

BASIC ASSESSMENT REPORT



destea

department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE

(For official use only)

File Reference Number:

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, 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, 2014 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. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. 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.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. 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.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. 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.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

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13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

Background

The proposed project will involve township development and will entail the development of a residential area on Plot (i.e. smallholding) 146 of the Bloemspruit agricultural plots ("Site"). The site is situated on the corner of Vooruitsig street and Kendal street in Bloemspruit.

The Plot has an extent of 4.2827 ha. The footprint of the development will be 4.277 ha. There will be 2 entrances to the site, 1 from Kendal street and 1 from Vooruitsig Street. The development will include *80 residential stands, one open space, road infrastructure and installation of services. The Construction phase of the development will necessitate clearing of vegetation and levelling of the site where necessary.

A dilapidated old house is located in the centre of plot 146. The rest of the site consists of grassland that has been disturbed with several scattered trees around the plot. Please refer to the ecological report for a more detailed description of the vegetation and ecology of the site.

Services and infrastructure:

According to a study done by SC Civil Services it was established that the water network has adequate capacity to accommodate the proposed development. A 110mm water pipe will be installed from the development, connecting to the 350mm municipal main in Voorspoed Street.

No sewage lines exist on the site to develop. A 150mm pipeline will be installed on the northern boundary of the development in Voorspoed Street to the sewer main in Nassau Street.site. This pipe will have sufficient capacity to accommodate the proposed development. The sewer will connect to the race course sewer main and drain to the North-East Waste Water Treatment Works ("WWTW"). The WWTW will have sufficient capacity for the additional demand.

The following Assessments have been conducted to determine the status of basic services in the area:

Electricity – The proposed development will be supplied from the future Bloemspruit DC once in operation. In the interim the development will be supplied from the existing 11kV overhead networks from the Coronation DC via Grassland Substation. The developer will install a 500kVA 11kV/400V miniature substation within the servitude on the property with a 185Al 11kV PLTC underground cable from the North Eastern corner of the Site.

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Sanitation – Refer to the above for sewage.

Water – The municipal water system was found to have adequate capacity to accommodate the development. A 110mm water pipe will be connected to the 350mm municipal main in Voorspoed Street.

Roads – The development will generate between approximately 66 peak hour trips in the morning and afternoon peak times. This additional traffic should not unacceptably raise the traffic congestion at the intersections.

Storm water – No on-site storm water retention will be required for the proposed development.

*The layout for the proposed development has been amended from the Draft BAR with the new layout plan available under appendix C. All layout changes are internal with the number of residential erven being reduced from 83 to 80.

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN 327	Description of project activity
Example: <i>GN 983 Item xx xx): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i>	<i>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</i>
GN. 327 of the 2014 EIA regulations as amended in 2017 – Activity 27: 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 – (i) The undertaking of a linear activity; or (ii) Maintenance purposes undertaken in accordance with a maintenance management plan.	An area of approximately 4.27 ha of indigenous vegetation will be cleared to construct the road infrastructure and erven for the proposed township development.

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;

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- (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 as required by Appendix 1 (3)(h) of GN 982, Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) 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.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Note:

Plot 146 is the property of the applicant (Lenova Construction and Development (Pty) Ltd) and is therefore considered for the development. Plot 147 is another property of the applicant with an approved Environmental Authorization.

Due to the fact that the applicant already owns the property no other sites were considered as alternatives.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Plot 146, Bloemspruit This property is owned by the applicant which will reduce the cost of the project. Furthermore, the Site does not have existing infrastructures and/or structure which will have to be demolished to construct new facilities. The only structure consists of an old dilapidated house which has been demolished in the past. There will not be large demolition costs associated with it. The ecologist indicated that the vegetation on this Site has been transformed to a large degree and is no longer representative of the vegetation type (i.e. Bloemfontein Dry Grassland). The Site is also not located close to any watercourses and/or wetlands. This Site was considered as the preferred alternative site as no other adjacent property will have a lower impact on the	29° 08' 03.27"	26° 16' 47.62"

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environment.		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p>Plot 147, Bloemspruit</p> <p>Although Plot 147 is also the property of the applicant, the site already has a RoD and the construction phase of the project commenced (<i>DESTEA Ref EMB/27/15/25</i>). It is noted that this is ideal for the applicant; however, more residential units are required in the area and the units constructed on Plot 147 will not be enough. Therefore, due to this alternative not being feasible to the new proposed development, it will not be assessed any further in this report.</p>	29° 07' 56.13"	26° 16' 50.57"
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p>Plot 148, Bloemspruit</p> <p>Plot 148 is not the property of the applicant. Considering this alternative will therefore result in the applicant having to purchase the property from the current owner which will lead to an increase in the development costs which they did not plan for during the planning phase of the project. This is also relevant to any other property surrounding the proposed Site. The purchasing of other land to use for the development of the township will also result in timeframes planned by the applicant being extended.</p> <p>Furthermore, Plot 148 has large infrastructure (i.e. houses, storage areas and workshops, etc.) and residents residing in the house. Should this alternative be decided on the applicant will have to demolish all the infrastructure and structures on the site which will incur additional costs during construction. Although this alternative site is also very degraded it is not expected that the use of the Proposed Alternative will result in higher environmental impacts occurring on it. Due to the above, this alternative site will not be considered any further.</p>	29° 7'54.24"	26°16'43.21"

In the case of linear activities:

N/A

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

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Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional 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.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

b) Lay-out alternatives

Note:

The proposed development has an amended layout plan which is indicated in the lay-out plan in appendix C. The amended layout has 80 residential erven as opposed to 83 in the original layout plan.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The proposed lay-out alternative is indicated in the lay-out plan attached and as indicated and suggested in the services- and specialist reports. There are no lay-out alternatives to be considered as the preferred lay-out was done by professional town planners and is based on topography, specialist and services reports. The preferred alternative was developed as the most feasible layout when considering connection points to municipal services and access roads. The preferred alternative was also developed in a manner which is practically best to accommodate the maximum number of residential units.	29° 08' 03.27"	26° 16' 47.62"
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
None		
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives:

Alternative 1 (preferred alternative)
The preferred technology alternative includes the connection of services with existing municipal services in the area. These include sewage, electrical and water. All of these services are available in the area.
Alternative 2
The alternative to the preferred technology alternative is to construct specific services infrastructure on the site for the following: <ol style="list-style-type: none"> 1. Sewage: the construction and use of septic tanks and/or a sewage treatment plant will be assessed in this report. 2. Electricity: the implementation of solar/renewable energy sources will be assessed in this

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report. 3. Water supply: an alternative to connecting to the municipal water supply will be assessed in this report.
Alternative 3

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives): NONE

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

e) No-go alternative

If the no-go alternative is decided on no construction will occur on the property and no environmental impacts will occur.

However, if the no-go alternative is decided on the opportunity will be lost to create temporary jobs and a positive impact on the socio-economic during the construction phase as the proposed project will provide people with direct jobs and also indirect jobs and economic gain through providing the applicant with building material and services.

Furthermore, the possibility to provide good quality houses for the people in the area will also be lost. During the Public Participation Process (“PPP”) the adjacent landowners indicated that the establishment of a township will have a positive impact on the area as more residents will result in more money being spent in the local community. Therefore, there will be a positive socio-economic impact.

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

3. PHYSICAL SIZE OF THE ACTIVITY

a) 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)

Size of the activity:

	42 827 m ²
	42 827 m ²
	42 827 m ²

or, for linear activities:

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

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Alternative:

Alternative A1 (preferred activity alternative)
Alternative A2 (if any)
Alternative A3 (if any)

Length of the activity:

	m
	m
	m

b) 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:

	42 770m ²
	42 770m ²
	42 770m ²

4. 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	NO
	m

Describe the type of access road planned:

The Site is bordered by Voorspoed Road to the north and Kendall Street to the west of the Site. Access to the Site will be gained by these roads. An internal road network will be developed during the construction phase of the project. The total length of the internal roads will not be more than 700m.

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.

5. 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 accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- 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.

6. LAYOUT/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:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100-year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

8. 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 report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 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.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES	NO	Please explain
That area is zoned for future residential therefore the township development falls within the land use as proposed by Mangaung Metro Municipality.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
The Free State PSDF is based upon, and promotes, an integrated and holistic approach to spatial planning and land-use management which implies that the interrelationships between economic activities and other developmental dimensions (e.g. social, financial, demographic, institutional, and infrastructural aspects), and environmental constraints and opportunities are carefully considered in accordance with a standard framework and at all applicable spheres of planning, Ranging from the international to the local level.			
(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
The site is located within the urban edge.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES	NO	Please explain
The activity will not compromise the integrity of the existing IDP and SDF of the Mangaung Metro Municipality as it is privately operated and privately owned. Furthermore, the land is zoned for future residential use.			
(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO	Please explain
The project will not compromise the environmental Management Framework of the Department as the zoning of the area is future residential and currently consists of agricultural plots.			

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(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
N/A			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	NO	Please explain
That area is zoned as a future residential therefore the township development falls within the land use proposed by the municipality.			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES	NO	Please explain
The project is not a priority to the community but could create quality residential options for the area. The proposed project will also create direct and indirect temporary jobs for the residents of Bloemfontein.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	NO	Please explain
All services reports indicated that services are available. However, the applicant will be responsible to implement the infrastructure on the site and connect to the municipal lines. This will be done at the cost of the applicant.			
6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	NO	Please explain
The Municipalities comments will be attached in the Final Basic Assessment Report in appendix I.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
The project is not of national concern. However, the project will provide more housing for residents in the area.			

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8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES	NO	Please explain
This area is set out for future residential development; therefore township development is a favourable land use. The ecological condition of the area is low and the vegetation has largely been transformed.			
9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
The site is currently empty, and the field is in a degraded condition. The vegetation has largely been transformed. The township development is a good practical option for the area.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
<p>The site has a low ecological value, thus the impact on environment in the area will be limited.</p> <p>The proposed project will benefit the community as it will bring affordable quality residential options to the area. The project will not use a large number of unskilled employees, but it will create temporary job opportunities for the local community during the construction phase. Furthermore, the project will result in indirect job opportunities and money being spent in the local community to obtain building materials and services.</p> <p>The increase in residents in the area will result in more money being spent in the local community during the operational phase of the project. This may result in further employment and/or business opportunities in this area which will improve the socio-economic status of the community.</p> <p>The township establishment will also result in an increase in property value in the area.</p>			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
The area is earmarked for future residential development; therefore no precedent will be set. Other township establishment projects in the area have already been authorised and are in the construction phase.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO	Please explain
The site is currently empty. A Public Participation Process was done (and will be continued) to ensure that all the surrounding landowners are informed of the project and do not have any concerns regarding the project.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO	Please explain
The proposed activity is located within the urban edge and therefore will not compromise the urban edge.			

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14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain
N/A			
15. What will the benefits be to society in general and to the local communities?	Please explain		
Quality residential housing to the community in Bloemfontein. Some direct and indirect job opportunities during the construction phase of the project. Increase in the property value of neighbouring properties and other employment and/or business opportunities in the area.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
None			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
N/A – The project has no significance on the National Development plan.			
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.			
<p>An assessment has been undertaken to evaluate potential impacts and give mitigation measures to lower the impacts on the environment, social conditions and cultural heritage due to the township development. A public participation was undertaken in terms of the 2014 EIA Regulations as amended in 2017.</p> <p>Consideration of environmental attributes in management and decision-making which may have a significant effect on the environment will be ensured; and</p> <p>The modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2 of the NEMA will be identified and employed.</p>			

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

The following principles have been taken into account:

- Avoiding or minimizing the disturbance to ecosystems;
- That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimized and remedied;
- That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimized and remedied;
- That waste is avoided, or where it cannot be altogether avoided, minimized and re-used or recycled where possible and otherwise disposed of in a responsible manner;
- That the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
- That the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardized;
- That a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions;
- That negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimized and remedied.
- Promotion of community participation through an extensive and open public participation process with I&APs;
- Delivery of high quality information to government and other decision-makers in order to enable them to make informed decisions.

11. 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	Applicability to the project	Administering authority	Date
National Environmental Management Act 107 of 1998	Competent authority on the project. Consultation with DESTEA regarding the project.	Department of Economic Small business development, Tourism and Environmental Affairs	1998
Occupational Health and Safety Act 85 of 1993	Comply to OHSA during construction phase	Department of Labor	1993
National Heritage Resources Act 25 of 1999	A Phase 1 Heritage and Paleontological Impact Assessment will be done and submitted to SAHRA as an area larger than 500m ² will be	South-African Heritage Resources Agency (SAHRA)	1999

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	cleared for the proposed project.		
National Water Act 36 of 1998	The area will be assessed to determine the impact (if any) on water resources. DWS is included in the PPP.	Department of Water and Sanitation	1998
National Building Regulations and Building Standards Act 103 of 1977	The developer must comply with building regulations during the construction phase of the project.	National Regulator for Compulsory Specifications	1977
Conservation of Agricultural Resources Act 43 of 1983	The land is an agricultural plot/smallholding which was previously used for agricultural purposes.	Department of Agriculture, Forestry and Fisheries	1983

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	NO
	2m ³
The construction solid waste will only be generated once and not monthly.	

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

The only construction solid waste that will be generated will be from the demolition of the dilapidated structure in the middle of the plot. Most of the construction solid waste will be used as filling or disposed of at the local Bloemfontein Landfill Site.

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

Construction solid waste will be disposed of at the local Bloemfontein Landfill Site. However, it is not expected that a large quantity of construction solid waste will be generated as it will be used as filling material during construction.

Will the activity produce solid waste during its operational phase?

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

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

YES	NO
	±16m ³

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Non-biodegradable waste such as glass bottles, plastic bags, metal scrap etc. generated by activities during operational phase will be disposed and stored in suitable containers at a collecting point and collected and disposed of at the nearest authorized facility in Bloemfontein.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

The nearest authorized facility in Bloemfontein

Where will the solid waste be disposed of 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 NEM:WA?

YES	NO
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If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

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

YES	NO
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If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

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

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

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

YES	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?

YES	NO
-----	----

If YES, provide the particulars of the facility:

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

BASIC ASSESSMENT REPORT

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

The waste water system of the residential development will feed directly into the municipal waste water system. Waste water will not be re-used and/or recycled on the site. However, residents may decide to use gray water for the irrigation of gardens.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

YES	NO
YES	NO

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

If YES, the applicant must 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:

The only emissions will be construction related i.e. exhaust emissions and dust during the construction phase.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

YES	NO
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES	NO
YES	NO

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

Describe the noise in terms of type and level:

During the construction phase construction activities will generate noise. But measures will be put in place to reduce the noise. Construction activities will be limited to daylight hours and speed limits will be imposed on all construction vehicles. Elevated noise levels will only be during the construction phase, thus temporary in nature. The activity in the operational phase will generate no noise. There are no houses and/or other receptors in close proximity, thus the impact will be small. Furthermore, the construction activities will not involve crushing, blasting and any other activities which results in very high noise levels.

13. 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 (Borehole)	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:

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

litres	
YES	NO

14. ENERGY EFFICIENCY

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

The developer will consider the implementation of energy saving items such as light bulbs and solar geysers during the construction phase. Furthermore, the residential units will be constructed in such a manner to allow natural light to laminate the inside of buildings during the day which will result in a lower consumption of electricity.

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

Refer to the above.
A technology alternative is to make use of renewable energy sources for the generation of electricity. This will consist of solar panels. However, the development will require large amounts of panels to generate enough electricity for the residential units. This may involve the construction of these panels on other open spaces which will result in the loss of units to make space. In addition, the cost of implementing solar panels and the maintenance of such a large system will be very high. This will require the appointment of a specialist to constantly maintain the system. Furthermore, a solar panel system may have a negative aesthetic impact as a result of the industrial look in relation to normal roofs.

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 B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A): 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
 If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Free State
District Municipality	Mangaung Metro Municipality
Local Municipality	Mangaung Metro Municipality
Ward Number(s)	17
Farm name and number	Plot 146, Bloemspruit Agricultural Plots
Portion number	0
SG Code	F00300190000014600000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Agricultural Holding land use. Zoned for future residential use in the 2017/2022 IDP.

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

BASIC ASSESSMENT REPORT

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	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
	YES	NO	YES	NO	YES	NO
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	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

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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

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.

Note:
Please refer to the ecological assessment in Appendix D

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that 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:

The area is zoned as Agricultural plots.

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial ^{AN}	Train station or shunting yard ^N	Mountain, koppie or ridge
Heavy industrial ^{AN}	Railway line ^N	Museum
Power station	Major road (4 lanes or more) ^N	Historical building
Office/consulting room	Airport ^N	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	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? Specify and explain:

The site is located 450m away from the railway line. The construction and operational phases and related activities will not have any significant impacts, if any, on the railway line.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? 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? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO
Core area of a protected area?	YES	NO
Buffer area of a protected area?	YES	NO
Planned expansion area of an existing protected area?	YES	NO
Existing offset area associated with a previous Environmental Authorisation?	YES	NO

BASIC ASSESSMENT REPORT

Buffer area of the SKA?	YES	NO
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If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

7. 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? If YES, explain:	YES	NO
	Uncertain	

Dr. Lloyd Rossouw indicated that exemption can be given from doing a Phase 1 Heritage Impact Assessment as the potential for archaeological impact at the site is considered to be non-existent. The exemption letter is attached in Appendix D.

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

--

Will any building or structure older than 60 years be affected in any way?	YES	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.		

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

27.7% and the youth unemployment is 37.2% (Stats SA 2011)

Economic profile of local municipality:

A total of 211 746 people are employed while 18 244 are discouraged work-seekers. According to Census 2011, 81 225 people are unemployed; making the unemployment rate stand at 37%. Of the 150 128 economic active youth aged 15–34, 94 281 are employed and 55 847 are unemployed.

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Level of education:

3.7% have a higher education, 16.5% completed secondary school and 30.6% have some secondary schooling. 5.4% have completed primary school while 37.7% have some primary school experience. 3.3% have no schooling experience (Stats SA 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R ± 30 Million	
What is the expected yearly income that will be generated by or as a result of the activity?	R Units will be sold to private owners after construction.	
Will the activity contribute to service infrastructure?	YES	NO
Is the activity a public amenity?	YES	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	10	
What is the expected value of the employment opportunities during the development and construction phase?	R420 000 (10 new employees at R7 000/month salary over 6 months construction period)	
What percentage of this will accrue to previously disadvantaged individuals?	90%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	No direct employment opportunities will be created during the operational phase. However, with more residents in the area there will be more business opportunities which will lead to indirect employment opportunities.	
What is the expected current value of the employment opportunities during the first 10 years?	Employment opportunities will be limited to the construction phase as indicated above.	
What percentage of this will accrue to previously disadvantaged individuals?	N/A	

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

BASIC ASSESSMENT REPORT

- a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	

- b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	%	5
Near Natural (includes areas with low to moderate level of alien invasive plants)	%	80
Degraded (includes areas heavily invaded by alien plants)	%	10
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	%	5

- c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems		
Ecosystem threat status as per the National Environmental Management:	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)	Estuary	Coastline
	Endangered			
	Vulnerable			
	Least			

BASIC ASSESSMENT REPORT

Terrestrial Ecosystems		Aquatic Ecosystems						
Biodiversity Act (Act No. 10 of 2004)	Threatened	YES	NO	UNSURE	YES	NO	YES	NO

- d) **Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)**

The vegetation in the area consists of Bloemfontein Dry Grassland (Gh 5). The vegetation type is currently listed as a Vulnerable (VU) vegetation type under the National List of Threatened Ecosystems (Notice 1477 of 2009) (National Environmental Management Biodiversity Act, 2004). Landscape features of this vegetation type are dominated by flat to slightly undulating terrain dominated by grassland.

The site is in a degraded condition and the vegetation has been largely transformed due to previous land use activities. The natural vegetation on the site has been transformed to a large degree and is no longer considered a representative example of this vegetation type. The site is not located near any watercourse or other water body.

The site does not contain any wetlands, drainage lines or any other water related systems. The nearest significant watercourse is the Bloemspruit which is located approximately 1.2 km north of the site. According to the National Freshwater Ecosystems Priority Areas (NFEPA) there are also no wetlands, rivers or other water bodies near the site.

The site does not form part of an Important Bird Area (IBA) or a Strategic Water Source Area (SWSA). There are also no National Protected Areas Expansion Strategy (NPAES) Focus Areas near the site. The area around the site does not contain any formal or informal protected areas (Van Rensburg, 2016).

Please refer to the Ecological Assessment in Appendix D.

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 B and indicate the area, which is covered by each copy No. on the Site Plan.

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

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

Property description/physical address:

Province	Free State
District Municipality	Mangaung Metro Municipality
Local Municipality	Mangaung Metro Municipality
Ward Number(s)	47
Farm name and number	Plot 147, Bloemspruit Agricultural Plots
Portion number	0
SG Code	F00300190000014700000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

The land is currently being developed for residential units. Zoned for future residential use in the 2017/2022 IDP.

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

BASIC ASSESSMENT REPORT

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	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
	YES	NO	YES	NO	YES	NO
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	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

BASIC ASSESSMENT REPORT

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

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. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that 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:

The area is zoned as Agricultural plots.

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial ^{AN}	Train station or shunting yard ^N	Mountain, koppie or ridge
Heavy industrial ^{AN}	Railway line ^N	Museum
Power station	Major road (4 lanes or more) ^N	Historical building
Office/consulting room	Airport ^N	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	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? Specify and explain:

The site is located 450m away from the railway line. The construction and operational phases and related activities will not have any significant impacts, if any on the railway line.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? 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? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO
Core area of a protected area?	YES	NO
Buffer area of a protected area?	YES	NO
Planned expansion area of an existing protected area?	YES	NO
Existing offset area associated with a previous Environmental Authorisation?	YES	NO

BASIC ASSESSMENT REPORT

Buffer area of the SKA?	YES	NO
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If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

7. 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? If YES, explain:	YES	NO
	Uncertain	

Dr. Lloyd Rossouw indicated that exemption can be given from doing a Phase 1 Heritage Impact Assessment as the potential for archaeological impact at the site is considered to be non-existent. This formed part of the BA Process done for the project in 2015. Please refer to the DESTEA Reference number above.

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

--

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

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

Same as for preferred alternative.

Economic profile of local municipality:

Same as for preferred alternative.

Level of education:

Same as for preferred alternative.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R ± 30 Million	
What is the expected yearly income that will be generated by or as a result of the activity?	R Units will be sold to private owners after construction.	
Will the activity contribute to service infrastructure?	YES	NO
Is the activity a public amenity?	YES	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	10	
What is the expected value of the employment opportunities during the development and construction phase?	R420 000 (10 new employees at R7 000/month salary over 6 months construction period)	
What percentage of this will accrue to previously disadvantaged individuals?	90%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	No direct employment opportunities will be created during the operational phase. However, with more residents in the area there will be more business opportunities which will lead to indirect employment opportunities.	
What is the expected current value of the employment opportunities during the first 10 years?	Employment opportunities will be limited to the construction phase as indicated above.	
What percentage of this will accrue to previously disadvantaged individuals?	N/A	

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category	If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
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BASIC ASSESSMENT REPORT

Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	10%	
Degraded (includes areas heavily invaded by alien plants)	10%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	80%	The site is currently in the construction phase of township development. The entire site will be transformed after completion of construction.

c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems								
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)	Estuary				Coastline			
	Endangered									
	Vulnerable									
	Least Threatened									
		YES	NO	UNSURE	YES	NO	YES	NO		

- d) **Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)**

N/A

The site is in the process of being transformed for township development as the project is currently in the construction phase. The vegetation has been removed.

However, an ecological report was done and submitted to the DESTEA as part of the BA Process in 2015. Please refer to this project details and the project reference number above.

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 B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B 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?
- If YES, please complete the form entitled “Details of specialist and declaration of interest” for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Free State
District Municipality	Mangaung Metro Municipality
Local Municipality	Mangaung Metro Municipality
Ward Number(s)	47
Farm name and number	Plot 148, Bloemspruit Agricultural Plots
Portion number	0
SG Code	F00300190000014800000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Used as Agricultural smallholding. Zoned for future residential use in the 2017/2022 IDP.

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?

10. 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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11. LOCATION IN LANDSCAPE

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

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

12. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
	YES	NO	YES	NO	YES	NO
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	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

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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.

13. 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

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.

Note:

As indicated earlier in the report this property is not owned by the applicant and therefore will not be assessed and specialist studies will not be conducted on the property. Due to costs associated with the proposed development occurring on this property this alternative will not be considered by the applicant.

14. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

15. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that 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:

The area is zoned as Agricultural plots.

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial ^{AN}	Train station or shunting yard ^N	Mountain, koppie or ridge
Heavy industrial ^{AN}	Railway line ^N	Museum
Power station	Major road (4 lanes or more) ^N	Historical building
Office/consulting room	Airport ^N	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	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? Specify and explain:

The site is located 450m away from the railway line. The construction and operational phases and related activities will not have any significant impacts, if any on the railway line.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? 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? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO
Core area of a protected area?	YES	NO
Buffer area of a protected area?	YES	NO

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Planned expansion area of an existing protected area?	YES	NO
Existing offset area associated with a previous Environmental Authorisation?	YES	NO
Buffer area of the SKA?	YES	NO

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

16. 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? If YES, explain:	YES	NO
	Uncertain	
Although a specialist has not been appointed to assess the site it is assumed that some of the structures on the site is older than 60 years and will require a permit to be demolished.		

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

A specialist investigation will not be conducted as this property is not owned by the applicant. Please refer to the above discussion.

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

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

Note:

The age of the buildings are unknown as it will not be assessed by a specialist as the applicant will not consider this alternative at this stage as it is not owned by them. The cost of purchasing the land will be too high and the property has large areas with infrastructure which will have to be demolished.

17. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

Same as for preferred alternative.

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Economic profile of local municipality:

Same as for preferred alternative.

Level of education:

Same as for preferred alternative.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R ± 40 Million		
What is the expected yearly income that will be generated by or as a result of the activity?	R Units will be sold to private owners after construction.		
Will the activity contribute to service infrastructure?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px 5px;">YES</td> <td style="width: 50%; padding: 2px 5px;">NO</td> </tr> </table>	YES	NO
YES	NO		
Is the activity a public amenity?	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px 5px;">YES</td> <td style="width: 50%; padding: 2px 5px;">NO</td> </tr> </table>	YES	NO
YES	NO		
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	10		
What is the expected value of the employment opportunities during the development and construction phase?	R420 000 (10 new employees at R7 000/month salary over 6 months construction period)		
What percentage of this will accrue to previously disadvantaged individuals?	90%		
How many permanent new employment opportunities will be created during the operational phase of the activity?	No direct employment opportunities will be created during the operational phase. However, with more residents in the area there will be more business opportunities which will lead to indirect employment opportunities.		
What is the expected current value of the employment opportunities during the first 10 years?	Employment opportunities will be limited to the construction phase as indicated above.		
What percentage of this will accrue to previously disadvantaged individuals?	N/A		

18. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

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- a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	

- b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	30%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	20%	
Degraded (includes areas heavily invaded by alien plants)	20%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	30%	

- c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems		
Ecosystem threat status as per the National Environmental Management:	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)	Estuary	Coastline
	Endangered			
	Vulnerable			
	Least			

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Terrestrial Ecosystems		Aquatic Ecosystems						
Biodiversity Act (Act No. 10 of 2004)	Threatened	YES	NO	UNSURE	YES	NO	YES	NO

- d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The site is also located in the Bloemfontein Dry Grassland vegetation Type and has been largely transformed by buildings and structures. The ecological value of this site has been degraded and is very low. Please note that this was evident from desktop studies conducted by the EAP and not a specialist.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Volksblad	
Date published	16 September 2016	
Site notice position	Latitude	Longitude
	29° 7'59.23"S	26° 16'46.03"E
Date placed	3 October 2016	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 982

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 982

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Basfour865 (Pty) Ltd.	Adjacent Landowner Plot 142	082 571 6479 051 403 1900 P.O. Box 4103 Bloemfontein 9300
Mrs. Belinda Mitchell	Adjacent Landowner Plot 143	079 694 1447 belinda.s.mitchell@gmail.com
Mr & Mrs Wepener	Adjacent Landowner Plot 144	083 724 0831
Mrs. Elizabeth Beukes	Adjacent Landowner Plot 145	073 302 9184 cfelicity26@gmail.com
Lenova Construction & Development CC-Ms. A. Zhao	Adjacent Landowner Plot 147	alicez@lenovaconstruction.co.za 076 391 4068
Mr. Pierre Thomas. Du Toit	Adjacent Landowner Plot 148	082 903 8939 Pierredutoit10@gmail.com P.O. Box 28880 Danhof 9310
Mr. S. Nieuwenhuizen	Adjacent Landowner Plot 149 A	P.O. Box 6680, Bloemfontein 9300 060 986 5257 stefannieuwenhuizen@gmail.com
Mrs. Liefie Brown	Adjacent Landowner Plot 149 B	076 868 8383
Shamiery Africa	Adjacent Landowner Plot 150	082 743 7305 Africaflowers1@gmail.com

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		P.O. Box 19272 Bloemspruit 9364
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Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
No Issues were raised for the first commenting period.	

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR 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 the Final BAR as Appendix E3.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Free State Department of Economic Small Business Development, Tourism and Environmental Affairs	Mrs. Grace Mkhosana	051 400 4843	051 400 4842	Mkhosana@detea.fs.gov.za	Private Bag X20801 Bloemfontein 9300
Department of agriculture, forestry & fisheries	Mr. Jack Morton	051 861 8369	086 234 6758	jack@fs.agric.za	P/Bag X01 Glen 9360
Department of	Mr. W. Grobler	051 405 9265			PO Box 528

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Water Affairs	Dr Nthili				Bloemfontein 9300
SAHRA	Mr. Andrew Salomon	021 462 4502	021 462 4549	asalomon@sahra.org. za	P.O. Box 4637 Cape Town 8001
Adv. T. Mea (Municipal Manager)	Mangaung Metro Municipality	051 405 8911	051 405 8108	Nthabiseng.matsoake @mangaung.co.za	PO Box 3704 Bloemfontein 9300
Ward Councillor, Ward 17 Mr. J. De Bruin	Mangaung Metro Municipality	082 821 9306 (Cell)	060 346 1410	Johandebruin71@gm ail.com	PO Box 3704 Bloemfontein 9300
Mr. Collin Dihemo	Mangaung Metro Municipality: Planning Department	051 405 8740		collin.dihemo@manga ung.co.za	PO Box 3704 Bloemfontein 9300
Ms. Mpolokeng Kolobe	Mangaung Metro Municipality: Environmental Department	051 405 8577 (Tel)	051 405 8883	Mpolokeng.kolobe@m angaung.co.za	PO Box 3704 Bloemfontein 9300

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) 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.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 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. 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

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts 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. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A (2) of this report.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Construction Phase			
Clearance of vegetation and removal and stockpiling of topsoil	Direct impacts: <ul style="list-style-type: none"> - Vegetation clearance and loss - Removal of topsoil and potential loss thereof - Possible change in the natural storm water drainage pattern - Noise elevation due to construction activities - Nuisance due to dust generation 	Low Negative	<ul style="list-style-type: none"> - Clearance of Vegetation will be limited to the site under construction. - The surface of the site will be levelled to ensure free-draining to prevent ponding of surface water. - Storm water measures such as channels, diversion berms, etc will be constructed around the site in order to limit and/or prevent erosion. - A speed limit will be enforced on construction vehicles. - Construction will be limited to daytime to limit any disturbance to neighbouring landowners. - Dust control measurements will be investigated if nuisance dust generation proves to be problematic - SAHRA will be notified should traces of any
	Indirect impacts: <ul style="list-style-type: none"> - Potential erosion of exposed soil - Possible dumping of construction rubble and general waste on site - Petrochemical spills may take place that may lead to contamination of surface and groundwater - Deterioration of the access road as a result of an increase of construction vehicles to the site. - Loss of archaeological significant artefacts. 	Low Negative	

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Activity	Impact summary	Significance	Proposed mitigation
	<p>Cumulative impacts: The area is zoned for future residential use and other properties will also be used for township development. If the stockpiling and management of topsoil is not sufficient it may lead to large volumes of topsoil being lost. This may lead to siltation of the surface water resources around Bloemfontein.</p>	Low Negative	<p>paleontological heritage be found during construction.</p> <ul style="list-style-type: none"> - All building rubble will be removed by the contractor on a regular basis and disposed of at an authorised landfill site in the area or used as filling material. - Receptacles should be placed on site for the collection of general waste. These receptacles should be emptied on a regular basis and waste be disposed of at the authorised landfill site in the area. <p>It is imperative that topsoil be stockpiled correctly and protected and returned to the site after construction to be used in gardens.</p>
Construction of infrastructure and buildings	<p>Direct impacts:</p> <ul style="list-style-type: none"> - Possible change in the natural storm water drainage pattern - Noise elevation due to construction activities - Nuisance due to dust generation - Unearthing of significant heritage artefacts 	Low Negative	<ul style="list-style-type: none"> - The site will be levelled in such a manner to allow storm water to be diverted around the site and drain into the surrounding storm water channels. - Storm water measures such as channels, diversion berms, etc will be constructed on the site in order to limit and/or prevent erosion. - A speed limit will be enforced on construction vehicles. - Construction will be limited to daytime to limit any disturbance to neighbouring landowners. - Dust control measurements

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Activity	Impact summary	Significance	Proposed mitigation
			<p>will be investigated if nuisance dust generation proofs to be problematic</p> <ul style="list-style-type: none"> - SAHRA will be notified should traces of any paleontological heritage be found during construction. - All building rubble will be removed by the contractor on a regular basis and disposed of at an authorised landfill site in the area or used as filling material. - Receptacles should be placed on site for the collection of general waste. These receptacles should be emptied on a regular basis and waste be disposed of at the authorised landfill site in the area.
Operational Phase	<p>Direct impacts:</p> <ul style="list-style-type: none"> - Potential pollution to storm water if proper storm water management measures are not maintained. - Potential pollution to the groundwater due to seepage of the untreated effluent to the groundwater aquifer in the event of any spillage and / or failure of the system. - Possible dumping of general waste on open properties close to the site. 		<ul style="list-style-type: none"> - The storm water management measures that will be constructed and implemented during construction will be maintained, repaired and cleaned when necessary. - General waste (i.e. paper, plastic, glass etc.) will be collected and disposed of at an authorised landfill site in Bloemfontein. - The access road will have to be upgraded when necessary.
	<p>Indirect impacts:</p> <ul style="list-style-type: none"> - Accumulation of waste that may pose health risks if not managed properly and not removed on a regular basis. - Deterioration of the access road as a result of increased traffic to the site. 		<ul style="list-style-type: none"> - The sewer reticulation, together with its connection to the sewer outfall, will be a prerequisite for the erection of any buildings.
	<p>Cumulative impacts: Increase in traffic on the access road may lead to the deterioration of the road.</p>		<p>The access road will be monitored and repair when necessary.</p>

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Activity	Impact summary	Significance	Proposed mitigation
<p>NOTE: <i>The activities, impacts and mitigation will be the same for all 3 alternatives. As indicated earlier in the report the alternatives will not be assessed as they are not feasible as the one alternative is already in the process of being developed and the second alternative site is not the property of the applicant. Furthermore, the second alternative site has a lot of infrastructure which will have to be demolished and has residents. The development of the township on the proposed site alternative will not result in any additional impacts which could be avoided on any of the other alternative sites.</i></p>			
Technology alternatives			
Preferred Alternative – Connecting of services (i.e. electrical, sewage) to municipal lines			
Construction Phase			
Activities will be the same as the site alternatives	<p>Impacts: Potential impacts will be the same as indicated in the site alternative as the activities will occur simultaneously.</p>		Refer to site alternative mitigation.
Alternative 2 – Solar energy and septic tanks			
Activities will be the same as the site alternatives	<p>Direct impacts: <i>Impacts associated will be the same as indicated at the site alternatives with the addition of the following impacts:</i></p> <ul style="list-style-type: none"> - Septic tanks will require very high levels of maintenance and will result in contamination of soil and groundwater as a result of leakage. - The site does not have capacity to construct and manage a septic tank system. This will require the pumping out of sewage on a daily basis and may result in overflowing and overflowing of the system which will result in contamination of soil and groundwater. - Solar panels will result in a negative aesthetic impact on surrounding residents as a result of the industrial look thereof. 	Moderate negative	<ul style="list-style-type: none"> - Regular monitoring of septic tanks and sewer system to prevent any contamination of groundwater and soil. - Implementation of a ground and surface water monitoring programme to monitor if there are any contamination of the sources.
	<p>Indirect impacts:</p> <ul style="list-style-type: none"> - The implementation of solar panels to provide electricity will result in a much smaller area of open space as this area will have to be used for solar panels. - The use of renewable energy will reduce the carbon footprint of the 	Moderate Negative	<ul style="list-style-type: none"> - No open spaces will be constructed and all available space will be used for township establishment and solar panels.

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Activity	Impact summary	Significance	Proposed mitigation
	development. - Solar panels are very expensive and will result in the units being sold for a much higher price. The housing planned for this area is not high cost housing.		
	<p>Cumulative impacts: If more township establishments make use of septic tanks it may result in an irreversible impact on ground and surface water and soil as a result of spillage of sewage. The cumulative impact of the implementation of solar energy will be positive in terms of a reduction of the carbon footprint. However, solar panels require large areas, are very expensive and is maintenance intensive.</p>		
No-go option			
	<p>Direct impacts: None</p>		
	<p>Indirect impacts: Jobs will be lost during the construction phase</p>		
	<p>Cumulative impacts:</p>		

A complete impact assessment in terms of Regulation 19(3) of GN 982 must be included as Appendix F.

2. 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 proposed project will entail the development of 84 erven on plot 146, Bloemspruit Agricultural plots, Bloemfontein. Ready access to the site is already in place.

The Plot for the proposed project has an extent of 4.2827 ha. The footprint of the development will be 4.277 ha. There will be 2 entrances to the site, 1 from Kendal street and 1 from Vooruitsig Street.

The development will include 80 residential stands, one open space, road infrastructure and installation of services. The Construction phase of the development will necessitate clearing of vegetation and levelling of the site where necessary.

A dilapidated old house is located in the centre of plot 146. The rest of the site consists of grassland that has been disturbed with several scattered trees around the plot. Please refer to the ecological report for a more detailed description of the vegetation and ecology of the site.

According to a study done by SC Civil Services it was established that the water network has adequate capacity to accommodate the proposed development. A 110mm water pipe will be installed from the development, connecting to the 350mm municipal main in Voorspoed Street.

No sewage lines exist on the site to develop. A 150mm pipeline will be installed on the northern boundary of the development in Voorspoed Street to the sewer main in Nassau Street. This pipe will have sufficient capacity to accommodate the proposed development. The sewer will connect to the race course sewer main and drain to the North-East WWTW. The WWTW will have sufficient capacity for the additional demand.

The likelihood of significant expected impacts occurring is highly unlikely and limited if the recommended mitigation measures are implemented throughout the phases of the project. If all the connections are made as stated above no problems are foreseen for this development.

The following Assessments have been conducted to determine the status of basic services in the area:

Electricity – The proposed development will be supplied from the future Bloemspruit DC once in operation. In the interim the development will be supplied from the existing 11kV overhead networks from the Coronation DC via Grassland Substation. The developer will install a 500kVA 11kV/400V miniature substation within the servitude on the property with an 185Al 11kV PLTC underground cable from the North Eastern corner of the Site.

Sanitation – Refer to the above for sewage.

Water – The municipal water system was found to have adequate capacity to accommodate the development. A 110mm water pipe will be connected to the 350mm municipal main in Voorspoed Street.

Roads – The development will generate between approximately 66 peak hour trips in the morning and afternoon peak times. This additional traffic should not unacceptably raise the traffic congestion at the intersections.

Storm water – No on-site storm water retention will be required for the proposed development.

Alternative B

Location:

Plot 146 (i.e. preferred alternative) is the only plot owned by the applicant in the area where no development has commenced. Although two other locations were proposed as alternatives they are not feasible for the establishment of the township due to the following reasons:

Plot 147 – This Alternative Location is the property of the applicant. However, EA was obtained for

the establishment of a township on this property in 2016. The applicant intends to expand the township establishment with another 4.2 ha. Although the use of this alternative will not have any additional environmental risks and impacts as no additional development will occur, it is not feasible as it limits the applicants' intention to develop more houses in the area of Bloemspruit.

Plot 148 – This property is not owned by the applicant. Purchasing the property from the current landowner will result in the applicant having to incur additional costs for the planning part of the project. Furthermore, there are no advantages in terms of environmental risks or impacts between this alternative and the preferred location. Plot 148 contains structures (i.e. house, storage areas, workshops, etc.) which cannot be incorporated into the development and will have to be demolished. This will result in additional costs and also more construction solid waste being generated during the construction phase. The demolition of the existing structures on Plot 148 will also contribute to elevated noise levels and dust emissions which will be avoided on the preferred alternative due to a lack of infrastructure.

Alternative C

Technology:

As indicated above, the preferred alternative for services (i.e. electricity and sewage management) is to connect to the existing municipal lines. Alternatives proposed and assessed are the following:

Septic tanks – This alternative to the management of sewage was considered. However, there are numerous environmental, safety and health risks associated with this alternative. Septic tanks require very intensive management and needs to be emptied regularly. The mismanagement and skipping of the emptying of the tank will lead to overflow and spilling of sewage which will result in contamination of soil, ground and surface water. Furthermore, septic tanks will not have sufficient capacity to contain the sewage from a residential development of this size. A septic tank system will require a large area where there can be no construction as they cannot be covered by infrastructure. This will reduce the available space for the developer to use for township establishment.

Apart from the environmental risks and impacts mentioned above, a septic tank also poses more significant health and safety risks: they are renowned for very bad smelling odours and leakages can result in illness. Furthermore, septic tanks are buried underground and children may fall into them if they are not constructed properly.

Solar panels – Apart from solar panels reducing the carbon footprint of the residential unit it is very expensive to implement a residential area where all the houses are dependent on solar energy. This will result in the prices of the units being much higher and maybe not affordable to the market it is intended for. Solar panels are usually placed on roofs of houses which can have a negative aesthetic impact on residents as it has an industrial look. The development will also have to construct panels on open spaces to provide for electricity provision for street lights and other electrical needs in public spaces. This will reduce the available space that can be used for open spaces on the footprint. It may also result in the loss of units as they will have to make way for solar panels.

The solar panel system is also very maintenance intensive and a contractor will have to be appointed to manage the system and replace the system. Due to running costs, repairs and replacements of the system the cost of living in this residential area will be very high.

Although the developer will implement the municipal electricity he/she will implement other energy saving systems to reduce the electricity use on the development. This includes the use of solar geysers, energy saving light bulbs, gas stoves and orientation of houses to allow natural light to enter buildings. However, the units will be bought by private owners and the applicant/developer cannot commit to what the owners of the buildings will implement when purchasing the properties.

No-go alternative (compulsory)

No environmental impacts will occur if the no-go alternative is accepted. Temporary direct and

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indirect jobs will be lost during the construction phase. An opportunity will be lost to better the community by upgrading and disturbed Plot 146 to 83 residential units.

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

NO

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.

In addition to the recommended mitigation and management measures described in section D, the following measures are recommended:

According to a study done by SC Civil Services it was established that the water network has adequate capacity to accommodate the proposed development. A 110mm water pipe will be installed from the development, connecting to the 350mm municipal main in Voorspoed Street.

No sewage lines exist on the site to develop. A 150mm pipeline will be installed on the northern boundary of the development in Voorspoed Street to the sewer main in Nassau Street. This pipe will have sufficient capacity to accommodate the proposed development. The sewer will connect to the race course sewer main and drain to the North-East Waste Water Treatment Works ("WWTW"). The WWTW will have sufficient capacity for the additional demand.

The following Assessments have been conducted to determine the status of basic services in the area:

Electricity – The proposed development will be supplied from the future Bloemspruit DC once in operation. In the interim the development will be supplied from the existing 11kV overhead networks from the Coronation DC via Grassland Substation. The developer will install a 500kVA 11kV/400V miniature substation within the servitude on the property with a 185Al 11kV PLTC underground cable from the North Eastern corner of the Site.

Sanitation – Refer to the above for sewage.

Water – The municipal water system was found to have adequate capacity to accommodate the development. A 110mm water pipe will be connected to the 350mm municipal main in Voorspoed Street.

Roads – The development will generate between approximately 66 peak hour trips in the morning and afternoon peak times. This additional traffic should not unacceptably raise the traffic congestion at the intersections.

Storm water – No on-site storm water retention will be required for the proposed

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development.

The following mitigation measures should also be implemented:

- That the site must be levelled and all vegetation and topsoil removed from the site.
- Measures to manage storm water and waste will be implemented and maintained to prevent erosion and pollution.
- Receptacles should be placed on site for the collection of general waste during construction and operation. These receptacles should be emptied on a regular basis and waste be disposed of at an authorized landfill site in Bloemfontein.
- No construction and / or any other waste will be dumped in the veld or on site
- SAHRA will be notified should traces of any paleontological heritage be found during construction.

Is an EMPr attached?

YES

NO

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

Richard Williamson

NAME OF EAP



25 April 2018

SIGNATURE OF EAP

DATE

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SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information