
ENVIRONMENTAL IMPACT ASSESSMENT (EIA): DRAFT BASIC ASSESSMENT REPORT

PROPOSED TOWN DEVELOPMENT ON PORTION 1 OF THE REMAINDER OF THE FARM TREDENHAM 2513 AND ON A PORTION OF THE REMAINDER OF PENROSE 2378, BLOEMFONTEIN

Applicant: Six Strings Investments (Pty) Ltd
DETEA Ref No: EMB/24(i)/14/18
Date: December 2014



Town & Regional Planners,
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Consultants

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DRAFT BASIC ASSESSMENT REPORT **TREDENHAM TOWN DEVELOPMENT**

(For official use only)

File Reference Number:

Application Number:

Date Received:

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

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 is 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 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

NO
X

If YES, please complete the form entitled "Details of specialist and declaration of interest"

for appointment of a specialist 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 detail¹:

The proposed project entails the proposed establishment of a township on Portion 1 of the Remainder of the Farm Tredenham 2153 as well as a small portion of the Remainder of the Farm Penrose 2378, Bloemfontein district. A small portion of the Penrose property was obtained to be able to widen the road to town planning standards.

The proposed development includes a total of 14 erven (Table 1) of which 5 are single residential units (only one dwelling will be allowed on 3 of the erven and two dwellings will be allowed on 2 of the erven) whilst 1 erf will be zoned as "General Residential 2" (approximately 103 residential units as the Free State Townships Board makes provision for a maximum of 30 units per hectare). Provision is also made for "private open space" and "streets".

Table 1. The proposed land use of the 14 erven.

Zoning/ Land Use	Number of erven	Area (ha)	%
Single Residential 1	5	1.1215	10.98
General Residential 2	1	3.4433	33.71
Private Open Space	1	2.9162	28.55
Street	3	1.8964	18.57
Undetermined	4	0.8366	8.19
TOTAL	14	10,2140	100

The character of the development is greatly influenced by the topography of the area. A koppie takes up a large section of the application property and this area has been incorporated as private open space.

The site area is adjacent to the Northridge Mall, Wild Olive Development and the Hillside Township Establishment and thus the proposed development is reconcilable with the character of the surrounding areas.

¹ Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

The activities associated with the development of the town development will include the following:

- Clearance of vegetation
- Levelling of certain areas within application area
- Establishment of storm water management measures
- Establishment and installation of bulk services that will be provided to the proposed development
- Construction of roads
- Etc.

According to the Spatial Development Framework (SDF), which is incorporated in the Integrated Development Plan (IDP) of the Mangaung Metro Municipality, the township establishment area is earmarked for future residential development (neighbourhood district). An application to amend the Municipality's Spatial Development Framework was submitted to incorporate the said area into town lands.

The services reports as well as the Traffic Impact Study (refer to complete reports attached as **Annexure D3 to D6**) for the proposed development can be provided, if the recommendations in the reports are implemented.

The activities being applied for as part of this Basic Assessment, includes;
"The transformation of undeveloped land to residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more but less than 20 ha"
- Activity 23(ii) in terms of R544 of 18 June 2010.

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

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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.

NOTE: Please take note of the description of the preferred as well as alternative:

Preferred Alternative:

- The SDF earmarks this area for future residential development and therefore for township establishments.
- Portion 1 of the Remainder of Farm Tredenham belongs to The Diamond Trust. The portion of the Remainder of the Farm Penrose belongs to Mr. PG de Bruyn.
- The site area is in close proximity to the Northridge Mall, Wild Olive Development and the Hillside Township Establishment and thus the proposed development is reconcilable with the character of the surrounding areas.
- The first portion of the road reserve and access road from the T185 will be widened (20 m) to allow for embankments required for cut and fill in order to ensure capable gradients. The road surface will be 16 m as the additional width makes provision for the said embankments.
- The proposed township establishment can be seen as an extension of the already existing land uses in the area and is reconcilable with the character and densities of the surrounding areas.
- There is currently a demand for residential developments on areas situated on the fringe of Bloemfontein. The need for smaller residential units is rapidly increasing and the urban fringe needs to accommodate future housing developments.
- The proposed area is too small to function as an economical agricultural unit and can therefore easily be integrated into the urban system for residential purposes.
- The proposed development will boost the building industry over the short term and will also contribute to sustainable economic growth in the long term.
- The township establishment area forms part of a primary road network and therefore has a favourable location.
- The street network will contribute to the effective flow of traffic as well as the channelling of surface storm water.
- The Geotechnical Report indicates that the underlying ground is suitable for residential development (refer **to Appendix D4**).

Locality: Remainder and Portion 1 of the Farm Tredenham 2153, Bloemfontein.

Type: The proposed development of residential units in the area will cater for the current demand for residential units in areas situated on the fringe of Bloemfontein.

Design: The layout of the proposed development area was restricted by the topography of the area, such as the koppie. The koppie was incorporated as a private open space in the proposed layout.

No other locality was considered as a wide area around the proposed property has

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been approved for township establishment or has already been developed. The proposed township establishment is therefore an extension of already existing land uses in the area and is reconcilable with the character and densities of the surrounding areas.

Alternative 2_{Layout}

- The layout of the development includes more of the koppie to be residential erven.
- The protected, rare and endangered vegetation types will be removed (and thus also habitat for the variety of animal species).
- This alternative is therefore not a feasible alternative and will not be discussed in the BAR.

No-go option

- The 'no-go' alternative will be considered throughout the assessment of the proposed project.

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.

Alternative:	Latitude (S):	Longitude (E):
Preferred Alternative	29° 2'55.63"S	26°13'48.76"E

In the case of linear activities: Not Applicable

Alternative:

Alternative S1 (preferred or only route alternative)

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

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

Alternative S2 (if any)

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

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

Alternative S3 (if any)

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

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

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:

Preferred Alternative

Alternative 2 (layout)

Size of the activity:

10.2140 ha

NOTE:

The size of the activity indicated above includes the private open space (2.9162 ha) of the development. Carefully planned footpaths and benches may be considered for the private open space.

or, for linear activities: **Not Applicable**

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

m
m
m

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

Not Applicable

Alternative:

Preferred Alternative

Alternative 2: Layout

Alternative 4

Alternative 5

Size of the site/servitude:

18.6343 ha

5. SITE ACCESS

Does ready access to the site exist?

YES	NO
X	
m	

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

Describe the type of access road planned:

Access to the application property can currently be gained from the T185, to the east of the property as well as from a panhandle, which turns off the T185 / R700 (southern portion of the site). The road will have to be widened to allow for embankments required for cut and fill in order to ensure acceptable gradients.

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);
- 6.10 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
- 6.11 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?

R102 mil

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

R850,000

Will the activity contribute to service infrastructure?

YES X	NO
------------------------	----

Is the activity a public amenity?

YES X	NO
------------------------	----

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

± 127

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

± R15 mil

What percentage of this will accrue to previously disadvantaged individuals?

60%

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

± 84

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

± R 40 mil

What percentage of this will accrue to previously disadvantaged individuals?

85%

9(b) Need and desirability of the activity

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

NEED:

There is currently a demand for residential developments on areas situated on the fringe of town in order to provide in the housing needs. It creates an additional option to potential home owners. The need for smaller residential units is rapidly increasing and it is the trend and rational approach that the urban fringe needs to accommodate future housing developments.

According to the SDF, which is incorporated in the IDP of the Mangaung Metro Municipality, this area is earmarked for future residential development and thus a township establishment.

1.	Was the relevant provincial planning department involved in the application?	YES X	NO
2.	Does the proposed land use fall within the relevant provincial planning	YES	NO

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	framework?	X	
3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		
	NOTE: The proposed development is in line with the SDF that is incorporated in the IDP of the Mangaung Metro Municipality 2012/13, which earmarks the township development area for extensive residential development (neighbourhood district). The need for smaller residential units is rapidly increasing as well as the current demand for residential developments on areas situated on the fringe of Bloemfontein.		

DESIRABILITY:

The study area is ideally situated to accommodate the proposed development. The proposed development is favourable situated in terms of the surrounding residential suburbs where the necessary support services exist. The proposed development will not have a discernable effect on the area and the study area is therefore desirable for a development of this nature and will not have a negative effect on the surrounding area or its visual acceptability, but will rather fulfil the increasing demand for housing.

1.	Does the proposed land use / development fit the surrounding area?	YES X	NO
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES X	NO
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES X	NO
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
	NOTE: The proposed development is in line with the SDF that is incorporated in the IDP of the Mangaung Metro Municipality 2012/13, which earmarks the township development area for extensive residential development (neighbourhood district). The need for smaller residential units is rapidly increasing as well as the current demand for residential developments on areas situated on the fringe of Bloemfontein.		
5.	Will the proposed land use / development impact on the sense of place?	YES	NO X
6.	Will the proposed land use / development set a precedent?	YES	NO X
7.	Will any person's rights be affected by the proposed land use / development?	YES	NO X
8.	Will the proposed land use / development compromise the "urban	YES	NO

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	edge”?		X
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES X	NO
2.	Explain: The need for smaller residential units is rapidly increasing as well as the current demand for residential developments on areas situated on the fringe of Bloemfontein.		
3.	Will the land use / development have any benefits for the local communities where it will be located?	YES X	NO
4.	Explain: The local businesses in Bloemfontein’s northern suburbs will benefit as the new homeowners will make use of the shops in the nearby vicinity. Employment opportunities will be created (temporary and a few permanent).		

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act (Act 107 of 1998)	Department of Environmental Affairs and Tourism	1998
National Water Act (Act 36 of 1998)	Department of Water Affairs	1998
National Heritage Resources Act (Act 25 of 1999)	South African Heritage Resources Agency	1999
Environmental Conservation Act (Act 73 of 1989)	DETEA	1989
National Environmental Management Biodiversity Act, 2004 (Act 10 of 2004)	DETEA	2004

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

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

YES X	NO
------------------------	----

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

Unknown at present (m³)

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

Typical construction waste, for example rubble and general domestic waste is likely to be produced. Rubble and general domestic waste is proposed to be temporarily stored in on-site waste receptacles and removed by the contractor on a regular basis. The contractor will be responsible for the disposal of construction waste / rubble. The waste will be transported and disposed of, by the contractor to an authorised landfill site in Bloemfontein. Furthermore the EMPr (refer to **Annexure F**) make recommendations with regard to best waste management practices.

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

The contractor will be responsible for the removal of construction waste from the collection area to an authorised landfill site in Bloemfontein. Hazardous waste (if any) should be disposed of at an authorised hazardous landfill site such as Holfontein.

Will the activity produce solid waste during its operational phase?

YES X	NO
------------------------	----

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

Unknown

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

The waste associated with these facilities can be described as general household waste that will be collected on a weekly basis by Mangaung Metro Municipality, and dispose of at an authorised landfill site in Bloemfontein.

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

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?

YES	NO X
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If yes, inform the competent authority and request a change to an application for scoping and EIA.

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

YES	NO X
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If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

YES	NO X
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If yes, what estimated quantity will be produced per month?

m ³

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

YES	NO X
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

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

YES	NO X
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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:

NOTE:
There is a recently constructed main outfall sewer line situated to the west of Tredenham adjacent to Wildealskloof which has sufficient capacity to accommodate the effluent generated by this development. Refer to **Annexure D5** for the Bulk Civil Services Report (with included consultant's report on the capacity of existing municipal sewer and water networks).

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES X	NO
------------------------	----

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

YES	NO X
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

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

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Vehicular and dust emissions will be the only source of ambient emissions generated as a result of the proposed project. Some vehicular emissions will be present during the construction phase. There will also be the potential for dust generation during the construction phase. This may be the result of wind over exposed areas of cleared land. Dust can easily be prevented through the implementation of air pollution mitigation measures contained in the EMPr (refer to **Annexure F**). Construction activities will be limited to working hours.

11(d) Generation of noise

Will the activity generate noise?

YES X	NO
YES	NO X

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

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:

Nuisance noise will only be associated with the construction activities. Heavy vehicles will be equipped with silencers. A blasting permit will be obtained, if blasting activities is to be undertaken. In addition, construction activities will be limited to working hours.

12. WATER USE

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

municipal	water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

± 1200 ML

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

YES	NO X
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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 lights in pathways
- Energy efficient lighting
- Gas Hobs
- Double glazed glass (where applicable)
- Solar geysers
- Cavity walls for insulation
- Efficient management of storm water.

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

- Storm water management
- Roof insulation
- Double glazed glass
- Efficient ceiling heights
- Cavity walls.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

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

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

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

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

YES	NO
X	

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:
All specialist reports must be contained in Appendix D.

Property description/physical address:

Portion 1 of the Remainder of the Farm Tredenham 2153, Bloemfontein and a small portion on Remainder of the Farm Penrose 2378.

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

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In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:

Agriculture.

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

Is a change of land-use or a consent use application required?

YES	NO
X	
YES	NO
X	

Must a building plan be submitted to the local authority?

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Locality map: An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

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

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Preferred Alternative and Alternative 2:

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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NOTE:

The steepest part of the site (the slope of the hill) is private open space and no development will be undertaken in this area (only carefully planned footpaths and benches can be considered).

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

Take note: The steepest part of the site (the slope of the hill) is private open space and no development will be undertaken in this area (only carefully planned footpaths and benches can be considered).

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Preferred Alternative and Alternative 2 (layout)	
Shallow water table (less than 1.5m deep)	YES	NO X
Dolomite, sinkhole or doline areas	YES	NO X
Seasonally wet soils (often close to water bodies)	YES	NO X
Unstable rocky slopes or steep slopes with loose soil	YES	NO* X
Dispersive soils (soils that dissolve in water)	YES	NO X
Soils with high clay content (clay fraction more than 40%)	YES	NO X
Any other unstable soil or geological feature	YES	NO X
An area sensitive to erosion	YES	NO X

NOTE:

* The hill has a steep slope, but will form part of the private open space, and therefore no development will be undertaken at these areas.

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

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

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

Natural veld - good condition ^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

Summary of the Floristic and Ecological Assessment (attached in Annexure D1):

The vegetation on the site consists of Bloemfontein Karroid Shrubland (Gh 8) and Winburg Grassy Shrubland (Gh 7). Neither of these vegetation types are currently considered as threatened, but the Bloemfontein Karroid Shrubland must be regarded as endemic to the Free State Province and are afforded a high conservation status and must be included as a Threatened Ecosystem.

The plateau of the site consists of Bloemfontein Karroid Shrubland which is known to have a high species diversity. Due to this, this vegetation type also contains a high amount of protected species, several which are considered as rare. The proposed development will have to be approached with caution. The entire midslope of the hill, thus including the entirety of the woodland slope is recommended to be excluded from the development as private open space (2.9162 ha).

This area must be managed in as natural a state as possible. Thus this space must be excluded from recreational activities and only carefully planned hiking trails and benches may be considered. Management should refrain from introducing domestic stock or game to the area. The introduction of any exotics and ornamentals must be prohibited.

A search-and-rescue operation is recommended for the development area. Bulbs and succulents listed in the Floristic and Ecological Assessment must be removed and transplanted to an area of private open space on the site. This will ensure genetic diversity remains. Protected trees which will be affected by the development must either be removed with the possession of a permit or must be incorporated into the design. Transplanting of these protected trees is considered unfeasible and if successful is likely to alter the species composition of the Karroid Shrubland due to exclusion of succulents by shade.

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.

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	x
5.2 Low density residential	x
5.3 Medium density residential	
5.4 High density residential	
5.5 Informal residential ^A	
5.6 Retail commercial & warehousing	
5.7 Light industrial	
5.8 Medium industrial ^{AN}	
5.9 Heavy industrial ^{AN}	
5.10 Power station	
5.11 Office/consulting room	
5.12 Military or police base/station/compound	
5.13 Spoil heap or slimes dam ^A	
5.14 Quarry, sand or borrow pit	
5.15 Dam or reservoir	
5.16 Hospital/medical centre	
5.17 School	
5.18 Tertiary education facility	
5.19 Church	
5.20 Old age home	
5.21 Sewage treatment plant ^A	
5.22 Train station or shunting yard ^N	
5.23 Railway line ^N	
5.24 Major road (4 lanes or more) ^N	
5.25 Airport ^N	
5.26 Harbour	
5.27 Sport facilities	
5.28 Golf course	
5.29 Polo fields	
5.30 Filling station ^H	
5.31 Landfill or waste treatment site	
5.32 Plantation	
5.33 Agriculture	x
5.34 River, stream or wetland	
5.35 Nature conservation area	
5.36 Mountain, koppie or ridge	x
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 will this impact / be impacted upon by the proposed activity?

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:

If YES, specify:

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:

If YES, specify:

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 palaeontological sites, on or close (within 20m) to the site?

YES	NO X
None (refer to Heritage Exemption Letter in Annexure D2)	

If YES, explain:

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.

Briefly explain the findings of the specialist:

Summary of the exemption letter (as attached in Annexure D2):
 There are no indications of prehistoric structures or rock art within the footprint area. There is also no evidence of informal graves or historical structures older than 60 years within the confines of the footprint.

 It is also recognized that the soil overburden (residual deposits) as well as the underlying dolerite bedrock at the site is palaeontologically insignificant. It is thus recommended that the proposed development is exempted from a Phase 1 Archaeological and Palaeontological Impact Assessment.

DRAFT BASIC ASSESSMENT REPORT TREDENHAM TOWN DEVELOPMENT

Will any building or structure older than 60 years be affected in any way?	YES	NO X
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO X

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

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

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

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and

- (b) state—
- (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (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 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

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

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.

List of authorities informed:

- Municipal Manager: Mangaung Metro
- Mangaung Metro Environmental Department: Mr RR Naidoo
- Municipal Ward Councillor: PJJ van Biljon
- Department of Agriculture
- Department of Water and Sanitation
- Adjacent landowners: Davlin Trust (Mr D van Wyck, Ms L van Wyck and Mr P Barkhuizen)
- Provincial Manager, Free State: South African Heritage Resource Agency
- South African Heritage Resources Agency (SAHRA): Mr A Salomon

List of authorities from whom comments have been received:

No comments received to date.
Please note that all comments to be received during the public participation process will be included in the final BAR.

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority. Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?

YES	NO X
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If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

No comments received to date.
Please note that all comments to be received during the public participation process will be included in the final BAR.

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 comments received to date.

Please note that all comments to be received during the public participation process will be included in the final BAR.

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

No response to comments to date as no comments was received to date.

Please note that all comments to be received during the public participation process will be included in the final BAR.

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.

Preferred Alternative		
	Potential Impacts	Recommended Mitigation Measures
Planning and Design	Direct Impacts <ul style="list-style-type: none"> None. 	<ul style="list-style-type: none"> The private open space indicated in Map 2 of the Floristic and Ecological Assessment (attached in Annexure D1) must be excluded from development. This must include the wooded slope and portion of the plateau as indicated. The private open space must be managed in as natural a manner as possible.
	Indirect Impacts <ul style="list-style-type: none"> None. 	
	Cumulative Impacts <ul style="list-style-type: none"> None. 	

Preferred Alternative		
	Potential Impacts	Recommended Mitigation Measures
	<p>No-go alternative</p> <ul style="list-style-type: none"> • None. 	
Construction	<p>Direct Impacts</p> <ul style="list-style-type: none"> • Loss of agricultural land. • Destruction of vegetation. • Noise elevation due to construction activities. • Destruction / degradation of Bloemfontein Karroid Shrubland with high conservation value. • Destruction / degradation of habitat for the high diversity of species (including protected species) • Possible change in natural storm water drainage patterns. • Temporary elevation of noise levels. • Potential erosion. • Temporary increase in dust. <p>Indirect Impacts</p> <ul style="list-style-type: none"> • Potential erosion of exposed soil. • Establishment of alien / invader vegetation on disturbed areas (proposed road as well as the road reserve). 	<ul style="list-style-type: none"> • Vegetation clearance will be limited to the residential unit for the construction of a road linking the units. • Comprehensive “search-and-rescue” operation of the protected, rare and Red Listed succulent and bulb species that will be affected by construction must be transplanted. An ecologist or suitable qualified person must lead the “search-and-rescue” operation and supervise transplanting. The areas should be monitored and should be done in summer as some of the endangered bulb species are only visible in summer. • The private open space must be excluded from recreational activities as this will cause trampling and destruction of vegetation. Carefully planned hiking trails and benches may be considered for private open space. • No domestic stock or game may be introduced into the private open space as the area is too small and the vegetation is sensitive to trampling. • Eradication of problematic weeds, especially Prickly Pear (<i>Opuntia humifusa</i>) must be done. • Introduction of any exotics or ornamentals within the private open space must be prohibited. • Protected trees that will be affected by construction must either be removed with the possession of a permit or must

Preferred Alternative		
	Potential Impacts	Recommended Mitigation Measures
	<ul style="list-style-type: none"> • Dumping of construction rubble and general waste on site. • Spillage of material to be utilised during the construction phase as well as untreated sewage to the surrounding environment. • Surface and groundwater pollution due to spillage of potential hazardous substances such as hydraulic material and untreated sewage. • Impacts on the small seasonal stream. <p>Cumulative Impacts</p> <ul style="list-style-type: none"> • None. <p>No-go alternative</p> <ul style="list-style-type: none"> • No opportunity for development. 	<p>be incorporated in the design.</p> <ul style="list-style-type: none"> • Storm water management system must be designed and implemented as to have the least effect on natural runoff patterns and must not cause significant erosion. • Visual inspections for the occurrence of erosion should be undertaken on a weekly basis. • No hunting, harming or capturing of any of the animals on the site must be allowed. This must be enforced during construction as well as the occupation of the residences. • Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads / pathways. • Dust control measures will be implemented if nuisance dust generation occurs during the construction period. • No waste (general / construction / potential hazardous / etc.) may be dumped in the veld. • Covered receptacles will be available on site for the temporary disposal of waste. • Waste will be removed from site and disposed of at an authorised landfill site.
Operational	<p>Direct Impacts</p> <ul style="list-style-type: none"> • Residents littering. • Disturbance of fauna, flora or heritage site by residents / visitors. 	<ul style="list-style-type: none"> • By promoting residents to the following eco-tourism characteristics: <ol style="list-style-type: none"> a) low-impact behaviour. b) sensitivity towards and appreciation of conserving biodiversity and vegetation.

Preferred Alternative	
Potential Impacts	Recommended Mitigation Measures
<p>Cumulative Impacts</p> <ul style="list-style-type: none"> Establishment of alien / invader species due to previous disturbance. 	<ul style="list-style-type: none"> The private open space must be excluded from recreational activities as this will cause trampling and destruction of vegetation. Carefully planned hiking trails and benches may be considered for private open space. Maintenance and repair will be undertaken on the pathways to mitigate erosion. No domestic stock or game may be introduced into the private open space as the area is too small and the vegetation is sensitive to trampling. Green areas should be monitored yearly to ensure the conservation of the protected, endangered and rare vegetation. Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before seeding thereof takes place. Eradication of problematic weeds, especially Prickly Pear (<i>Opuntia humifusa</i>) must be done. It is recommended that landscaping be done with indigenous vegetation (a list can be found in the Floristic and Ecological Assessment attached in Annexure D1).

Preferred Alternative		
	Potential Impacts	Recommended Mitigation Measures
Decommissioning and Closure	<ul style="list-style-type: none"> Activities associated with the decommissioning phase will be limited to the rehabilitation of areas disturbed during the construction phase, other than the residential units. All disturbed areas will be rehabilitated to its natural status. It is not anticipated that the proposed project will cease in the nearby future. However, if full decommissioning is decided upon, a rehabilitation plan will be developed and submitted for approval. The end-use of the area will be kept in mind during the compilation of the rehabilitation plan. 	
	<p>Direct Impacts</p> <ul style="list-style-type: none"> No impact. <p>Indirect Impacts</p> <ul style="list-style-type: none"> Potential erosion of exposed soil. Potential dumping of waste on site. Potential establishment of alien vegetation in rehabilitated areas. <p>Cumulative Impacts</p> <ul style="list-style-type: none"> None. <p>No-go alternative</p> <ul style="list-style-type: none"> The 'no-go' alternative will not result in any environmental impacts. 	<ul style="list-style-type: none"> All temporary infrastructure related to the construction phase will be removed from site. Temporary concrete surfaces will be removed and compacted areas ripped. The establishment of natural occurring vegetation will be encouraged. No waste will be dumped on site and any waste occurring on site will be removed and disposed of according to best practices. Establishment of extensive alien species will be monitored.

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.

Preferred Alternative

The preferred development plan will provide more housing opportunities in Bloemfontein. The identified sensitive areas (e.g. the earth dam, koppie and 1:100 year flood lines) are incorporated in the development as open spaces, for the use by the residents.

The possible impacts associated with the proposed project can be minimised if the recommended mitigation measures as mentioned in the EMPr, is adhered to.

Alternative 2: Layout

Same as above, including:

Loss of additional pristine area.

The loss of protected, rare and endangered vegetation species.

Therefore, this option is not seen as a reasonable / feasible alternative.

No-Go Alternative

No environmental impact will occur if the no-go alternative is decided upon. However, the opportunity to create housing for the existing need and employment opportunities for members from the community will be lost.

SECTION E. RECOMMENDATION OF PRACTITIONER

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

YES X	NO
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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):

--

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:

Please refer to the recommended conditions and mitigation measures as listed in the EMPr (Appendix F).
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Is an EMPr attached?

YES X	NO
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The EMPr must be attached as Appendix F.

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 D₁: Archaeological and Heritage Assessment

Appendix D₂: Ecological Report

Appendix D₃: Delineation of Wetlands and Seasonal Drainage Lines

Appendix D₄: Geotechnical Survey

Appendix D₅: Bulk Services Report

Appendix E: Comments and responses report

Appendix E₁: List of identified interested and affected parties

Appendix E₂: Example of notification

Appendix E₃: Proof of notification

Appendix E₄: List of registered parties

Appendix E₅: List of comments received

Appendix E₆: Proof of response to comments received

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

Appendix G₁: Proof of submission of application: Amendment of SDF: Bloemfontein

Appendix G₂: Proof of submission of application: Change of land-use (Dept. of Agriculture)

Appendix G₃: Declaration of specialists

Appendix G₄: Declaration of EAP