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 as amended 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 **07 April 2017**. 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.
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?		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

Proposed Hertzogville township establishment – Malebogo Erven 848, 1174, 1175 and 2233.

The proposed Hertzogville township establishment on Erven 848, 1174, 1175 and 2233, Malebogo forms part of Phase 1 of the proposed township development in the larger Tokologo Municipal area as identified in the Spatial Development Framework (SDF) and the Integrated Development Plan (IDP) for Tokologo Local Municipality. The aim is to ultimately provide a total of 2 000 formal residential stands with related linear services (i.e. electricity, sewer line, water line, internal roads).

The following related activities will be associated with this proposed project:

- Reutilisation and rezoning of the following existing erven for the establishment of formal residential stands: Erf 848 (i.e. zoned as "erf" but currently not developed) ordained under General Plan 651/1995; Erf 1174 (i.e. zoned school erf) and Erf 1175 (i.e. zoned school erf) ordained under General Plan 1056/1996; Erf 2233 (i.e. zoned "open space") ordained as part of General Plan 1402/2006.
- Formalising erven to allow practical and cost-effective service delivery.
- Installation of internal services (including water, sewer, electricity) that would connect to the existing municipal services. According to the Bulk Services Report: Hertzogville Infill Planning – Erf 1174 and 1175 (2021), the design standards of these services are proposed to be of the same standard and capacity than the existing services in the existing Malebogo development which is below the thresholds of current listed activities in terms of the listing notices under the EIA Regulations, 2014 (as amended).
- Establishment of an internal road network.

Phases during the proposed project will include the following:

<u>Planning Phase</u>

- Create ±106 new residential erven at an average erf size of ±350m^2.
- Planning and concept designing to address identified issues and physical restrictions and/or constraints to develop a layout plan for approval in terms of the Spatial Planning and Land Use Management Act (SPLUMA) (Act 16 of 2013) and the Municipal Planning Bylaw (MLUP). Factors taken into consideration include the following:
  a) Flood line determination.
  b) Geotechnical constraints.
  c) Civil engineering services constraints: both internal and external (bulk) services.

d) Electrical engineering services constraints: Both internal and external.
e) Environmental constraints.
f) Traffic impact constraints.

- Change in layout details and land use zoning of existing Erven 848, 1174 and 1175 Malebogo Ext. 2; and Erf 2233 Malebogo Ext. 9.
  a) Erf 848 (i.e. zoned general erf but undeveloped) is to be changed to "Park" together with a portion of Erf 1175 for the purpose of storm water retention as this is the lowest point of the study area.
  b) Erf 1175 is a school erf (General Plan SG 1056/1996) and is no longer required for its education purposes due to the integration of education assets in Hertzogville. The existing developed recreational facility on the south-eastern portion of the erf will be incorporated into the proposed "Park" erf that will be connected to Erf 848 to the west.

     There is an existing historic excavation pit on Erf 1175 which is only partially filled. This area with an extended portion of land to the north will be changed to "Park" to create open space to the community within the developed area.
  c) Erf 1174 is a school erf (General Plan SG 1056/1996) no longer required for its education purposes. The erf will be reutilised for the creation of formal residential stands.
  d) Erf 2233 (0.3516 ha) is currently zoned "Open Space" (General Plan SG 1402/2006). This is a non-functional erf to be closed and used for street purposes. To enable a more practical site layout, the existing Eskom Powerline traversing the erf will be relocated to extend along the eastern edge of the new widened street reserve.

Construction Phase

- Site establishment.
- Clearance of vegetation and topsoil of areas to be disturbed for houses and internal services.
- Formalising of erven in accordance with the approved site layout.
- Establishment of internal access roads, storm water management measures and services. According to information currently available, the extent of these activities are below the thresholds of the listed activities under the EIA Regulations, 2014 (as amended) and will be of the same standard and capacity than that of the existing services of Malebogo.
- Establishment/construction of houses.
- Possibly fill and rehabilitate the historic excavation pit with excavation material that may emanate from the construction of the services (if approved).

Operational Phase

- Residential development.
- Internal service delivery (i.e. services including electricity, sewer and water).
- Public road use.

Decommissioning Phase

- Due to the nature of the project, decommissioning is not currently envisioned for this project. For purposes of this application, discussion under the "Decommissioning Phase" will be focussed on

the rehabilitation of disturbed areas after township establishment and construction of services have ceased. - Removal of any construction material remaining on site on completion of establishment of services. - Removal of any remaining construction rubble as well as waste material produced during construction of the internal services and disposal thereof at the Hertzogville landfill site. - Local rehabilitation and landscaping of disturbed areas related with the proposed project, e.g. temporary linear excavations during the construction of services.

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

Listed activity as described in GN 327,325 and 324	Description of project activity
Example: ***GN 327 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.***	***A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river***
GNR 324 Item 4: The development of a road wider than 4 m with a reserve less than 13.5 m. b. Free State ii. Inside urban areas: aa) Areas zoned for use as public space.	Transformation of the land use to residential and/or street purposes with storm water management in relation to the approved site layout as the erf currently has no functional purpose.
GNR 324 Item 12: The clearance of an area of 300 m^2 or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken with a maintenance management plan. b. Free State iii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.	Clearance of indigenous vegetation more than 300m^2 on Erf 2233 zoned as "Open Space". Closure of the "Open Space/park" and reutilisation of the erf for street purposes.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;

(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h) of GN 326, Regulation 2014 as amended. 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:
The proposed Hertzogville township establishment on Erven 848, 1174, 1175 and 2233, Malebogo forms part of Phase 1 of the proposed township development in the larger Tokologo Municipal area as identified in the Spatial Development Framework (SDF) and the Integrated Development Plan (IDP) for Tokologo Local Municipality. There is an urgent need in the Tokologo community for the establishment of residential stands.

Erven 1174 and 1175 are existing erven ordained as part of General Plan 1056/1996; Erf 848 is an existing erf ordained as part of General Plan 651/1995; Erf 2233 is an existing erf ordained as part of General Plan 1402/2006. To enable the municipality to start addressing the needs of the community, Phase 1 of the township development would be to reutilise and rezone existing erven identified to be available for the establishment of formal residential stands. The respective site layout alternatives are related to the respective site alternatives. For ease of reference and discussion purposes, the alternatives are as follow:

<u>Alternative 1 (preferred site and site layout): Proposed township establishment on Erven 848, 1174, 1175 and 2233</u>

- The preferred site alternative and site layout for this application is development on Erven 1174, 1175 and 2233 with inclusion of Erf 848 for storm water retention purposes.

Alternative 2 (alternative site and alternative site layout): Proposed township establishment on Erven 1174, 1175 and 2233

- The alternative site alternative and site layout for this application is development on Erven 1174, 1175 and 223 with the exclusion of Erf 848.

Alternative 1 (preferred alternative): Erf 848, Erf 1174, Erf 1175 and Erf 2233		
Description	Lat (DDMMSS)	Long (DDMMSS)
Preferred site and layout alternative: Proposed township development on the following erven: Erf 848 (i.e. undeveloped erf); Erven 1174 and 1175 (i.e. zoned for school purposes); and Erf 2233 (i.e. zoned "open space') for the establishment of ±106 new residential erven at an average erf size of ±350m^2.	28º 7' 17.88"	25º 30' 01.56"
Alternative 2: Erf 1174, Erf 1175 and Erf 2233		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative site and layout alternative: Proposed township development on the following erven: Erven 1174 and 1175 (i.e. zoned for school purposes); and Erf 2233 (i.e. zoned "open space') for the establishment of ±136 new residential erven at an average erf size of ±350m^2.	28º 7' 17.88"	25º 30' 01.56"
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A		

In the case of linear activities: **NOT APPLICABLE**

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		
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

Alternative 1 (preferred alternative): Re-Layout Erf 848, Erf 1174, Erf 1175 and Erf 2233		
Description	Lat (DDMMSS)	Long (DDMMSS)
- Erf 848 (i.e. zoned general erf but undeveloped) is to be changed to "Park" together with a portion of Erf 1175 for the purpose of storm water retention as this is the lowest point of the study area. - Reutilisation of Erf 174 and Erf 1175 (i.e. zoned school erf) for creation of ±106 new formal residential stands. - Rezone the existing partially filled excavation pit on Erf 1175 as well as the existing recreational facility on the erf to "Park". - Reutilisation and rezoning of Erf 1174 (i.e. zoned as school erf) for the creation of formal residential stands. - Close Erf 2233 (0.3516 ha) currently zoned "Open Space" and rezone it for residential and/or street purposes. To enable a more practical site layout, the existing Eskom Powerline traversing the erf will be relocated to extend along the eastern edge of the new widened street reserve.	28º 7' 17.88"	25º 30' 01.56"
Alternative 2: Concept layout Erf 1174, Erf 1175 and Erf 2233		
Description	Lat (DDMMSS)	Long (DDMMSS)
- Reutilisation and rezoning of existing Erven 1174 and 1175 (i.e. zoned school erf) under General Plan 1056/1996, as well as Erf 2233 (i.e. zoned Open Space/Park) ordained under General Plan 1402/2006 for the establishment of ±135 new residential stands at an average erf size of ±350m^2. - Erf 2233 (0.3516 ha) is not a functional "park" erf and an existing Eskom Powerline travers the erf. This alternative will entail the closure of this park to reutilise it to enhance the practical layout of the proposed residential stands.	28º 7' 17.88"	25º 30' 01.56"
Alternative 3: N/A		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives NOT APPLICABLE

Alternative 1 (preferred alternative)
N/A
Alternative 2
N/A
Alternative 3
N/A

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternative 1 (preferred alternative): Services		
Internal services including electricity, road network, sewer and water will be incorporated within the existing services of the municipality following a phased approach. These services will be to the same standard and capacity of the existing services of Malebogo.	28º 7' 17.88"	25º 30' 01.56"
Alternative 2		
N/A		
Alternative 3		
N/A		

e) No-go alternative

The 'no-go alternative' entails that the proposed township establishment for residential stands and associated services on existing Erven 848, 1174, 1175 and 2233 is not continued with. This alternative will be assessed as part of this application.

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:	**Size of the activity:**
Alternative A1[1] (preferred activity: ±106 residential stands with preferred layout on Erven 848, 1174, 1175 & 2233)	(±106 x 350m^2; Excluding service servitudes) 37 100 m^2
Alternative A2 (alternative activity: ±135 residential stands on Erven 1174, 1175 & 2233)	(±135 x 350m^2; Excluding service servitudes) 47 250 m^2
Alternative A3 (alternative activity) N/A	m^2

or, for linear activities: N/A

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

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

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

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred site: Erven 848, 1174, 1175 & 2233)	Erf 848 = 3 755 m^2 Erf 1174 = 24 860 m^2 Erf 1175 = 40 959 m^2 Erf 2233 = 3 516 m^2
Alternative A2 (if any)	Erf 1174 = 24 860 m^2 Erf 1175 = 40 959 m^2 Erf 2233 = 3 516 m^2
Alternative A3 (if any) N/A	m^2

4. SITE ACCESS

Does ready access to the site exist?	YES
If NO, what is the distance over which a new access road will be built	m

Describe the type of access road planned:

The same standard and type of road (i.e. concrete interlocking paving streets) than the already established parts of Malebogo is planned for the internal road network that will be associated with the proposed residential development.

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.

Note:

The housing structures are initially expected to be of a temporary nature constructed by the beneficiaries to be identified by the Municipality until formal housing is allocated to applicants qualifying in terms of the municipality's housing development project.

The internal services (e.g. water, sewage and electricity) associated with the proposed development will be of similar standard, type and capacity than the existing services within Malebogo and will be integrated into the

existing network of the municipality. According to the information available at the time of this application, the extent of these services will be below the thresholds of current listed activities in terms of the listing notices under the EIA Regulations, 2014 (as amended).

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		Please explain
Erven 1174 and 1175 are currently earmarked for use as "school" (General Plan SG 1056/1996); however it is no longer required for its education purposes due to the integration of education assets in Hertzogville. Erf 2233 is currently zoned "Open Space/Park" (General Plan SG 1402/2006). However, the existing Eskom Powerline traversing the erf and the current alignment of the erf renders it non-functional. The purpose of this project would be to close the "Park" and rezone it for street and residential purposes. Erf 848 is an existing general erf earmarked for future development. However, it is currently undeveloped and proposed for rezoning as "park" for storm water retention purposes as part of the holistic development plan for this site.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		Please explain
According to the Free State SDF (2007), one of the objectives were "Improving basic services and housing" with focus on addressing backlogs and informal settlements. The Free State Provincial Growth and Development Strategy's (FSGDS) (Free State Provincial Government, 2007) target is to reduce the housing backlog from 23.4% to 0% in 2030. According to Statistics South Africa (Census 2011), 83.8 % of households within the Tokologo Local Municipal area has formal dwellings. The purpose of this project would be to address the housing need within the Tokologo Local Municipal area.			
(b) Urban edge / Edge of Built environment for the area	YES		Please explain
Erven 848, 1174, 1175 and 2233 are situated within the urban edge. According to the Final Draft Tokologo SDF (2019), the urban edge of Hertzogville will include Malebogo as well as the small extension of the open space to the north of Malebogo and the R708 to accommodate future residential developments.			
(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		Please explain
The proposed development forms part of Phase 1 of the proposed township development in the larger Tokologo Municipal area as identified in the Final Draft SDF (CoGTA, 2019) and the Integrated Development Plan (IDP) 2020/2021 (Tokologo Local Municipality, 2020) for the municipality.			

(d) Approved Structure Plan of the Municipality	YES		Please explain
The concept site layout plans have been approved by the council of Tokologo Local Municipality.			
(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?)		NO	Please explain
At the time of this report, Tokologo Local Municipality did not have an approved Environmental Management Framework (EMF). However, the approval of this application is not anticipated to compromise the integrity of the existing environmental management priorities of the site to be developed. The identified erven are situated within the urban edge and earmarked for development (Final Draft Tokologo SDF, 2019). These erven are surrounded by similar land use than that proposed with this application. Although Erf 2233 is zoned "Open Space", it is to reason that the only purpose for this is the Eskom Powerline traversing the erf. This erf is currently highly degraded by invader plant species and waste dumping. There is an existing recreational facility in the south-eastern corner of Erf 1175. This project will aim to reutilise these erven to formalise residential stands and create a practical site layout for phased service delivery.			
(f) Any other Plans (e.g. Guide Plan)	YES		Please explain
Erf 1174 and Erf 1175 are existing formal erven ordained in General Plan SG 1056/1996. Erf 848 is an existing erf ordained in General Plan SG 651/1995. Erf 2233 is an existing erf ordained in General Plan SG 1402/2006. An application in terms of SPLUMA, 2013 (Act 16 of 2013) will be lodged to obtain approval for the physical layout plan and the rezoning of previous unfunctional erven to be reutilised. Final Project Implementation/Business Plan for Tokologo Local Municipality: Hertzogville (Malebogo) (Housing Development Agency, 2018).			
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		Please explain
Erven 1174 and 1175 are currently earmarked for use as "school"; however it is no longer required for its education purposes due to the integration of education assets in Hertzogville. There is an existing recreational facility in the south-eastern corner of Erf 1175. Erf 2233 is zoned "Open Space/Park", but it has no functional purpose. The purpose of this project would be to close the "park" and create a more functional and practical site layout for residential and street purposes. The so called "loss" of this park erf, will be replaced with the formalising of the existing recreational facility together with an extended section of Erf 1175 and the whole of Erf 848 to "park". The study area is currently isolated open land surrounded by residential and similar development. Future formal or informal development on this site is considered inevitable. The proposed development forms part of Phase 1 of the proposed township development in the			

larger Tokologo Municipal area as identified in the Final Draft SDF (2019).			
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		Please explain
The Municipality has an immanent land invasion problem and illegal settlement by the community on other open land in the Hertzogville area has already taken place. Erven 848, 1174, 1175 and 2233 have been identified as existing erven ordained under existing General Plans of Tokologo Local Municipality available to start Phase 1 of the larger project to create a total of at least 2 000 new residential stands in the municipal area.			
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.)	Reticulation network: Yes Treatment Works: Further assessment and improvement may be required.		

Also refer to the report titled "Bulk Services Report: Hertzogville infill planning – Erf 1174 and 1175", dated May 2021 attached hereto under Appendix J.

Water supply:

According to the Bulk Services Report (Zutari, 2021), the proposed development will be serviced via the existing 75 mm diameter water reticulation network of Malebogo from where it will be reticulated throughout the new development area.

The additional water demand estimated for the proposed project would be 64.8 Kl/day. Malebogo is currently supplied with water from two existing elevated storage reservoirs with a combined capacity of 215 m^3. The Hertzogville Water Treatment Works (WTW) has a total treatment capacity of 3Ml/day. The Plant currently delivers a total daily volume of between 0.48 and 0.55 Ml/day which is at 18% of the plant's total capacity. Although the WTW has the capacity to deliver the additional demand, an investigation by the civil engineers on 18 May 2021 found that the WTW was not fully functional and one of the storage reservoirs were not in operation.

The engineers recommend that the current treatment capacity of the WTW needs to be addressed to ensure that the water demand of Hertzogville and Malebogo is reached.

Sewerage supply:

It is proposed that the development will connect into the existing 160 mm diameter main sewage reticulation of Malebogo (Zutari, 2021). The total average daily dry weather flow of the proposed development is estimated to be 101.25 kl/day with a peak wet weather flow of an estimated 4.10 l/s. Based on the capacity of the existing reticulation of Malebogo and on the assumed additional unit flow rate per day for the proposed development, the greater Malebogo sewage reticulation network would have sufficient capacity for the additional flow (Zutari, 2021).

Findings from an investigation by the civil engineers on 18 May 2021, indicated that the existing Hertzogville Waste Water Treatment Works (WWTW) is not currently operating as originally designed, nor at full capacity. In addition, not all the existing ponds were operating at the time of the

study; therefore jeopardising effective treatment of raw sewage entering the system (Zutari, 2021).

Recommendations from the civil engineer include further assessment and improvement of the existing WWTW to ensure that the Plant has sufficient capacity to accommodate the total sewage generated by Hertzogville and Malebogo.

Roads:

According to the Bulk Services Report (Zutari, 2021), access to the new residential stands will be obtained by means of concrete interlocking paving streets connected to the existing internal road network of Malebogo.

Stormwater:

Stormwater will be managed via surface runoff within the proposed road network and additional surface drains will be constructed where necessary (Zutari, 2021). Malebogo is predominantly serviced via surface stormwater infrastructure.

Electrical:

The additional electricity load on Eskom's Medium Voltage network is estimated at 337.5 kVA. An existing overhead Eskom network with spare capacity for additional residential stands is available adjacent to the proposed development areas (Zutari, 2021). This does not include additional power requirements for any water or waste water treatment works.

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		Please explain
An invitation to tender for the refurbishment of the existing Hertzogville WWTW is currently underway.			
7. Is this project part of a national programme to address an issue of national concern or importance?		NO	Please explain
The project is not a formally listed project under the National Infrastructure Plan (Presidential Infrastructure Coordinating Commission Report, 2012), but forms part of the objectives to address socio-economic needs and provision of housing and basic needs (Draft National Spatial Development Framework, 2018).			
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		Please explain
Erven 1174 and 1175 are no longer required for its initial education purposes and Erf 2233 is not currently a functional "open space/park" erf. Erf 848 is zoned as a general erf, but currently undeveloped. These erven are surrounded by similar residential development and future development is likely inevitable. The purpose of this project would be to reutilise these erven, create a practical site layout for service delivery and functional land use.			

9. Is the development the best practicable environmental option for this land/site?	YES		Please explain
It is important to note that Erven 1174, 1175 and 848 were existing formal erven zoned for development. Erf 2233 is zoned "open space" with no functional purpose other than what appears to be a servitude for the existing Eskom Powerline traversing the erf. The site has been identified to be available for the development of residential stands as it is existing erven ordained as part of the General Plan and currently undeveloped. The site is situated within the urban area of Malebogo and surrounded by residential development and similar land use. This isolates the site from surrounding natural aeras and modifies the ecological functioning to a large degree. Future development, whether formal or informal, is considered to be inevitable. There is an existing recreational facility in the south-eastern corner of Erf 1175. According to the Ecological and Biodiversity Overview Report for Phase 1 of the proposed Hertzogville Residential Establishment (DPR Ecologists, 2021), Erven 1174 and 1175 are heavily degraded and affected by numerous impacts such as waste dumping, dirt tracks and significant infestation by exotic plants. The site is completely transformed from the natural condition and not contributing significantly toward the functioning of the surrounding areas.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES		Please explain
The site has been highly degraded and transformed from its natural vegetation type. The site is dominated by exotic weeds and pioneer plant species. Impacts include waste dumping, rubble dumps, dirt tracks crossing the site and a partially filled excavation pit. It is expected that by reutilising this site for residential stands and formalising the site layout, the municipality would be able to also establish services which will in affect assist in the management of the site.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES		Please explain
The local communities of the towns within Tokologo Local Municipal area has identified the need for more residential stands and formal dwellings during the consultation process of the Tokologo SDF and IDP. The primary option for the municipality is to identify existing available land ordained within the General Plan and to reutilise and/or rezone it for residential development. This will enable the municipality to commence addressing this need in a phased approach, while further land (possibly undeveloped) are investigated for feasibility and approval.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		NO	Please explain
The study area currently forms isolated open land surrounded by similar land use proposed for the site. Future formal or informal development on this open land is considered to be inevitable considering the current need for residential stands within the community and already illegal settlement that has occurred on other open land within the municipal area. The formalisation of the residential stands within the approved site layout will address the housing need within the legal framework and allow for practical and cost-effective service delivery by the municipality. Tokologo Local Municipality is the landowner and applicant for this project. No objections towards the proposed project have been received by the EAP from stakeholders or Interested and/or Affected Parties (I&APs) during the consultation process of this application.			

13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		NO	Please explain
Erven 848, 1174, 1175 and 2233, Malebogo are situated within the urban edge of Hertzogville.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?		NO	Please explain
Although one of the national objectives are to create Sustainable Human Settlements, this project has not been identified as part of the 18 SIPS.			
15. What will the benefits be to society in general and to the local communities?			Please explain
Members of the local community has illegally invaded parcels of land in the municipal area reserved and/or earmarked for, amongst other, public spaces, parks, schools, etc. By reutilising and rezoning the identified erven, an estimated 106 formal residential stands of approximately 350 m^2 would be created and made available to identified beneficiaries. With approval of the final site layout, the municipality will be able to establish services to this area. This will assist in alleviating living conditions of households in the municipal area of Tokologo.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
The urgency to address the need for residential stands and formal housing in the municipality is intensified by continuous unrests in the Tokologo Municipal area and illegal land invasion by community members. Tokologo Local Municipality is currently also involved in court cases related to illegal land invasion.			
17. How does the project fit into the National Development Plan for 2030?			Please explain
The project will create residential stands to identified beneficiaries (members of the local community) currently living in informal settlements. Once the final site layout has been approved, the municipality would be able to establish services (including water and sewar lines, electricity, storm water management) that would connect to the existing municipal services. This will ultimately enhance the living conditions of the beneficiaries.			
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.			
Through the undertaking of a Basic Assessment (BA) process by the EAP, guided by the available guidelines, the consideration of impacts and alternatives and its various positive and negative influences have been made. The desirability of the proposed development has been weighed. The comments (if any) emanating from the public participation process have been considered. The findings and recommendations from specialist assessments have been included in the risk assessment and the recommendations used to develop mitigatory measures. This ensures that all provisions of the Act were considered and as such Integrated Environmental Management has been accommodated.			
19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.			
Through the undertaking of a BA process by the EAP, guided by the available guidelines, the consideration of impacts and alternatives and their various positive and negative influences has been made. All provisions of the Act were considered and as such Integrated environmental Management			

has been accommodated in terms of:

(2) Environmental Management must place people and their needs at the forefront of its concern, and serve their physical, psychological developmental, cultural heritage and social interests equitably.

The goal of this BA is to identify and mitigate potential socio-economic impacts to meet the terms of Section 24 of the Constitution.

(3) Development must be socially, environmentally and economically sustainable.

The overall goal of this BA is to predict, identify and manage potential positive and negative impacts in the socio-economic, cultural and biophysical environments to meet the needs of present generations without compromising the needs of future generations which will give effect to sustainable development.

(*4)(a) Sustainable development requires the consideration of all relevant factors including the following:*

i) That the disturbance of ecosystems and loss of biological diversity are avoided or where they cannot be altogether avoided, are minimised and remedied,

ii) That pollution and degradation of the environment are avoided or where they cannot be altogether avoided, are minimised and remedied,

iii) That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided or where they cannot be altogether avoided, are minimised and remedied,

iv) That waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible or otherwise disposed of in a responsible manner,

v) 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,

vi) 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 jeopardised,

vii) 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; and

viii) That negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether avoided, are minimised and remedied.

Specialist studies were undertaken where necessary as part of the BA process to consider all impacts relating to the above. An Environmental Management Programme (EMPr) was compiled to mitigate and manage all activities during the planning, construction and operational phases.

(b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practical environmental option.

All aspects, including socio-economic, cultural-heritage and biophysical was evaluated and assessed in order to minimise potential negative impacts which will give effect to Integrated Environmental Management, as set out in chapter 5 of NEMA, 1998 (Act 107 of 1998).

(c) Environmental justice must pursue so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.

A public participation process in terms of regulations 41 – 44 of the NEMA EIA Regulations, 2014 as amended was undertaken as part of the BA process to involve Interested and/or Affected Parties (I&APs) as well as identified stakeholders in the process and provide them an opportunity to comment on the proposed project. The need for residential stands and formal dwellings have also been identified by the local community during the public consultation process conducted for the Tokologo SDF (2019) and Tokologo IDP (2020/2021).

(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.

The proposed project will aim to improve living conditions of members of the community and address matters of illegal and informal settlements on the outskirts of the town and on open land earmarked for other land use. The project falls within the Tokologo IDP (2020/2021). Once the re-layout plan has been approved (if considered for approval), the municipality would be able to establish basic service delivery in a phased approach.

(e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process service or activity exists throughout its life cycle.

The EMPr will be applicable throughout the lifecycle of the project. The municipality will be responsible for basic service delivery and continuous maintenance thereof, ensuring sufficient capacity and proper functioning thereof.

(f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills, and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.

A public participation process in terms of regulations 41 – 44 of the NEMA EIA Regulations, 2014 as amended was undertaken as part of the BA process to involve I&APs as well as identified stakeholders in the process and provide them an opportunity to comment on the proposed project.

The municipal council was in constant discussions with stakeholders and the Hertzogville Concern Group regarding the action to be taken and subsequent progress in addressing the need for residential stands in the community (refer to Appendix E).

(g) Decisions must take into account the interests, needs, values of all interested and affected parties and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.

DESTEA's decision making process must be in accordance with the above.

(h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.

Environmental awareness will be included in the EMPr for implementation by appointed contractors/service providers during the construction phase of the project. The municipality will be responsible for basic service delivery and continuous maintenance thereof during the operational phase. The municipality will therefore be liable to ensure that staff and/or third parties appointed on this project be well informed regarding potential environmental risks that may be associated with the activity and the required management measures to address environmental incidents, e.g. oil spill, etc.

(i) The social, economic and environmental impacts of activities, including disadvantages and benefits must be considered, assessed and evaluated and decisions must be appropriate in the light of such consideration and assessment.

This BAR does give effect to Section 5 of NEMA whereby all social, economic and environmental

impacts of activities were considered, assessed and evaluated.

(j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.

The municipality will be liable to ensure that the human rights of its staff and/or third parties appointed on the project are considered during all phases of this project.

(k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.

DESTEA's decision making process must be in accordance with the above. The decision will take place in an open and fair manner and to give effect to Section 32 of the Constitution, registered I&APs will be notified of the decision in terms of the requirements as set out in regulations 41 – 44 of the NEMA EIA regulations, 2014 and as amended in 2017.

(l) There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment.

The relevant governmental authorities will be considered, and key stakeholders have been consulted during the BA process to give their inputs on the project.

(m) Actual or potential conflicts of interest between organs of the state should be resolved through conflict resolution procedures.

The EAP aims to comply with applicable environmental legislation throughout the BA process and the stakeholders have been consulted throughout the process.

(n) Global and international responsibilities relating to the environment must be discharged in the national interest.

The project is not of international importance.

(o) The environment is held in public trust for the people the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.

The inputs of specialists and their recommended mitigation measures were included in the assessment to ensure that the project is undertaken in a sustainable manner and that the potential impact on the environment is prevented and/or limited to a minimum.

(p) The cost of remedying pollution, environmental degradation and consequent adverse health effects and of preventing controlling or minimising further pollution, environmental damage or adverse health effects must be paid by those responsible for harming the environment.

The EMPr has been compiled for implementation by the Applicant to prevent and/or minimise any potential negative impacts to the environment. It will be the responsibility of the Applicant and appointed contractor to adhere to all measures set out in the EMPr to give effect to Section 28(1) of NEMA, 1998 (Act 107 of 1998).

(q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.

(r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands and similar systems require specific attention in management and planning procedures especially where they are subjected to significant human resource usage and development pressure.

An ecological and biodiversity overview have been done by a specialist (refer to the specialist report under Appendix D). Although there may be remnants of natural vegetation and a proportion of indigenous vegetation are still present on site, the site is found to be degraded and highly transformed from its natural condition by current land uses. The indigenous vegetation found on site

are dominated by pioneer species. This together with the high infestation of invader and exotic plant species on site are indicative of a transformed natural vegetation layer.

There are no defined natural watercourses or wetlands on site but storm water drainage in the south-western corner of the site appears to be problematic and results in the accumulation of runoff water. The vegetation found in this area is indicative of a higher moisture regime. The storm water management measures in this area should be addressed if the identified erven are to be developed.

There is an existing recreational facility in the south-eastern corner of Erf 1175.

The preferred site layout of the proposed development has been informed by environmental risks. An EMPr with minimum environmental management measures has been developed with the focus of preventing and/or limiting potential environmental impacts because of the proposed development.

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 (NEMA), 1998 (Act 107 of 1998); EIA Regulations, 2014 as amended.	Application for Environmental Authorisation through a Basic Assessment process	DESTEA, Free State Province	2014
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) as amended.	Ecological screening has been done to identify potential occurrence of listed sensitive, endangered or protected species.	DFFE; DESTEA Free State	2004
National Heritage Resources Act (NHRA), 1999 (Act 25 of 1999).	The proposed development falls within the ambit of the activities under Section 38 of the NHRA, 1999 (Act 25 of 1999).	SAHRA	1999
Spatial Planning and Land Use Management Act (SPLUMA), 2013 (Act 16 of 2013); together with Municipal Land Use Planning By Law (MLUP).	Amendment of the Municipal Land Use Planning By-Law (MLUP) to declare an emergency to relocate people temporarily or permanently to an area better suited than the current position. Obtain approval for a physical layout plan considering constraints. Rezoning of erven to reutilise previously unfunctional erven.	DRDLR; DCOGTA	2013

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES
If YES, what estimated quantity will be produced per month?	(Estimated on a 12-month contract and dependant on total length of services to be constructed – not verified) ±50 m^3

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

- Topsoil and overburden excavated during the construction of services will be stockpiled adjacent to the works for backfilling and landscaping purposes after completion of construction. It is recommended that excess material that will not be used for backfilling be used to fill the partially filled excavation pit situated on Erf 1175 to create a safe "open space" for the community.
- Construction rubble (including inert waste such as broken bricks, off cuts from pipes, etc.) will be collected and removed from site by tipper trucks for disposal by the municipality or appointed service provider at the Hertzogville Landfill Site.
- Any scrap metal will be collected and recycled by the municipality or appointed service provider.
- Illegal dumping of domestic waste currently occurs on site. This waste will have to be collected and disposed of at the Hertzogville Landfill Site by the municipality or service provider prior to construction.

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

- It is recommended that excess topsoil and overburden from excavations be used to rehabilitate the existing partially filled excavation pit on Erf 1175. Any excess material after backfilling (if approved) and landscaping should be removed from site and disposed of at Hertzogville landfill site.
- Any other solid waste generated during the Construction Phase will be collected and disposed of at the Hertzogville Landfill site.

Will the activity produce solid waste during its operational phase?	YES
If YES, what estimated quantity will be produced per month?	[Estimated based on an average of 0.7 kg/capita/day for low-income x 106 households (DEA IWMP)] ±13.5 m^3

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

The management of domestic solid waste will be incorporated into the Tokologo municipal waste stream and managed as per the municipal waste management plan.

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

Hertzogville Landfill Site

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?		NO

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. ***N/A***

Is the activity that is being applied for a solid waste handling or treatment facility?		NO

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application. ***N/A***

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?		NO
If YES, what estimated quantity will be produced per month? ***N/A***		m^3
Will the activity produce any effluent that will be treated and/or disposed of on site?		NO

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. ***N/A***

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

If YES, provide the particulars of the facility:

Facility name:	Hertzogville Wastewater Treatment Works		
Contact person:	Mr. Mpho Sehloho		
Postal address:	Tokologo Local Municipality Private Bag X46 Boshof		
Postal code:	8340		
Telephone:	053 541 0014	**Cell:**	
E-mail:	Mpho.tokologo@gmail.com	**Fax:**	053 541 0360

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

Domestic wastewater generated during the operational phase of the residential development will be incorporated into the existing municipal services. No reuse and/or recycling of wastewater projects currently forms part of this project.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that exhaust emissions and dust associated with construction phase activities?		NO
If YES, is it controlled by any legislation of any sphere of government? ***N/A***		

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. ***N/A***

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

Emission sources associated with the proposed project during the Construction Phase are expected to be localised and limited to the following: - Exhaust emissions from construction vehicles during the construction/installation of services (i.e. electricity lines, storm water management measures, sewer and water lines). - Dust generation during the establishment of housing and construction of services due to clearance of vegetation and soil exposed during excavation.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?		NO

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority. ***N/A***

e) Generation of noise

Will the activity generate noise?	YES	
If YES, is it controlled by any legislation of any sphere of government?		NO

Describe the noise in terms of type and level:

- Noise during the Construction phase is expected to be localised and limited to construction vehicles for the duration of construction activities. - During the Operational Phase, noise is expected to be limited to vehicles and public transport in the area and general community activities, e.g. creche, open space attracting playing kids, etc. - No excessive noise is expected considering the land use will mainly be residential.

13. WATER USE

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

X Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	N/A
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?	NO

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

14. ENERGY EFFICIENCY

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

The existing street/area lighting principals for Malebogo will be applied for the proposed development, as well as the same design standards. No plan towards "energy efficiency" currently forms part of this project.

It is recommended that individual landowners are educated in energy saving methods, e.g. energy saving appliances and lights.

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

No alternative energy sources have been considered as part of this project.

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? YES [ ]

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	Lejweleputswa District Municipality
Local Municipality	Tokologo Local Municipality
Ward Number(s)	3
Farm name and number	Hertzogville Dorpsgronden 1084
Portion number	Portions 21, 23 and 24
Erf number	848 1174 1174 2233
SG Code	F00400050000084800000 F00400050000117400000 F00400050000117500000 F00400050000223300000

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:

Erf 848: General erf
Erf 1174: School
Erf 1175: School
Erf 2233: Open space/Park

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 [ ]

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1 (Preferred site): Erven 848, 1174, 1175 and 2233

Flat X	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

Alternative S2 (if any): Erven 1174, 1175 and 2233

Flat X	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

Alternative S3 (if any): N/A

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

2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline		2.4 Closed valley		2.7 Undulating plain / low hills	
2.2 Plateau		2.5 Open valley		2.8 Dune	
2.3 Side slope of hill/mountain		2.6 Plain	**X**	2.9 Seafront	
2.10 At sea					

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at

the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

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]	**X Natural veld with heavy alien infestation[E]**	**X Veld dominated by alien species[E]**	Gardens
Sport field	Cultivated land	Paved surface	**X Building or other structure**	**X 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. **Refer to Appendix D for the Ecological and Biodiversity Overview Report (2021).**

5. SURFACE WATER

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

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

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

N/A

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:

Natural area X	Dam or reservoir	Polo fields
Low density residential X	Hospital/medical centre	**Filling station[H] X**
Medium density residential X **[Definition: Medium density housing is defined as approximately 40 – 100 dwelling units/ha (gross) (Development Action Group, 2008)]**	**School X**	Landfill or waste treatment site

High density residential	Tertiary education facility	Plantation
Informal residential[A]	**Church X**	**Agriculture X**
Retail commercial & warehousing X	Old age home	River, stream or wetland
Light industrial X	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 X	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 X	Golf course	**Other land uses (describe) X** **Effluent treatment plant possibly for treatment of effluent from animal stock pen)**

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:

N/A

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:

There is an existing filling station approximately 250 m to the east, south-east of the proposed development site. The proposed development will not have an impact on the filling station. An increase in built-up area in close proximity of the filling station may increase the cumulative safety risks in the event of a fire. However, this should also be seen in context of the surrounding land use. There is existing residential development within 100 m from the filling station, thus the greater distance of the proposed development from the filling station reduces the safety risks. The filling station will have no direct impact on the proposed development and provided that the management measures and storage specifications required by the filling station are implemented, the safety risks due to fires will be minimised.

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

Critical Biodiversity Area (as per provincial conservation plan)	NO **Ecological Support Area 2**	
Core area of a protected area?		NO
Buffer area of a protected area?		NO

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

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:		NO
N/A		

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:

Phase 1 Archaeological Desktop study for the proposed development of Malebogo Township (Ubique, 2021).

- The study area has been subjected to various anthropogenic disturbances, including development, waste dumping and movement through the area. The study area is therefore unlikely to produce *in situ* heritage resources. If any, it is likely to be out of context.
- Heritage sites and resources ranging from low to high significance have been documented on the periphery of a 15-100 km radius from the study area.
- According to the desktop study, most of the documented lithic material in the area is of low to medium significance. As the development area is situated within the already developed area of Hertzogville and the current state of surface disturbance, the occurrence of above ground lithic material within the study area is considered to be low, and if any, would likely be out of context.
- The possibility of rock art or engravings within the study area are very low as recorded rock-art sites are further than 50 km from the proposed development area.
- The likelihood of Iron Age Sites present within the study area is low, as the nearest recorded site is approximately 155km to the east.
- Hertzogville has been established during the early 1900s. Although the occurrence of colonial-era material and features are considered probable, the degraded state of the site may result in findings being out of context.
- The probability of graves and burials are low but should not be disregarded as informal cemeteries and disregarded graves can occur anywhere in the landscape.
- Due to the disturbed nature of the study area, exemption from a complete AIA with field assessment is recommended.
- A visual guide or rudimentary Chance Finds Protocol has been developed for this project for implementation by the Applicant and/or appointed service provider.

Palaeontological Desktop Assessments for the proposed township developments (Banzai Environmental, 2021)

- Erf 1174 is underlain by Jurassic dolerite. According to the PalaeoMap of South African Heritage Resources Information System (SAHRIS), the Palaeontological Sensitivity of Jurassic dolerite is zero as it is igneous in origin. Potential impact: Negative Low Impact.
- Erven 848, 1175 and 2233 are underlain by younger Quaternary sediments which has a moderate Palaeontological Sensitivity. Potential impact: Negative Medium Impact.
- The proposed development is not considered to have detrimental impacts on the palaeontological reserves of the area. Subsequently, no further palaeontological heritage studies, ground truthing and/or specialist mitigation are required for this study area.

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

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

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:

According to the 2011 census, Tokologo Local Municipality has a population of 28 986 with a population growth rate of -1.13% (2001 – 2011). Of the total population 5.9% is elderly (i.e. persons 65 years and older), 31.2% are children (i.e. persons younger than 15 years) and 62.9% between the ages of 15 and 64 (working age). Of the 9 122 economically active people (employed or unemployed but looking for work), 27.4% are unemployed. Of the 4 647 economically active youth (15 – 34 years), 35.8% are unemployed.

Economic profile of local municipality:

As per statistics of 2014 (Tokologo IDP, 2019), the five main contributing economic sectors of Tokologo Local Municipality to the GDP of Lejweleputswa District Municipality's economy are: 1. Agriculture (24.6%); 2. Mining (21.6%); 3. Community services (20.7%); 4. Trade (12.3%); 5 Finance (7.6%). The five main sectors that provided formal employment in the municipal area as percentage in 2014 were: agriculture; households; community services; trade and manufacturing (Tokologo IDP, 2019).

Level of education:

Tokologo Local Municipality level of education as per 2011 census:

No schooling aged 20+: 20.8%

Higher education aged 20+: 5.1%

Matric aged 20+: 17.8% Reference: Stats SA; Accessed on 16 September 2021 at http://www.statssa.gov.za/?page_id=993&id=tokologo-municipality.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	Estimated value for professional services: R3150/erf (Total estimated: R334 000.00). The capital value of services to be constructed is currently unknown and dependant on the project rollout by the municipality.	
What is the expected yearly income that will be generated by or as a result of the activity?	The activity is mainly for residential development and service delivery by the municipality. No long-term income apart from remuneration to service providers during planning and construction is expected for this project.	
Will the activity contribute to service infrastructure?	YES	
Is the activity a public amenity?		NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	Employment will be limited during construction of the services associated with the development, e.g. pipelines, internal road network, etc. This is dependant on the project rollout by the municipality and cannot be confirmed at this time.	
What is the expected value of the employment opportunities during the development and construction phase?	Estimated value for professional services: R3150/erf (Total estimated: R334 000.00). The value of employment during the construction phase is dependent on the project rollout by the municipality and cannot be confirmed at this time.	
What percentage of this will accrue to previously disadvantaged individuals?	This is dependent on the project rollout by the municipality and cannot be confirmed at this time.	
How many permanent new employment opportunities will be created during the operational phase of the activity?	The proposed project is mainly for residential development. New permanent employment opportunities during the Operational Phase is therefore not expected for this project.	

What is the expected current value of the employment opportunities during the first 10 years?	The activity is mainly for residential development and service delivery by the municipality. No long-term income apart from remuneration to service providers during planning and construction is expected for this project.
What percentage of this will accrue to previously disadvantaged individuals?	This is dependent on the project rollout by the municipality and cannot be confirmed at this time.

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**
Critical Biodiversity Area (CBA)	**Ecological Support Area (ESA) X**	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	According to the National Biodiversity Assessment (2018), ESAs are not essential for meeting biodiversity targets but supports the ecological functioning of CBAs and protected areas in delivering ecosystem services.
				The study area are considered an ESA 2 (Free State Province Biodiversity Management Plan, 2015). This confirms that the site is transformed though still functions in support of surrounding watercourses and pan systems (DPR Ecologists, 2021).

b) Indicate and describe the habitat condition on site

Habitat Condition	**Percentage of habitat condition**	**Description and additional Comments and Observations (including additional insight into condition, e.g. poor**

	class (adding up to 100%)	land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0%	The National Biodiversity Assessment (2018) indicates that the site is largely transformed, although patches of remnant natural vegetation are indicated to still be present. The onsite survey by the ecologist has confirmed that the site is highly degraded and largely transformed from the natural condition but with some remnants of the natural vegetation still present. The domination of pioneer species and significant infestation of exotic plants on site is indicative of degradation and transformation from the natural vegetation type.
Near Natural (includes areas with low to moderate level of alien invasive plants)	<5%	As the study area falls within the Savannah Biome, a prominent tree layer would be expected. However, this is completely absent which also provides an indication that the natural vegetation is largely transformed (DPR Ecologists, 2021). The scattered specimens of *Vachellia karroo* (Sweet thorn) are not considered characteristic of the natural vegetation type for the specific area, but rather a component of degraded vegetation.
Degraded (includes areas heavily invaded by alien plants)	±80%	The site already consist of dense informal housing and anthropogenic activities. According to DPR Ecologists (2021), although some vegetation are still present on patches around existing dwellings, remnants of natural vegetation is almost completely absent.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	±15%	The site is almost completely transformed from the natural condition by the existing informal housing, extensive waste dumping, dirt tracks crossing the site, unrehabilitated gravel excavation pit and establishment of exotic plants (DPR Ecologists, 2021).

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 unchanneled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable X							
	Least Threatened X		NO			NO		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)

According to Mucina & Rutherford (2006), the study area falls within the Eastern Kalahari Bushveld Bioregion and consists of Kimberley Thornveld (SVk 4) (Least Threatened) and Schmidtsdrif Thornveld (SVk 6) [adjusted to Vulnerable (Free State Biodiversity Plan. Draft 1, 2016)] vegetation type.

According to the Screening Report for Environmental Authorisation, dated 26 July 2021, the study area has a "Very high sensitivity" rating for "relative terrestrial biodiversity theme" as it is situated within an Ecological Support Area 2. An onsite survey by an ecologist indicated that the proposed development site is highly degraded and transformed from its natural condition. Being isolated from the surrounding natural areas and current degradation on site, the ecological function has been modified to a large degree (DPR Ecologists, 2021).

The natural drainage on site is from north-east to south-west, leaving Erven 848 and 1174 as the lowest point. Although there are no natural defined watercourses, wetlands or drainage lines within the perimeters of the site, the lack of storm water control measures and built-up area of houses and streets, are resulting in the accumulation of storm water in the southwestern corner of the site. Adequate storm water management measures will be required should the proposed development be continued with.

Also refer to the Ecological and Biodiversity Overview Report (DPR Ecologists, 2021) attached in Appendix D for an indication of the status of the study area identified for the proposed development.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Bloemnuus	
Date published	26 August 2021	
Site notice position	**Latitude**	**Longitude**
	28º07'46.8" S	25º30'10.5" S
Date placed	21 September 2021	

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 326

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 326

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Refer to Appendix E for a list of members of The Concern Group.	The Concern Group	Refer to Appendix E of the final BAR for a list of members of The Concern Group with contact details. (As per POPI Act, contact details of individuals were omitted from this report).

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 comments have been received up to date of submission of the draft BAR to the competent authority.	No response required to date.

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: Note: The POPI Act has been considered during the compilation of this draft report. Subsequently, any non-official or private contact details have been omitted from this report and will be attached to the final BAR submitted to the competent authority for processing.

Authority/Organ of State	**Contact person (Title, Name and Surname)**	**Tel No**	**Fax No**	**e-mail**	**Postal address**
Eskom	R. de Bruin	Tel: 051 534 1751		dbruiner@eskom.co.za	P.O. Box 356 Bloemfontein 9300
Department of Water and Sanitation: Chief Director	Onalenna Motlhaping			MotlhapingO@dws.gov.za	PO Box 528 Bloemfontein 9300
Tokologo Local Municipality *Municipal Manager*	*Municipal Manager* Mr. Kelehile Motlhale [Applicant]	Tel: 053 541 0014	Fax: 053 54 0360		Private Bag X46 Boshof 8340
Tokologo Local Municipality *Ward Councillor:* Ward 3	*Ward Councillor:* Ward 3	Tel: 053 541 0014	Fax: 053 54 0360		Private Bag X46 Boshof 8340
Corporate Governance and Traditional Affairs	Maryke Froneman	Tel: 051 407 6861	Fax: 051 407 6852	maryke@fscogta.gov.za	PO Box 211 Bloemfontein 9300
Department of Rural Development and Land Reform: Land Restitution Support (Free State)	Lefa Thabane			Lefa.Thabane@drdlr.gov.za	Old Postbank Building c/o East Burger and Selbourne Street Bloemfontein 9300

Department of Economic, Small Business development, Tourism and Environmental Affairs	Mrs. G. Mkhosana	Tel: 051 400 4817		mkhosana@destea.gov.za	Private Bag X20801 Bloemfontein 9300
Free State Department of Agriculture and Rural Development	Mr J.A.S. Morton	Tel: 051 861 8369		mortonj@dard.gov.za	Private Bag X01 Glen Building Bloemfontein 9360
Department of Agriculture, Forestry and Fisheries	Mr J. Zeelie	Tel: 051 409 2624		johanz@daff.gov.za	Omni Building First Floor 73 Aliwal Street Bloemfontein 9300
Free State Heritage Resources Authority	Loudine Philip			loudine.philip@nasmus.co.za	
South African Heritage Resources Authority	Natasha Higgitt			nhiggitt@sahra.org.za	

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 as amended 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.

Note:
This project forms Phase 1 of the township development by reutilising existing "non-functional" erven identified to be available for formal residential stands. The respective site layout alternatives are related to the respective site alternatives. Therefore, for ease of reference and discussion purposes during the assessment of the potential impacts, the alternatives and other alternatives (if any) were grouped as follow:

Alternative	Description
Alternative 1 (preferred site and site layout)	Proposed township development on Erven 848, 1174, 1175 and 2233 for the establishment of ±106 new residential stands at an average size of ±350 m^2/erf.
Alternative 2 (alternative site and site layout)	Proposed township development on Erven 1174, 1175 and 2233 for the establishment of ±135 new residential stands at an average size of ±350 m^2/erf.
Alternative 3 (other preferred: services)	Internal services including electricity, road network, stormwater, sewer and water supply.
No-go alternative	If the proposed project is not continued with.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (Preferred): Proposed residential development on Erf 848, Erf 1174, Erf 1175 and Erf 2233 (preferred site layout with ±106 residential stands)			
Change in land use	***Direct impacts:*** • Loss of land use currently earmarked for public amenity (i.e. school & open space). • Formalise residential stands on current open land & address the need for housing – **Positive impact.**	Medium	The necessary approval of the site layout and rezoning from COGTA must be obtained prior to commencement of construction or settlement. Additional "Park" erven would be created with dual function as open

Activity	Impact summary	Significance	Proposed mitigation
			space/recreational area to the community as well as for storm water retention purposes.
	Indirect impacts: • The reutilisation and rezoning of the identified erven will enable the municipality to establish associated services, which would in effect also alleviate the potential cumulative impacts on the natural environment due to the current informal nature and lack of services – **Positive impact.**	Medium	The formalisation of the residential stands will allow for practical and functional lay down areas and routes for other services, e.g. electricity lines and pipelines.
	Cumulative impacts: • According to the criteria used, the cumulative impacts may be indicated as high due to the proposed development being one of several similar developments in the past, present or future in the same geographical area. However, the erven identified for this proposed development have already been earmarked for development, though for schools. Future development on the current undeveloped land is considered inevitable. The site is highly degraded due to extensive waste dumping and infestation of exotic plant species and therefore regarded to be highly transformed from its natural state.	Medium to High	Implementation of the preferred site layout of ±106 residential stands of 350 m^2 by reutilising and rezoning the proposed erven to a more practical site layout and land use.
Site preparation, landscaping and construction of dwellings & associated services (i.e. water, sewer, electricity and roads)	***Direct impacts:*** • Clearance and transformation of natural vegetation. • Loss of habitat & biodiversity. • Aesthetics & visual impact. • Destruction of objects of potential heritage importance. • Elevated noise levels. • Nuisance dust generation.	Low	Limit removal of vegetation and topsoil to areas directly affected by the proposed development as per approved site layout, e.g., road network, residential units, services, etc. Good housekeeping and implementation of Environmental Best Practices should be maintained on site. Inform the supervisor and site manager of any unearthed remains of heritage importance. Construction work in the direct vicinity of the findings must be stopped and SAHRA should be contacted. All construction vehicles operational on site should be in good working condition. Speed limits should be enforced on

Activity	Impact summary	Significance	Proposed mitigation
			construction vehicles on the access road. Additional dust suppression may be required if nuisance dust during construction is above acceptable limits.
	Indirect impacts: • Erosion damage and loss of topsoil. • Establishment and distribution of invasive plant species. • Change in storm water flow. • Health & safety: Risks of injury to construction workers & the local community during construction & open excavations. • Risk of fires resulting in potential loss of vegetation, livelihoods or lives during construction and operational phase. • Pollution due to spillage of petrochemicals or other potential hazardous substances. • Employment opportunities during construction – **Positive impact.**	Low to Medium	Clear any proclaimed weed or invasive vegetation on disturbed areas before seeding. The use of chemical substances should be used in accordance with the user specifications. No open fires must be allowed by construction workers on site. Any excavation and landscaping as part of construction must be done to acceptable slopes and rehabilitated after construction. A crossfall will be provided within the design of the roads to allow stormwater to accumulate on one side of the street from where it will be controlled to a defined discharge point into the natural surroundings. Erf 848 and the southwestern portion of Erf 1175 will be incorporated into a "park" erf for storm water retention purposes. Topsoil must be removed prior to commencement of construction. Topsoil must be stored in an area not prone to erosion and should be used for rehabilitation after construction. Limit construction activities to development footprint. Re-vegetate areas disturbed by construction activities and available for rehabilitation as soon as possible. No construction workers will be residing on site. Construction activities must be limited to daytime working hours. No permanent storage of potential hazardous substances on site. Any spillage of petrochemical products must be cleaned immediately. Any contaminated soil and the contaminant will be removed and placed into suitable receptacles for disposal at a facility registered to dispose of such material (potentially

Activity	Impact summary	Significance	Proposed mitigation
			hazardous). Drip trays must be used at stationary construction vehicles. Any gas cylinders should be stored in a designated and well-ventilated area. No major repairs will be done on equipment on site but at a workshop as far possible. Drip trays shall be implemented during emergency repairs and refuelling of construction vehicles. The partially filled excavation will be zoned "park" and not be available for development. It is also recommended that this pit is fully backfilled and rehabilitated with excess subsoil and topsoil (if available) emanating from the construction of the associated services. Barricades and visible markings should be placed at open excavations and areas under construction. Construction workers on site must be given an induction on environmental awareness. PPE will be provided to construction workers on site. All employees working with construction equipment and machinery should be properly trained in their specific tasks to limit injuries. The relevant Occupation and Safety regulation must be adhered to throughout construction and rehabilitation activities.
	Cumulative impacts: • There is a great need for formal residential stands in the Tokologo Municipal area. These erven have been identified as available land already ordained within the General Plan of the municipality and surrounded by similar land use. The reutilisation of these erven to create formal residential stands will enable the municipality to establish associated services in a phased approach, which would in effect also alleviate the potential cumulative impacts on the natural environment due to the current lack of services.	Medium to high	Implementation of the preferred site layout of ±106 residential stands of 350 m^2 by reutilising and rezoning the proposed erven to a more practical site layout and land use. The preferred site layout will include the use of Erf 848 for storm water retention purposes. Due the erf being the lowest point of the site, it is anticipated that development on this site would nevertheless be possible due to accumulation of storm water in this area. The formalisation of the residential

Activity	Impact summary	Significance	Proposed mitigation
	• The additional residential stands will increase the demand on existing municipal services. If the treatment works and existing infrastructure is not sufficient to meet the additional demand and are not maintained throughout the operational phase, disposal of waste, discharge of untreated sewage and insufficient clean water is likely resulting in significant environmental and health risks.		stands will allow for practical and functional lay down areas and routes for other services, e.g. sewer which is currently absent in the area. It is however of utmost importance that the capacity of the treatment plants and reticulation network of the existing municipal services be confirmed prior to settlement.
Waste generation	***Direct impacts:*** • Waste generation during construction. • Waste generation during operation (i.e. residential units).	Low to medium	Appropriate waste management and waste minimisation shall be implemented on site. All sections of the NEM: Waste Act, 2008 (Act 59 of 2008) pertaining to the disposal of waste must be adhered to.
	Indirect impacts: • Pollution due to disposal of construction rubble during construction and disposal of domestic solid waste during operation. • Pollution due to spillage or discharge of sewage from temporary chemical toilet facilities during construction and disposal from houses during operation.	Low to medium	It is recommended that excess subsoil and topsoil emanating from excavations during construction of the services be used as backfilling to rehabilitate the partially filled excavation on Erf 1175 (provided it is approved). Construction rubble and inert waste generated during construction of the services will be loaded on tipper trucks and disposed of at Hertzogville landfill site. General waste generated during construction will be collected in appropriate bins on site and disposed of at Hertzogville landfill site on a regular basis. Hazardous waste (including used oil/grease) should be contained in closed containers for appropriate disposal at a recognised hazardous waste facility or collected by a company registered for further management/disposal of such waste or substances. Hazardous waste spills will be cleaned immediately, and contaminated soil will be disposed of described for hazardous waste or substances. An adequate number of temporary toilet facilities must be situated on

Activity	Impact summary	Significance	Proposed mitigation
			site during construction and should be cleaned regularly. Effluent generated during the occupation of the residential units will be limited to normal sewage. This will be incorporated into the existing municipal bulk services. Ensure that the existing treatment works has the capacity to meet the demand of the development. Implement a maintenance management plan for monitoring and repair of the sewage line and/or treatment works to ensure proper functioning during operation.
	Cumulative impacts: • Waste generation from the proposed development will potentially increase. Excessive dumping of waste already occurs on site.	Medium to low if mitigated.	Waste during occupation of the residential units is expected to be limited to domestic solid waste. It is recommended that the municipality collect solid waste at designated "pick-up" points within Malebogo for disposal at Hertzogville landfill site on a weekly basis. This is dependent on the Service Level Agreement of the municipality.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 2 (Alternative): Proposed residential development on Erf 1174, Erf 1175 and Erf 2233 (preferred site layout with ±135 residential stands)			
Change in land use	***Direct impacts:*** • Loss of land use currently earmarked for public amenity (i.e. school & open space). • Formalise residential stands on current open land & address the need for housing – **Positive impact.**	Medium	The necessary approval of the site layout and rezoning from COGTA must be obtained prior to commencement of construction or settlement.
	Indirect impacts: • The reutilisation and rezoning of the identified erven will enable the municipality to establish associated services, which would in effect also alleviate the potential cumulative impacts on the natural environment due to the current informal nature and lack of services – **Positive impact.**	Medium	The formalisation of the residential stands will allow for practical and functional lay down areas and routes for other services, e.g. electricity lines and pipelines.
	Cumulative impacts: • According to the criteria used, the	Medium to High	Implementation of the site layout of

Activity	Impact summary	Significance	Proposed mitigation
	cumulative impacts may be indicated as high due to the proposed development being one of several similar developments in the past, present or future in the same geographical area. However, the erven identified for this proposed development have already been earmarked for development, though for schools. Future development on the current undeveloped land is considered inevitable. The site is highly degraded due to extensive waste dumping and infestation of exotic plant species and therefore regarded to be highly transformed from its natural state.		±135 residential stands of 350 m^2.
Site preparation, landscaping and construction of dwellings & associated services (i.e. water, sewer, electricity and roads)	***Direct impacts:*** • Clearance and transformation of natural vegetation. • Loss of habitat & biodiversity. • Aesthetics & visual impact. • Destruction of objects of potential heritage importance. • Elevated noise levels. • Nuisance dust generation.	Low	Limit removal of vegetation and topsoil to areas directly affected by the proposed development as per approved site layout, e.g., road network, residential units, services, etc. Good housekeeping and implementation of Environmental Best Practices should be maintained on site. Inform the supervisor and site manager of any unearthed remains of heritage importance. Construction work in the direct vicinity of the findings must be stopped and SAHRA should be contacted. All construction vehicles operational on site should be in good working condition. Speed limits should be enforced on construction vehicles on the access road. Additional dust suppression may be required if nuisance dust during construction is above acceptable limits.
	Indirect impacts: • Erosion damage and loss of topsoil. • Establishment and distribution of invasive plant species. • Change in storm water flow. • Health & safety: Risks of injury to construction workers & the local community during construction &	Low to Medium	Clear any proclaimed weed or invasive vegetation on disturbed areas before seeding. The use of chemical substances should be used in accordance with the user specifications. No open fires must be allowed by construction workers on site.

Activity	Impact summary	Significance	Proposed mitigation
	open excavations. • Risk of fires resulting in potential loss of vegetation, livelihoods or lives during construction and operational phase. • Pollution due to spillage of petrochemicals or other potential hazardous substances. • Employment opportunities during construction – **Positive impact.**		Any excavation and landscaping as part of construction must be done to acceptable slopes and rehabilitated after construction. A crossfall will be provided within the design of the roads to allow stormwater to accumulate on one side of the street from where it will be controlled to a defined discharge point into the natural surroundings. Storm water control, e.g. culverts must be constructed at the southwestern corner of Erf 1175 to prevent accumulation of storm water on this erf as well as Erf 848. Topsoil must be removed prior to commencement of construction. Topsoil must be stored in an area not prone to erosion and should be used for rehabilitation after construction. Limit construction activities to development footprint. Re-vegetate areas disturbed by construction activities and available for rehabilitation as soon as possible. No construction workers will be residing on site. Construction activities must be limited to daytime working hours. No permanent storage of potential hazardous substances on site. Any spillage of petrochemical products must be cleaned immediately. Any contaminated soil and the contaminant will be removed and placed into suitable receptacles for disposal at a facility registered to dispose of such material (potentially hazardous). Drip trays must be used at stationary construction vehicles. Any gas cylinders should be stored in a designated and well-ventilated area. No major repairs will be done on equipment on site but at a workshop as far possible. Drip trays shall be implemented during emergency repairs and refuelling of construction vehicles. Barricades and visible markings

Activity	Impact summary	Significance	Proposed mitigation
			should be placed at open excavations and areas under construction. Construction workers on site must be given an induction on environmental awareness. PPE will be provided to construction workers on site. All employees working with construction equipment and machinery should be properly trained in their specific tasks to limit injuries. The relevant Occupation and Safety regulation must be adhered to throughout construction and rehabilitation activities.
	Cumulative impacts: • There is a great need for formal residential stands in the Tokologo Municipal area. These erven have been identified as available land already ordained within the General Plan of the municipality and surrounded by similar land use. The reutilisation of these erven to create formal residential stands will enable the municipality to establish associated services in a phased approach, which would in effect also alleviate the potential cumulative impacts on the natural environment due to the current lack of services. • The additional residential stands will increase the demand on existing municipal services. If the treatment works and existing infrastructure is not sufficient to meet the additional demand and are not maintained throughout the operational phase, disposal of waste, discharge of untreated sewage and insufficient clean water is likely resulting in significant environmental and health risks.	Medium to high	The implementation of the alternative site layout to create ±135 residential stands will increase the number of stands available for formal settlement. The alternative site layout will not formally include the use of Erf 848 for storm water retention purposes but due the erf being the lowest point of the site, it is anticipated that development on this site would nevertheless be possible due to accumulation of storm water in this area. The formalisation of the residential stands will allow for practical and functional lay down areas and routes for other services, e.g. sewer which is currently absent in the area. It is however of utmost importance that the capacity of the treatment plants and reticulation network of the existing municipal services be confirmed prior to settlement.
Waste generation	***Direct impacts:*** • Waste generation during construction. • Waste generation during operation (i.e. residential units).	Low to medium	Appropriate waste management and waste minimisation shall be implemented on site. All sections of the NEM: Waste Act, 2008 (Act 59 of 2008) pertaining to the disposal of waste must be adhered to.

Activity	Impact summary	Significance	Proposed mitigation
	Indirect impacts: • Pollution due to disposal of construction rubble during construction and disposal of domestic solid waste during operation. • Pollution due to spillage or discharge of sewage from temporary chemical toilet facilities during construction and disposal from houses during operation.	Low to medium	It is recommended that excess subsoil and topsoil emanating from excavations during construction of the services be used as backfilling to rehabilitate the partially filled excavation on Erf 1175 (provided it is approved). Construction rubble and inert waste generated during construction of the services will be loaded on tipper trucks and disposed of at Hertzogville landfill site. General waste generated during construction will be collected in appropriate bins on site and disposed of at Hertzogville landfill site on a regular basis. Hazardous waste (including used oil/grease) should be contained in closed containers for appropriate disposal at a recognised hazardous waste facility or collected by a company registered for further management/disposal of such waste or substances. Hazardous waste spills will be cleaned immediately, and contaminated soil will be disposed of described for hazardous waste or substances. An adequate number of temporary toilet facilities must be situated on site during construction and should be cleaned regularly. Effluent generated during the occupation of the residential units will be limited to normal sewage. This will be incorporated into the existing municipal bulk services. Ensure that the existing treatment works has the capacity to meet the demand of the development. Implement a maintenance management plan for monitoring and repair of the sewage line and/or treatment works to ensure proper functioning during operation.
	Cumulative impacts: • Waste generation from the proposed development will potentially increase. Excessive dumping of waste already occurs on site.	Low to medium	Waste during occupation of the residential units is expected to be limited to domestic solid waste. It is recommended that the municipality

Activity	Impact summary	Significance	Proposed mitigation
			collect solid waste at designated "pick-up" points within Malebogo for disposal at Hertzogville landfill site on a weekly basis. This is dependent on the Service Level Agreement of the municipality.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 3 (preferred & only alternative): Services for the proposed residential development incorporated within the existing municipal services of Tokologo Local Municipality.			
Construction of associated services (i.e. water, sewer, electricity and roads)	***Direct impacts:*** • Physical disturbance and clearance of vegetation. • Aesthetics & visual impact. • Destruction of objects of potential heritage importance. • Elevated noise levels. • Nuisance dust generation.	Low to medium	Limit removal of vegetation and topsoil to areas directly affected by the proposed development as per approved site layout, e.g., road network, residential units, services, etc. Good housekeeping and implementation of Environmental Best Practices should be maintained on site. No poaching and/or unpermitted collection of plants or animals will be allowed on site. Inform the supervisor and site manager of any unearthed remains of heritage importance. Construction work in the direct vicinity of the findings must be stopped and SAHRA should be contacted. All construction vehicles operational on site should be in good working condition. Speed limits should be enforced on construction vehicles on the access road. Additional dust suppression may be required if nuisance dust during construction is above acceptable limits.
	Indirect impacts: • Erosion damage and loss of topsoil. • Establishment and distribution of invasive plant species. • Change in storm water flow. • Health & safety: Risks of injury to construction workers & the local community during construction & open excavations. • Pollution due to spillage of	Low to medium	Clear any proclaimed weed or invasive vegetation on disturbed areas before seeding. The use of chemical substances should be used in accordance with the user specifications. No open fires must be allowed by construction workers on site. Any excavation and landscaping as part of construction must be done to

Activity	Impact summary	Significance	Proposed mitigation
	petrochemicals or other potential hazardous substances. • Employment opportunities during construction – **Positive impact.**		acceptable slopes and rehabilitated after construction. A crossfall will be provided within the design of the roads to allow stormwater to accumulate on one side of the street from where it will be controlled to a defined discharge point into the natural surroundings. Topsoil must be removed prior to commencement of construction and stored in an area not prone to erosion for rehabilitation purposes after construction. Limit construction activities to development footprint. Re-vegetate areas disturbed by construction activities and available for rehabilitation as soon as possible. Construction activities must be limited to daytime working hours. No permanent storage of potential hazardous substances on site. Any spillage of petrochemical products must be cleaned immediately. Any contaminated soil and the contaminant will be removed and placed into suitable receptacles for disposal at a facility registered to dispose of such material (potentially hazardous). Drip trays must be used at stationary construction vehicles. Any gas cylinders should be stored in a designated and well-ventilated area. No major repairs will be done on equipment on site but at a workshop as far possible. Drip trays shall be implemented during emergency repairs and refuelling of construction vehicles. Barricades and visible markings should be placed at open excavations and areas under construction. Construction workers on site must be given an induction on environmental awareness. PPE will be provided to construction workers on site. All employees working with

Activity	Impact summary	Significance	Proposed mitigation
			construction equipment and machinery should be properly trained in their specific tasks to limit injuries. The relevant Occupation and Safety regulation must be adhered to throughout construction and rehabilitation activities.
	Cumulative impacts: • The development is expected to increase the demand for bulk services in the municipality. The volume of storm water and velocity of sheet flow may increase because of reduced infiltration of the built-up areas and paved surfaces. • Based on findings of the Bulk Services Report (Zutari, 2021), the existing reticulation network of the water and sewer lines will be sufficient to incorporate the capacity required for the new development, but further investigation and possible improvements may be required to ensure that the existing Water Treatment Works and Waste Water Treatment Works of Hertzogville is functioning to its designed capacity to ensure that the demand of the proposed development are met.	Medium to high	The formalisation of the residential stands will allow for practical and functional lay down areas and routes for other services, e.g. sewer which is currently absent in the area. Surface water flow is expected to be partially addressed with implementation of storm water management measures as part of the designs of the internal access road network. Surface water will be directed to follow the natural drainage as far possible to reduce risks and impacts. The municipality must ensure that the existing treatment works can meet the demand of the new development to prevent major risks of malfunctioning, poor service delivery and potential discharge of untreated sewage to the environment.
Waste generation	***Direct impacts:*** • Waste generation during construction.	Low to medium	Appropriate waste management and waste minimisation shall be implemented on site. All sections of the NEM: Waste Act, 2008 (Act 59 of 2008) pertaining to the disposal of waste must be adhered to.
	Indirect impacts: • Pollution due to disposal of construction rubble during construction. • Pollution due to spillage or discharge of sewage from temporary chemical toilet facilities during construction and disposal from houses during operation.	Low to medium	It is recommended that excess subsoil and topsoil emanating from excavations during construction of the services be used as backfilling to rehabilitate the partially filled excavation on site (provided it is approved). Construction rubble and inert waste generated during construction of the services will be loaded on tipper trucks and disposed of at Hertzogville landfill site. General waste generated during construction will be collected in

Activity	Impact summary	Significance	Proposed mitigation
			appropriate bins on site and disposed of at Hertzogville landfill site on a regular basis. Hazardous waste (including used oil/grease) should be contained in closed containers for appropriate disposal at a recognised hazardous waste facility or collected by a company registered for further management/disposal of such waste or substances. Hazardous waste spills will be cleaned immediately, and contaminated soil will be disposed of described for hazardous waste or substances. An adequate number of temporary toilet facilities must be situated on site during construction and should be cleaned regularly. Effluent generated during the occupation of the residential units will be limited to normal sewage. This will be incorporated into the existing municipal bulk services. Ensure that the existing treatment works has the capacity to meet the demand of the development. Implement a maintenance management plan for monitoring and repair of the sewage line and/or treatment works to ensure proper functioning during operation.
	Cumulative impacts: • Waste generation from the proposed development will potentially increase. Excessive dumping of waste already occurs on site.	Medium to low if mitigated.	Waste during occupation of the residential units is expected to be limited to domestic solid waste. It is recommended that the municipality collect solid waste at designated "pick-up" points within Malebogo for disposal at Hertzogville landfill site on a weekly basis. This is dependent on the Service Level Agreement of the municipality.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 4 (Alternative): "No-go" alternative			
Change in land use due to illegal	***Direct impacts:*** • Loss of land use currently earmarked for public amenity (i.e.	Low to medium	The proposed development area is already ordained within the General

Activity	Impact summary	Significance	Proposed mitigation
settlement. No formal construction or operational activities will be undertaken during the "no-go alternative", but settlement by the community on "open erven" is likely to occur.	school & open space). • Clearance and transformation of natural vegetation. • Loss of habitat & biodiversity. • Aesthetics & visual impact. • Destruction of objects of potential heritage importance. • Elevated noise levels. • Nuisance dust generation.		Plan and has been identified for residential development. Implementation of the preferred site layout of ±106 residential stands of 350 m^2 reutilising the existing available land to address the need for residential development. This will decrease the likelihood of illegal settlement on other open land earmarked for other land uses within the municipal area. The formalisation of the residential stands will allow the municipality to service the development area, e.g. sewer which is currently absent in the area.
	Indirect impacts: • Illegal and informal settlement by the community due to a lack in formal residential stands within the municipality. • Erosion damage and loss of topsoil. • Establishment and distribution of invasive plant species. • Change in storm water flow. • Risk of fires resulting in potential loss of vegetation, livelihoods or lives during construction and operational phase. • Pollution due to dumping of solid waste on site due to a lack of services. • Pollution due to spillage/discharge of untreated sewage on site due to a lack of services. • Safety risk to the residents adjacent to the historic gravel pit.	Medium	
	Cumulative impacts: • Human activities and infestation of exotic plant species have resulted in the study area being highly transformed from its natural state. Due to the urgent need of residential stands within the municipal area, it is expected that informal settlement of members of the community on "open land", whether earmarked for different land use or not formally included within the General Plan, will be continued with. • If the land use of these erven which have been identified to be available and already included in the General Plan are not changed and reutilised for residential purposes, the municipality would not be able to service these erven.	Medium to High	

A complete impact assessment in terms of Regulation 19(3) of GN 326 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 1 (Preferred): Proposed residential development on Erf 848, Erf 1174, Erf 1175 and Erf 2233 (preferred site layout with ±106 residential stands)

Also refer to the Impact Assessment Report (September 2021) attached under Appendix F of this report. The main impacts/risks expected to be associated with the proposed development include the following:

- Loss of existing erven earmarked for the development of public amenities, i.e. school. However, with the incorporation of the education system, Erf 1174 and Erf 1175 are no longer required for the development of schools and have been identified as available land for the development of residential stands. The impact is rated to be of low medium significance. It is also important to consider the impact in context as the site has already been transformed and is surrounded by residential development. Should the proposed project be continued with, it is expected that the positive impacts will be more than the potential negative impacts, provided that the municipality has the capacity to provide adequate service delivery (including clean water, sewer and waste management).
- Erf 2233 is currently zoned “Open Space/Park” but has no functional purpose. The aim of the preferred site layout is to reutilise this erf for residential and/or street purposes as part of the approved site layout.
- The preferred site layout will result in approximately 29 less formal residential stands but aims to create functional and formal “park” erven to the community with dual purpose of storm water retention. This will result in an additional area of approximately 1 ha not being “built-up”.
- If the existing partially filled excavation on Erf 1175 is backfilled and rehabilitated with excess subsoil emanating during the construction of the services, a safe “park” can be created for use by the community in the area. What would have been considered a loss of “open space” due to the rezoning of Erf 2233, will be gained and more with implementation of the preferred site layout.
- The study area is situated within an Ecological Supporting Area 2 and consists of Schmidtsdrif Thornveld vegetation type of which the conservation status has been adjusted to Vulnerable (Free State Biodiversity Plan, 2016). Clearance and transformation of vegetation on the physical footprint to be disturbed during construction will occur. However, as indicated, the study area is already highly transformed from its natural state and is surrounded by similar type developments. From the ecological overview it was also found that the site is highly transformed and has lost its ecological function to a large degree. The potential impact on the localised habitat and general biodiversity is therefore considered to be low.
- Likely cumulative change in storm water flow due to the construction activities and overall development and built-up areas. This can be managed with implementation of storm water control measures incorporated within the road designs. The preferred site layout will incorporate

a portion of Erf 1175 and Erf 848 as "park" erf for storm water retention purposes.

- Extensive establishment and spread of alien vegetation has already occurred on site. This is likely to become worse if not managed.
- Erosion and loss of topsoil. With implementation of storm water management measures, the impact is expected to be low and affected areas could be reinstated with relative success.
- Potential pollution risk (e.g. spillage) from the sewage pipeline. This is considered a low risk during the operational phase if the municipal pipeline is maintained and the existing WWTW has sufficient capacity to meet the additional demands from the proposed development. If this is not maintained or addressed, discharge of untreated sewage is highly likely and will result in significant environmental and health risks.
- Potential pollution to the surrounding environment due to waste generation. Excessive waste dumping is currently taking place on site. If the municipality implement a waste management plan with regular collection and disposal at Hertzogville landfill site, this could be an impact of low significance. If it is not managed, the current impact is likely to become worse.
- Localised dust generation and elevated noise levels from construction vehicles for the duration of construction.
- The potential impact on objects of potential heritage importance is considered low as no obvious risks have been identified during the desktop heritage impact assessment.
- Health and safety risk to employees on site during construction. This will be low with implementation of safety procedures by the appointed contractors.
- The proposed development is expected to have a cumulative effect on the general aesthetics of the area as a result of similar development being undertaken in the area. By formalising the site layout and possible future construction of formal dwellings, the impact on the overall aesthetics is expected to be alleviated to some extent, although the visual impact will remain.
- Risk of veld fires during construction and operation. In the event of a fire it is likely to have adverse impacts on the localised and possibly regional community, depending on the scale of the fire. According to the Bulk Services Report (Zutari, 2021), the treatment capacity of the existing WTW should be investigated and improved to allow for a constant water supply that would also meet the demand for firefighting requirements in the event of a fire.
- It is expected that employment opportunities will be created during construction of the services, resulting in a positive socio-economic impact.
- Positive impact of addressing housing need in Tokologo Local Municipality.
- The proposed project is of permanent nature.

Alternative 2 (Alternative): Proposed residential development on Erf 1174, Erf 1175 and Erf 2233 (preferred site layout with ±135 residential stands)

Also refer to the Impact Assessment Report (September 2021) attached under Appendix F of this report. The main impacts/risks expected to be associated with this alternative are similar to that of the preferred alternative and include the following:

- Loss of existing erven earmarked for the development of public amenities, i.e. school. However, with the incorporation of the education system, Erf 1174 and Erf 1175 are no longer required for

the development of schools and have been identified as available land for the development of residential stands. The impact is rated to be of low medium significance. It is also important to consider the impact in context as the site has already been transformed and is surrounded by residential development. Should the proposed project be continued with, it is expected that the positive impacts will be more than the potential negative impacts, provided that the municipality has the capacity to provide adequate service delivery (including clean water, sewer and waste management).

- Erf 2233 is currently zoned "Open Space/Park" but has no functional purpose. The aim of the preferred site layout is to reutilise this erf for residential and/or street purposes as part of the approved site layout.
- The alternative site layout will result in approximately 29 more formal residential stands than the preferred site layout. However, the layout will be more compact and may possibly not allow for as much functional and formal "park" erven for use by the community or for storm water retention purposes.
- If the existing partially filled excavation on Erf 1175 is backfilled and rehabilitated with excess subsoil emanating during the construction of the services, a safe "park" can be created for use by the community in the area. What would have been considered a loss of "open space" due to the rezoning of Erf 2233, will be gained.
- The study area is situated within an Ecological Supporting Area 2 and consists of Schmidtsdrif Thornveld vegetation type of which the conservation status has been adjusted to Vulnerable (Free State Biodiversity Plan, 2016). Clearance and transformation of vegetation on the physical footprint to be disturbed during construction will occur. However, as indicated, the study area is already highly transformed from its natural state and is surrounded by similar type developments. From the ecological overview it was also found that the site is highly transformed and has lost its ecological function to a large degree. The potential impact on the localised habitat and general biodiversity is therefore considered to be low.
- Likely cumulative change in storm water flow due to the construction activities and overall development and built-up areas. This can be managed with implementation of storm water control measures incorporated within the road designs. Accumulation of storm water on the southwestern corner and Erf 848 is likely due to the built-up area and street to the south of the site if the current storm water management in the area is not addressed with the proposed development.
- Extensive establishment and spread of alien vegetation has already occurred on site. This is likely to become worse if not managed.
- Erosion and loss of topsoil. With implementation of storm water management measures, the impact is expected to be low and affected areas could be reinstated with relative success.
- Potential pollution risk (e.g. spillage) from the sewage pipeline. This is considered a low risk during the operational phase if the municipal pipeline is maintained and the existing WWTW has sufficient capacity to meet the additional demands from the proposed development. If this is not maintained or addressed, discharge of untreated sewage is highly likely and will result in significant environmental and health risks.
- Potential pollution to the surrounding environment due to waste generation. Excessive waste dumping is currently taking place on site. If the municipality implement a waste management plan with regular collection and disposal at Hertzogville landfill site, this could be an impact of low significance. If it is not managed, the current impact is likely to become worse.

- Localised dust generation and elevated noise levels from construction vehicles for the duration of construction.
- The potential impact on objects of potential heritage importance is considered low as no obvious risks have been identified during the desktop heritage impact assessment.
- Health and safety risk to employees on site during construction. This will be low with implementation of safety procedures by the appointed contractors.
- The proposed development is expected to have a cumulative effect on the general aesthetics of the area as a result of similar development being undertaken in the area. By formalising the site layout and possible future construction of formal dwellings, the impact on the overall aesthetics is expected to be alleviated to some extent, although the visual impact will remain.
- Risk of veld fires during construction and operation. In the event of a fire it is likely to have adverse impacts on the localised and possibly regional community, depending on the scale of the fire. According to the Bulk Services Report (Zutari, 2021), the treatment capacity of the existing WTW should be investigated and improved to allow for a constant water supply that would also meet the demand for firefighting requirements in the event of a fire.
- It is expected that employment opportunities will be created during construction of the services, resulting in a positive socio-economic impact.
- Positive impact of addressing housing need in Tokologo Local Municipality.
- The proposed project is of permanent nature.

Alternative 3 (preferred & only alternative): Services for the proposed residential development incorporated within the existing municipal services of Tokologo Local Municipality.

Also refer to the Impact Assessment Report (September 2021) attached under Appendix F of this report. The main impacts/risks expected to be associated with the services that will be associated with the proposed development have been discussed under the Construction Phase of Alternative 1 and include the following:

- Should the proposed project be continued with, it is expected that the positive impacts will be more than the potential negative impacts, provided that the municipality has the capacity to provide adequate service delivery (including clean water, sewer and waste management).
- Clearance and transformation of vegetation on the physical footprint to be disturbed during construction. However, as indicated, the study area is already highly transformed from its natural state and is surrounded by similar type developments. From the ecological overview it was also found that the site is highly transformed. The potential impact on the localised habitat and general biodiversity is low.
- Likely cumulative change in storm water flow due to the construction activities and overall development and built-up areas. This can be managed with implementation of storm water control measures incorporated within the road designs.
- Extensive establishment and spread of alien vegetation has already occurred on site. This is likely to become worse if not managed.
- Erosion and loss of topsoil. With implementation of storm water management measures, the impact is expected to be low and affected areas could be reinstated with relative success.

- Potential pollution risk (e.g. spillage) from the sewage pipeline. This is considered a low risk during the operational phase if the municipal pipeline is maintained and the existing WWTW has sufficient capacity to meet the additional demands from the proposed development. If this is not maintained or addressed, discharge of untreated sewage is highly likely and will result in significant environmental and health risks.
- Potential pollution to the surrounding environment due to waste generation. Excessive waste dumping is currently taking place on site. If the municipality implement a waste management plan with regular collection and disposal at Hertzogville landfill site, this could be an impact of low significance. If it is not managed, the current impact is likely to become worse.
- Localised dust generation and elevated noise levels from construction vehicles for the duration of construction.
- The potential impact on objects of potential heritage importance is considered low as no obvious risks have been identified during the desktop heritage impact assessment.
- Health and safety risk to employees on site during construction. This will be low with implementation of safety procedures by the appointed contractors.
- Risk of veld fires during construction. In the event of a fire it is likely to have adverse impacts on the localised and possibly regional community, depending on the scale of the fire. According to the Bulk Services Report (Zutari, 2021), the treatment capacity of the existing WTW should be investigated and improved to allow for a constant water supply that would also meet the demand for firefighting requirements in the event of a fire. No open fires by workers will be allowed on site during construction.
- It is expected that employment opportunities will be created during construction of the services, resulting in a positive socio-economic impact.
- Positive impact of addressing the need for service delivery Tokologo Local Municipality.
- The proposed project is of permanent nature.

No-go alternative (compulsory)

The 'no-go alternative' entails that the proposed township development and associated infrastructure (including internal roads, electricity, storm water control, water and sewer lines) on the identified erven is not continued with.

Should the proposed project not be implemented, the following may be expected:

- Due to the urgent need of residential stands within the municipal area, it is expected that informal settlement of members of the community on "open land", whether earmarked for different land use or not formally included within the General Plan, will be continued with.
- If the land use of the identified erven which are already included in the General Plan is not changed and reutilised for residential purposes, the municipality would not be able to service these erven. This will highly likely result in more significant cumulative impacts to the surrounding environment due to waste dumping, sewage discharge, etc.
- Potential impacts such as erosion, loss of topsoil, change in storm water flow, waste dumping and establishment of invasive vegetation will continue and escalate if no management measures are implemented.

- Risk of fires resulting in potential loss of vegetation, livelihoods or lives is likely to be more severe if there are no services, e.g. water supply or road network for easy access.
- Increased pollution on site due to dumping of solid waste due to a lack of services.

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	

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

N/A

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

Recommendations include, but are not limited, to the following:

- Implementation of the preferred site layout of ±106 residential stands of 350 m^2 with incorporation of Erf 848 for storm water tension purposes and Erf 2233 for more functional and street purposes.
- Installation of associated services once the capacity of the existing treatment works have been verified and/or improved to ensure that it can meet the additional demands of the proposed development. Individual pit latrines are not recommended due to the expected localised concentration thereof and potential impact on groundwater. If considered as an alternative to the formal municipal sewer system (which has not been provided as an alternative by the applicant in this application, the impacts thereof would have to be assessed prior to implementation.
- A Designated Environmental Officer (DEO) must be appointed by the contractor to ensure that the aspects stipulated in the Environmental Authorisation (if considered for approval) and Environmental Management Programme are carried out properly during construction of services.
- The appointment of an Environmental Control Officer (ECO) by the applicant or Site manager to verify compliance with the conditions of the EA and EMPr during construction.
- Preconstruction environmental induction for all construction staff on site to ensure that basic environmental principles are adhered to.
- The areas to be cleared for construction of the services should be clearly demarcated and barricaded during construction to limit access and safety risks.
- All construction vehicles should adhere to clearly defined and demarcated roads.
- Dust suppression and erosion management should be an integrated component of the construction approach.
- No dumping of inert waste (including construction rubble) during construction should take place on the property but should be removed from site and disposed of at Hertzogville landfill site.
- All hazardous materials (if any) should be kept appropriately to prevent contamination of the project site. Any accidental chemical, fuel and oil spills that occur at the project site should be cleaned up appropriately as related to the nature of the spill.
- Weed control measures must be applied to eradicate the noxious weeds (category 1a &1b species) on disturbed areas, as well as to remove invasive vegetation within the study area during construction.
- All construction vehicles should adhere to a low-speed limit.
- If trenches need to be dug for electrical cabling or other purpose, these should not be left open for extended periods of time to limit safety risks.

Is an EMPr attached? | YES | |
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.

_____
NAME OF EAP

_____ _____
SIGNATURE OF EAP DATE

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