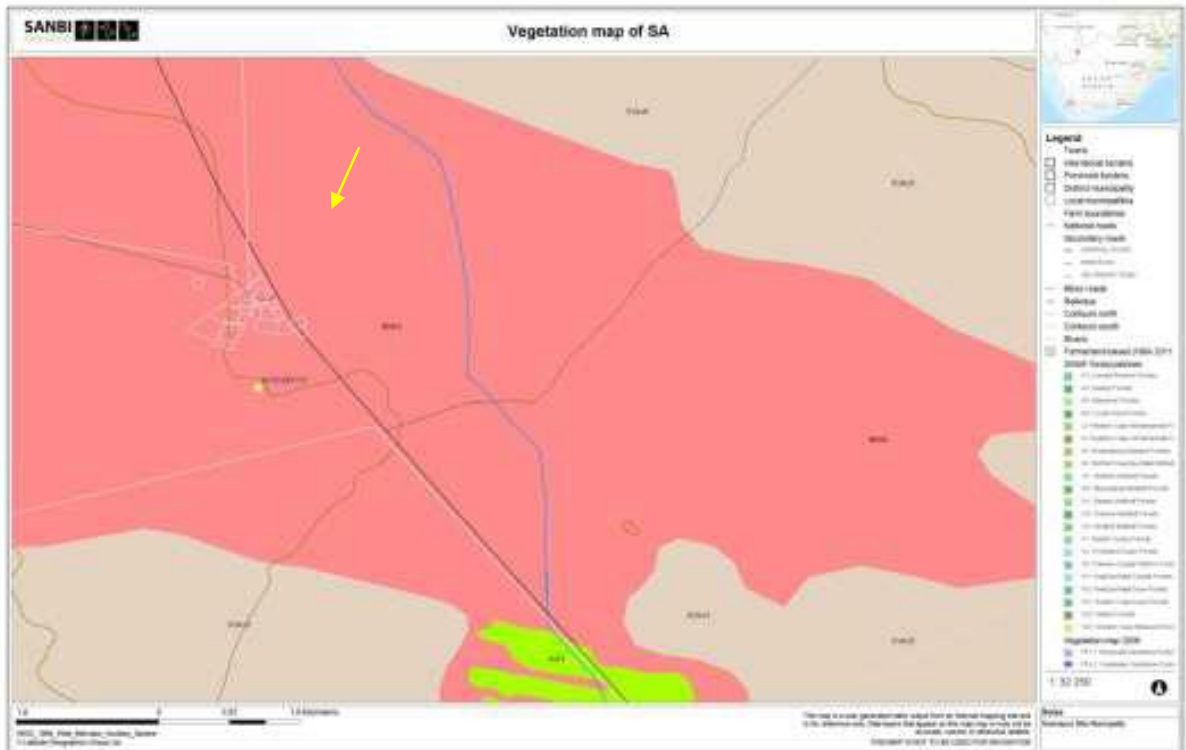


Figure 2: Vegetation Map

A heritage impact assessment was also conducted. Stone tools form a strong background signature across the property. Acheulian, MSA and LSA tools were located. Four graves or burials (informal) were located on the property.

Grave 1: 27°30'45.82"S; 20°8'36.54"E

Grave 2: 27°30'35.02"S; 20°8'28.08"E

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Grave 3: 27°30'43.47"S; 20°8'37.73"E

Grave 4: 27°30'43.01"S; 20°8'87.87"E

The lithic found on the property rate as Generally Protected B. This site needs further recording before destruction. The range and number of stone tools found on the property suggest that the site has a generally Medium significance.

The burials may have a high local significance and are awarded a field rating of Generally Protected A. The site should be mitigated before destruction.

The stone tools or lithic found on the property need to be recorded and sampled in detail, prior to development. The recording of the lithic should assess the raw material, typology and dimensions of a sample of the property. It is recommendation that the site be mapped, documented, minimally sampled, and then destroyed (with a permit). Mitigation usually involves a requirement to collect sample through a controlled surface pickup (CSP) of the cultural and other remains.

Prior to the CSP a permit needs to be acquired from SAHRA for the sampling process. After the CSP the sampled will be analysed and a report sent to the developers and SAHRA. SAHRA should then issue a permit allowing the destruction of the site. The sample will be stored for future reference at the designated repository.

The burials need further investigation. Firstly, it needs to be determined if they are burials. Should they prove to be human burials, further mitigation is necessary. Three alternatives are suggested; 1, Protection of the graves from the impact of the development including possibly mitigation through fencing and avoidance of the area by the development. A mini management plan for maintenance of the graves must also be developed, 2, Relocation of the graves involving public participation and possibly further archival research, or 3, both.



Figure 3: Location of archaeological finds.

Please see **Appendix D1** and **D2** for the specialist reports.

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: 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 due to (1) the present layout of the Noenieput town, in relation to the land owned by the municipality for such a development (accessibility, suitably placed in terms of services, and integration into the existing town), (2) the Kgalagadi Transfontier Park conservation area situated adjacent to the Mier Municipality and (3) the presence of one of the world’s ancient tribes, the !Khomani San, farming and residing in the Mier area. The proposed site is thus the only feasible site.

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

Layout alternatives:

- Alternative 1 (option 3 provided by the town planners) (Appendix A1)

The proposed development will be over approximately 11ha and 107 new development stands are proposed, 106 of which are single residential erven, in response to the growing housing need in the municipality. An Institutional Zone II, Transport Zone II (roads) and Public Open Space Zones I & II are included in the layout design.

The location of the graves on site has been taken into consideration in this layout design; these will be located within the Public Open Space.

This layout has also taken the location of intermitted drainage lines (furrows) in to account; minimising the potential pollution, erosion and/or other impacts the proposed development might inflict most when compared to the other layout alternatives.

- Alternative 2 & 3 (respectively option 4 and 2 provided by the town planners - layout alternatives) (Appendix A2 & A3)

Alternative layout design 2 and 3 will both cover the same area as that of the preferred alternative, 11ha.

Institutional Zone II, Transport Zone II (roads) and Public Open Space Zones I & II are included in the layout of all the proposed layout designs.

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Layout design 2 proposes 101 single residential erven and layout design 3 proposes 105 residential erven, compared to the 106 proposed by the preferred alternative, Layout Design 1.

Layout design 2 and 3 both take into consideration the location of the graves, placing them in open space zoned areas.

However, the intermitted drainage lines, though brought on in the layout mapping, are at greater risk of being adversely impacted by the proposed housing development compared to that of the preferred alternative, based on the close proximity and/or exact proximity of areas to be developed (not zoned open space).

- Alternative 4 (option 1 provided by the town planners - layout alternative) (Appendix A4)

Alternative layout design 4 covers the same area as that of the preferred alternative, 11ha.

Institutional Zone II, Transport Zone II (roads) and Public Open Space Zones I & II are included in the layout of all the proposed layout designs.

Layout design 4 proposes the most residential erven that of 108, compared to the 106 proposed by the preferred alternative (Layout Design 1).

Layout design 4 does not take into consideration a workaround plan with respect to the graves identified, placing them inside residential and transport zones directly affected by the proposed development.

The intermitted drainage lines are also at greater risk of being adversely impacted by the proposed housing development compared to that of the preferred alternative, based on the close proximity and/or exact proximity of areas to be developed (not zoned open space).

- Alternative 5 (option 5 provided by the town planners - layout alternative e- preferred layout alternative) (Appendix A5)

Alternative 5 was proposed and after consultation with the local community, was considered the preferred layout alternative.

The breakdown of the layout (Appendix A5) can be seen in the table below.

The layout takes the location of the graves into consideration, placing them directly in public open space, and will therefore not be directly impacted on by the development.

Noenieput		Land Units	Tot. Area (m ²)
RES I	Single Home	102	36977,9
OPEN I	Public Open Space	3	3411,1
OPEN II	Private Open Space	3	15097,7
INST II	Worship	1	1123,4
AUTH	Municipal Use	1	1609,3
TRANS II	Public Street	1	21971,9
		Total:	80191,3

Alternative 5 is the preferred layout as it not only provides 102 residential opportunities and present the least impact to biodiversity and heritage features identified in the area, but it also provides a institutional zone opportunity for a Place of Worship, 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

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- 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*

Coordinates:	Latitude:	27, ⁰	30'	,40.02"	South
	Longitude:	20, ⁰	08'	,33.62"	East

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 A1¹ (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:

11000m ² (11ha)
m ²
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)

Alternative A3 (if any)

Size of the site/servitude:

m ²
m ²
m ²

5. SITE ACCESS

Does ready access to the site exist?

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

YES

¹ "Alternative A.." refer to activity, process, technology or other alternatives.

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Describe the type of access road planned: _____

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

R14,500,000.00
Unknown
YES
YES
+/- 60
Unknown
80%
None
N/A
N/A

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9(b) Need and desirability of the activity

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

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 town of Noenieput as an area of focus.

This application for 107 new development stands in Noenieput, 106 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.

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 business opportunities by providing job opportunities during construction.

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 / explanation:		
	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).		

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	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.	
5.	Will the proposed land use / development impact on the sense of place?	NO
6.	Will the proposed land use / development set a precedent?	YES
7.	Will any person's rights be affected by the proposed land use / development? <i>See below</i>	NO
8.	Will the proposed land use / development compromise the "urban edge"?	YES
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 Noenieput.</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 Noenieput area.</p> <p>The proposed development will lead to the extension of the Urban edge. However, this is considered necessary as there is very little to no opportunities for "infill".</p>	

BENEFITS:		
1.	Will the land use / development have any benefits for society in general?	YES
2.	<p>Explain: The activity will provide much needed additional housing opportunities, which is a local, provincial and national need, as well as business opportunities 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?	YES
4.	<p>Explain: The activity will provide much needed additional housing opportunities, as well as business opportunities 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:
The National Heritage Resources Act, 1999 (Act 25 of 1999)	SAHRA – Northern Cape	

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Northern Cape Planning and Development Act (Act 7 of 1998); - rezoning and subdivision	Local Municipality	Not yet
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11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

A report is being compiled by the contracted engineers regarding the associated infrastructure for the required civil and electrical services. This will be incorporated into the final BAR. In the interim standard estimations as used by similar housing projects within the Mier Municipality will be applied

11(a) Solid waste management

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

YES NO

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

Unknown at this stage

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?

YES NO

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

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

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?

NO

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

NO

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?

YES NO

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

15.5m³ per household per month

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

NO

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?

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

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Will the activity release emissions into the atmosphere?

	NO
YES	NO

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 emissions in terms of type and concentration:

N/A

11(d) Generation of noise

Will the activity generate noise?

	NO
YES	NO

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

12. WATER USE

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

municipal	<input checked="" type="checkbox"/> water board	<input type="checkbox"/> groundwater	<input type="checkbox"/> river, stream, dam or lake	<input type="checkbox"/> other	<input type="checkbox"/> 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**

litres

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

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

13. ENERGY EFFICIENCY

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

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?

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

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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



Figure 4: General view of the site

Please Note: A biodiversity & botanical scan of the location was done, Please refer to **Appendix D1** in this regard.

“According to Mucina and Rutherford (2006) and the SANBI Biodiversity Geographical Information System, the geology and soils for this area is described as Cenozoic Kalahari Group sands and small patches also on calcrete outcrops and scree on scarps of intermittent rivers (mekgacha). Dwyka Group tillites outcrops found in places. The soils are deep, red-yellow, apedal, freely drained, with a high base status, typical of Ae land type. No special soils

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or geology features (e.g. quartz patches or broken veld), which could support special botanical features, were observed during the site visit (or are expected)."

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	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	NO	YES	NO	YES	NO
An area sensitive to erosion	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).

Please Note: A biodiversity & botanical scan of the location was done, Please refer to **Appendix D1** in this regard.

"Although the site is still covered by natural vegetation, the vegetation shows signs of degradation. A portion of this specific area was levelled at some stage and presumably used for sporting fields. There are no formal streams or wetlands on the proposed property itself, but two very small drainage lines (furrows) traverse the property from northwest to south east."

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 the Biodiversity Assessment (Appendix D1).**

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 D1**):

“In accordance with the 2006 Vegetation map of South Africa, Lesotho and Swaziland (Mucina & Rutherford, 2006) one broad vegetation type is expected on the site and its immediate surroundings, namely Kalahari Karroid Shrubland.

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

The natural veld encountered on the site can be described as very sparse disturbed karroid type vegetation, on a very rocky substrate, dominated by one of the *Tetragonia* species (yellow plants in Photo 1). Vegetation structure is much compromised as if the whole site was disturbed at some stage. Vegetation especially sparse and more disturbed towards the east of the site. Species diversity was low (Photo 1).”

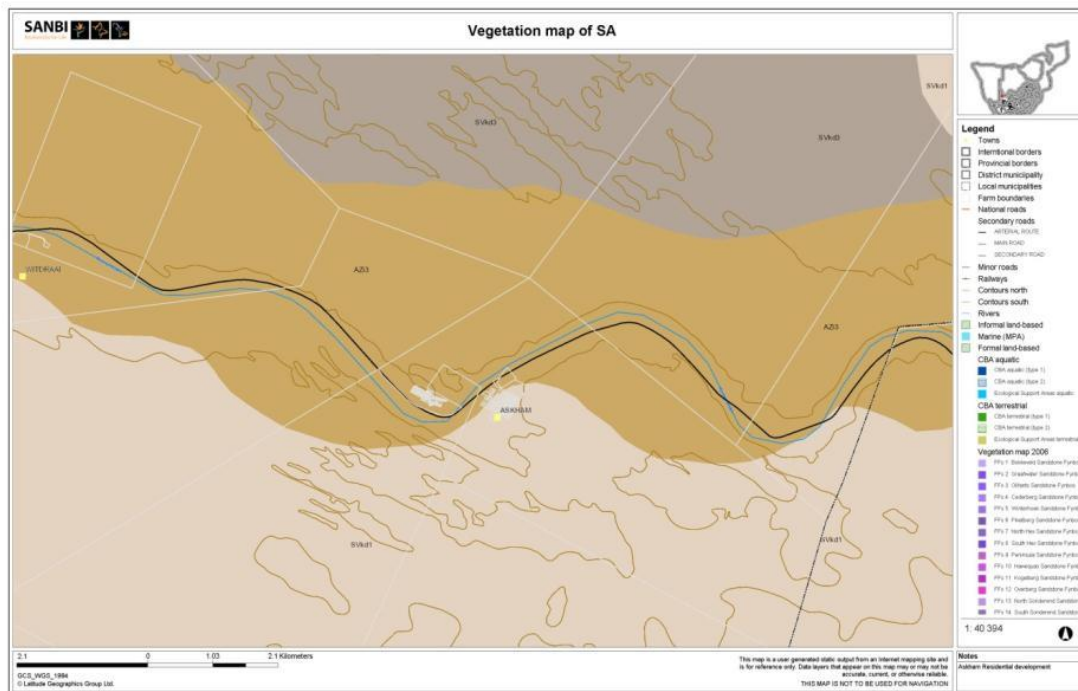


Figure 3: Vegetation map of SA, Lesotho and Swaziland (2006).

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

Significant vegetation identified includes three listed protected species that were encountered within the proposed site. These include the *Acacia erioloba*, *Boscia albitrunca* and *Acacia haematoxylon*. These have been listed and mapped in Table 5 of the Biodiversity Assessment.

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

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- 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 –
- 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.

If YES, specify and explain:	N/A
------------------------------	-----

If any of the boxes marked with an "AN" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	N/A
------------------------------	-----

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

If YES, specify and explain:	N/A
------------------------------	-----

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?	YES	<input checked="" type="checkbox"/>
If YES, explain:	Please see below	
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.		

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Briefly explain the findings of the specialist:

Stone tools form a strong background signature across the property. Acheulian, MSA and LSA tools were located. Four graves or burials were located on the property. Mostly situated near the Police station, they are informal.

Grave 1: 27°30'45.82"S; 20°8'36.54"E

Grave 2: 27°30'35.02"S; 20°8'28.08"E

Grave 3: 27°30'43.47"S; 20°8'37.73"E

Grave 4: 27°30'43.01"S; 20°8'87.87"E

The lithic found on the property rate as Generally Protected B. This site needs further recording before destruction. The range and number of stone tools found on the property suggest that the site has a generally Medium significance.

The burials may have a high local significance and are awarded a field rating of Generally Protected A. The site should be mitigated before destruction.

The stone tools or lithic found on the property need to be recorded and sampled in detail, prior to development. The recording of the lithic should assess the raw material, typology and dimensions of a sample of the property. It is recommendation that the site be mapped, documented, minimally sampled, and then destroyed (with a permit). Mitigation usually involves a requirement to collect sample through a controlled surface pickup (CSP) of the cultural and other remains.

Prior to the CSP a permit needs to be acquired from SAHRA for the sampling process. After the CSP the sampled will be analysed and a report sent to the developers and SAHRA. SAHRA should then issue a permit allowing the destruction of the site. The sample will be stored for future reference at the designated repository.

The burials need further investigation. Firstly, it needs to be determined if they are burials. Should they prove to be human burials, further mitigation is necessary. Three alternatives are suggested; 1, Protection of the graves from the impact of the development including possibly mitigation through fencing and avoidance of the area by the development. A mini management plan for maintenance of the graves must also be developed, 2, Relocation of the graves involving public participation and possibly further archival research, or 3, both.

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)?

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.

	NO
YES	

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SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT (Please refer to Appendix E 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.

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

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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 E** 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 or during the Draft Basic Assessment Report 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?

YES

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

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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. 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 D2**), no archaeological sites were found during a foot survey of the proposed site, or other prehistoric resources were found during a foot survey of the proposed site.

However, class B, generally protected lithic (Stone Tools) and a total of four graves were identified.

Stone tools form a strong background signature across the property. Acheulian, MSA and LSA tools were located. Four graves or burials were located on the property.

Grave 1: 27°30'45.82"S; 20°8'36.54"E

Grave 2: 27°30'35.02"S; 20°8'28.08"E

Grave 3: 27°30'43.47"S; 20°8'37.73"E

Grave 4: 27°30'43.01"S; 20°8'87.87"E

The burials may have a high local significance and are awarded a field rating of Generally Protected A. The site should be mitigated before destruction.

The range and number of stone tools found on the property suggest that the site has a generally Medium significance.

The graves have been identified by the planners and provision for them has been made in the site development plans. These will be located within the area rezoned as Public Open Space.

Mitigation:

The stone tools or lithic found on the property need to be recorded and sampled in detail, prior to development. The recording of the lithic should assess the raw material, typology and dimensions of a sample of the property. It is recommendation that the site be mapped,

documented, minimally sampled, and then destroyed (with a permit). Mitigation usually involves a requirement to collect sample through a controlled surface pickup (CSP) of the cultural and other remains.

Prior to the CSP a permit needs to be acquired from SAHRA for the sampling process. After the CSP the sampled will be analysed and a report sent to the developers and SAHRA. SAHRA should then issue a permit allowing the destruction of the site. The sample will be stored for future reference at the designated repository.

The burials need further investigation. Firstly, it needs to be determined if they are burials. Should they prove to be human burials, further mitigation is necessary. Three alternatives are suggested; 1, Protection of the graves from the impact of the development including possibly mitigation through fencing and avoidance of the area by the development. A mini management plan for maintenance of the graves must also be developed, 2, Relocation of the graves involving public participation and possibly further archival research, or 3, both.

The Heritage recommended gave site mitigation measures:

- That fencing around the burial ground be put in place, particularly prior to construction, with signage explaining the significance of the site.
- That research into the relationship of the local community with the burials be investigated.
- There is always the possibility of encountering human remains during construction. Human Remains, which are indicated by the presence of light brown to dark brown bones either whole or in fragments, may include artefacts. Burial places fall under the jurisdiction of SAHRA and must be approached using the guidelines set out in the NHRA 1999 Section 36. If human remains are found, please follow these guidelines:
 - Leave the remains in place;
 - Cordon off the area;
 - Contact SAHRA (021 462 4502);
 - Contact an archaeologist;
 - Once an archaeologist has examined the find, the SA Police services and state pathologist must be contacted to report human remains;
 - If the remains are found to be a legitimate burial or precolonial burial, an emergency exhumation permit will be issued by SAHRA or HWC; and
 - If a crime is suspected, a police docket will be opened.

The development will have a adverse impact on the lithics and the burials identified on site. Mitigation is necessary.

Biodiversity (Biodiversity Assessment - Appendix D1)

The construction of the proposed low cost housing entails:

1. the layout planning and location of the proposed housing within the larger site;
2. clearing of the footprint (including topsoil);
3. installation of Municipal works (water, sewerage and electricity) and associated infrastructure (e.g.roads);
4. construction of housing; and
5. rehabilitation of the construction footprint (outside the designated housing area) on completion of the project.

Parameters of the impact

Extent of the impact: Local.

Duration of the impact: Permanent

Probability or likelihood: The probability or likelihood that the impact will occur if the project is approved is very likely.

Severity of the impact: The severity of the impact is considered to be medium to low depending on the impact minimisation actions implemented.

Possible issues / impacts associated with construction

1. The possible impact on natural vegetation with a high conservation value, which might also be located within a future conservation area (Draft Siyanda EMF).
2. The likely impact on protected species.
3. The possible impact on small drainage lines or furrows (one of which appears to be manmade).
4. Establishment of a construction associated infrastructure during the construction phase.
5. Temporary storage areas.
6. Waste management and control.

Direct Impacts:

1. Impact on threatened or protected ecosystems

According to the Biodiversity Assessment (**Appendix D1**) the vegetation mostly conforms to Kalahari Karroid Shrubland, classified as "Least Threatened"

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 is thus rated as **medium-low**.

2. Special habitats

The vegetation itself is not considered to belong to a threatened or protected ecosystem and is classified as "Least threatened", but according to the draft Siyanda EMF, shrubland in good condition is given a high conservation priority, and it falls within a proposed conservation area. In addition its environmental sensitivity classification was rated as medium. This is, however, offset by the general poor condition of the veld. 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 very **low**.

3. 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 localized impact of the housing project and because the site are already impacted by the Noenieput settlement it is highly unlikely that it will have any significant additional impacts on corridors or conservancy networks.

The impact is thus rated as **low**.

4. 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 (Van Rooyen et. all, 1984, vide Mucina & Rutherford, 2006). 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 (Van Rooyen, 1988, vide Mucina & Rutherford, 2006). 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**.

5. Protected Species

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.

Three protected plant species was observed. The number of species per broad geographical levels for these biomes is low and it is therefore very unlikely that any single species will be confined to the proposed site alone. However, these species will be impacted (especially the Aizoaceae). Both the Aloe and the Mesembryanthemaceae could be easily transplanted (single individuals), but the Aizoaceae are to numerous.

It is thus considered likely that the project will have an impact on protected species.

The impact is thus rated as **medium** (which can be reduced with mitigation).

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.
- All protected species must preferably be conserved or transplanted.

- Permits must be obtained for the removal of any protected species which are encountered.

Direct impacts refers to those impacts with a direct impact on biodiversity features and in this case were considered for the potentially most significant associated impacts (some of which have already been discussed above).

- Direct loss of vegetation type and associated habitat due to construction and operational activities.
- Loss of ecological processes (e.g. migration patterns, pollinators, river function etc.) due to construction and operational activities.
- Loss of local biodiversity and threatened plant species
- Loss of ecosystem connectivity

The site still support natural vegetation (shrubland) which, according to the draft Siyanda EMF is considered to be of high conservation value. In addition the site may be located within a proposed future conservation area and a number of protected species were encountered. However, the impact will be localized, no special habitats 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:

- 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.

Indirect Impacts:

Indirect impacts are impacts that are not a direct result of the main activity, but are impacts

still associated or resulting from the main activity. 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.

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.

Cumulative Impacts:

In order to comprehend the cumulative impact, one has to understand to what extent the proposed activity will contribute to the cumulative loss of ecological function and other biodiversity features on a regional basis.

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

- The proposed site is located on degraded natural veld in relative poor condition.
- 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. However, a number of protected species were encountered. The impact on individual species is thus regarded as low-medium.
- 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 the site 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 – **Low**.

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

Special habitats – Very **low (negative), highly unlikely**.

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

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

Protected species – **Medium (negative), likely during construction phase**.

Job creation – **Medium (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.

No-go alternative (compulsory)

According to the Biodiversity Assessment (**Appendix D**), 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.

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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.
- A suitably qualified ECO or botanist must inspect the final site with the aim of identifying any protected plant species listed in the NCNCA. Should any protected or specially protected plant be located within the final footprint, an application for 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.
- 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 efforts must be made to protect all the mature protected trees within the proposed final footprint (and any other protected species that might be encountered on site). On-site micro- adjustment of the final erven must be done in order to minimise the impact on as many of the protected tree species 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 all further movement must be confined to the access roads to allow the vegetation to re-establish over the excavated areas.
- Rehabilitation must include sand stabilisation methods to protect the open sandy

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- areas against wind erosion.
- Adequate measures must be implemented to ensure against erosion.
- No firewood should be collected on site. Adequate, safe, cooking equipment must be provided for workers at the construction site camp.
- Fencing around the burial ground must be put in place, particularly prior to construction, with signage explaining the significance of the site.
- Research into the relationship of the local community with the burials be investigated.
- If human remains are found, please follow these guidelines:
 - Leave the remains in place;
 - Cordon off the area;
 - Contact SAHRA (021 462 4502);
 - Contact an archaeologist;
 - Once an archaeologist has examined the find, the SA Police services and state pathologist must be contacted to report human remains;
 - If the remains are found to be a legitimate burial or precolonial burial, an emergency exhumation permit will be issued by SAHRA or HWC; and
 - If a crime is suspected, a police docket will be opened.
- Stone tools / lithic found on the property need to be recorded and sampled in detail, prior to development. Recording to assess the raw material, typology and dimensions of a sample of the property. It is recommendation that the site be mapped, documented, minimally sampled, and then destroyed (with a permit). Collect sample through a controlled surface pickup (CSP) of the cultural and other remains.
- Prior to the CSP a permit needs to be acquired from SAHRA for the sampling process. After the CSP the sampled will be analysed and a report sent to the developers and SAHRA. SAHRA should then issue a permit allowing the destruction of the site. The sample will be stored for future reference at the designated repository.

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