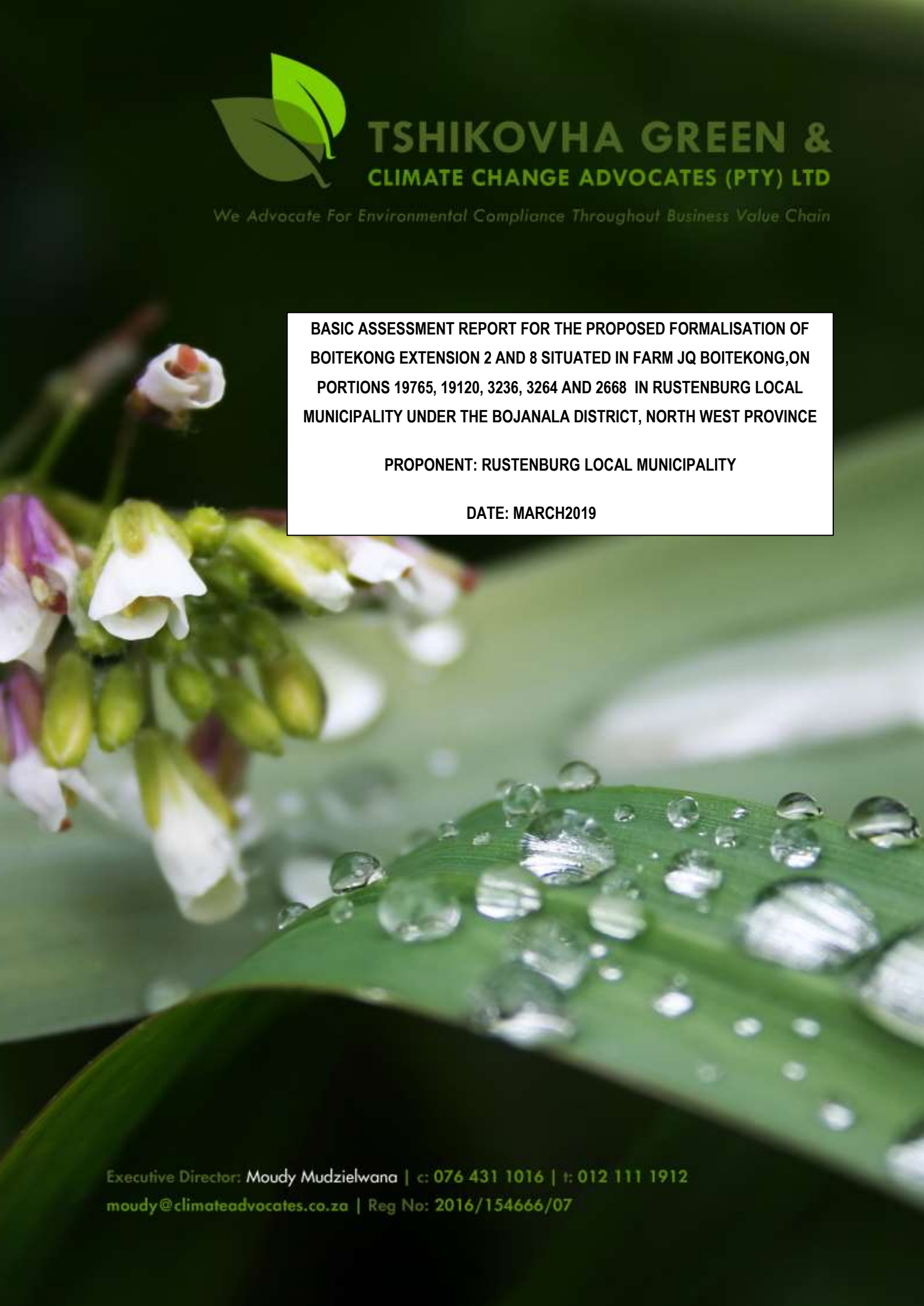

TSHIKOVHA GREEN &
CLIMATE CHANGE ADVOCATES (PTY) LTD

We Advocate For Environmental Compliance Throughout Business Value Chain

BASIC ASSESSMENT REPORT FOR THE PROPOSED FORMALISATION OF BOITEKONG EXTENSION 2 AND 8 SITUATED IN FARM JQ BOITEKONG,ON PORTIONS 19765, 19120, 3236, 3264 AND 2668 IN RUSTENBURG LOCAL MUNICIPALITY UNDER THE BOJANALA DISTRICT, NORTH WEST PROVINCE

PROPONENT: RUSTENBURG LOCAL MUNICIPALITY

DATE: MARCH2019

Executive Director: Moudy Mudzielwana | c: 076 431 1016 | t: 012 111 1912
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Department:
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North West Provincial Government
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CHIEF DIRECTORATE: ENVIRONMENTAL SERVICES

DIRECTORATE: ENVIRONMENTAL QUALITY MANAGEMENT

(For official use only)

Provincial Reference Number:	
NEAS Ref Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications.
2. This report format is current as of **December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. The use of "not applicable" in the report must be done with circumspection. An incomplete report or that does not meet the requirements in terms of Regulation 19 of the NEMA EIA Regulations, 2014, will be rejected to be revised and be resubmitted.
6. The report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The signature of the Environmental Assessment Practitioner (EAP) on the report must be an original.
9. The report must be compiled by an independent EAP.
10. 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.
11. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
12. 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.
13. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
14. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

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DETAILS OF THE COMPANY AND THE CLIENT

Table 1:Details of the EAP and Client

Environmental Assessment Practitioner	Tshikovha Green and Climate Change Advocates
	Ndivhuwo Maponya
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	Moudy Mudzielwana
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Applicant	**Rustenburg Local Municipality**
Address	PO Box 16 Rustenburg, 0300 159 Nelson Mandela & Beyers Naude Street
Contact person	Bophelo Rankudu
Contact details	Cell: 073 909 3505 Email: brankudu@rustenburg.gov.za
Date	February 2019

DEFINITIONS

Alternatives: Alternatives are different means of meeting the general purpose and need of a proposed activity. Alternatives may include location or site alternatives, activity alternatives, process or technology alternatives, temporal alternatives or thedo nothing'alternative.

Development- The building, erection, construction or establishment of a facility, structure or infrastructure, including associated earthworks or borrow pits, that is necessary for the undertaking of a listed or specified activity, but excludes any modification, alteration or expansion of such a facility, structure or infrastructure, including associated earthworks or borrow pits, and excluding the redevelopment of the same facility in the same location, with the same capacity and footprint.

Direct impacts- Impacts that are caused directly by the activity and generally occur at the same time and at the place of the activity (e.g. noise generated by blasting operations on the site of the activity). These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable.

Environment -The surroundings (biophysical, social and economic) within which humans exist and that are made up of:

i. the land, water and atmosphere of the earth;

ii. micro-organisms, plant and animal life;

iii. any part or combination of (i) and (ii) and the interrelationships among and between them; and

iv. the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.

Environmental Impact- An action or series of actions that have an effect on the environment.

Environmental Impact Assessment- Environmental Impact Assessment (EIA), as defined in the NEMA EIA Regulations and in relation to an application to which basic assessment must be applied, means the process of collecting, organising, analysing, interpreting and communicating information that is relevant to the consideration of that application.

.**Environmental management-** Ensuring that environmental concerns are included in all stages of development, so that development is sustainable and does not exceed the carrying capacity of the environment

Environmental management programme- A Programme that organises and co-ordinates mitigation, rehabilitation and monitoring measures in order to guide the planning and implementation of a proposal and its on-going maintenance and operation after implementation.

General Waste- as defined in the NEM: Waste Amendment Act, 2014 (Act No. 26 of 2014) Waste that does not pose an immediate hazard or threat to health or to the environment, and includes:

a) Domestic waste;

b) Building and demolition waste;

c) Business waste;

d) Inert waste; or

e) Any waste classified as non-hazardous waste in terms of the regulations made under section 69, and includes non-hazardous substances, materials or objects within the business, domestic, inert or building and demolition wastes.

Indirect impacts- Indirect or induced changes that may occur as a result of the activity (e.g. the reduction of water in a stream that supply water to a reservoir that supply water to the activity). These types of impacts include all the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.

Interested and Affected Party- In relation to an application, means an interested and affected party whose name is recorded in the register opened for that application

Public Participation Process- A process of involving the public in order to identify needs, address concerns, in order to contribute to more informed decision making relating to a proposed project, programme or development.

Significant impact- An impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.

Waste- as per the NEM: Waste Amendment Act, 2014 (Act No. 26 of 2014) means:

a) any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, by the holder of the substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes as defined in Schedule 3 of the Act; or

b) Any substance, material or object that is not included in Schedule 3 that may be defined as a waste by the Minister by notice in the Gazette, but any waste or portion of waste, referred to in paragraph (a) and (b) ceases to be a waste –

i. once an application for its re-use, recycling or recovery has been approved or, after such approval, once it is, or has been re-used, recycled or recovered;

ii. where approval is not required, once a waste is or has been re-used, recycled or recovered;

iii. where the Minister has, in terms of section 74, exempted any waste or a portion of waste generated by a particular process from the definition of waste; or

iv. where the Minister has, in the prescribed manner, excluded any waste stream or a portion of a waste stream from the definition of waste.

Water course- as per the National Water Act (Act No. 36 of 1998) means –
a) A river or spring;
b) A natural channel in which water flows regularly or intermittently;
c) A wetland, lake or dam into which, or from which, water flows; and d) Any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

Wetland- Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which under normal circumstances supports or would support vegetation typically adapted to life in saturated soil (National Water Act, Act No. 36 of 1998); land where an excess of water is the dominant factor determining the nature of the soil development and the types of plants and animals living at the soil surface (Cowardin et al., 1979).

ABBREVIATIONS

BAR	Basic Assessment Report
CBA	Critical Biodiversity Area
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPR	Environmental Management Programme
GN	Government Notice
I&AP	Interested and Affected Party
IDP	Integrated Development Plan
NEMA	National Environmental Management Act
NENWA	National Environmental Management Waste Act
NEM:AQA	National Environmental Management Act: Air Quality Act
NWA	National Water Act**PPP** Public Participation Process

Executive Summary

Rustenburg Local Municipality is proposing to formalise existing residential area in Boitekong extension 2 and 8 of portions 19765, 19120, 3236, 3264 and 2668 of Farm JQ Boitekong within Rustenburg Local Municipality under Bojanala District Municipality, North West Province

The subjected area to be formalized is approximately 24.18 hectares. An estimated 1000 residential stands with a ruling size of 150 square meters is expected in the area. The proposed activity includes the installation of the following services: Electricity, Sewage, Roads, Stormwater infrastructure, Bulk water services and Solid Waste collection

The proposed project triggers listed activities in terms of the Environmental Impact Assessment (EIA) Regulations as promulgated under the National Environmental Management Act (No. 107 of 1998) (NEMA). Government Notice (GN) R.326: The Environmental Impact Assessment Regulations, 2014 (amended 7 April 2017) where listed activities from GN R.324 (Listing Notice 3) Activity 15 and GN R.327 (Listing Notice 1 Activity 9, 10 and 19 will be applied for. Therefore, the proposed development requires Environmental Authorisation in terms of the EIA Regulations prior to commencement of construction and operation.

Environmental Impact Assessment is mainly seen as a challenge towards developments timeline due to its possible nature of delays which may be caused by lack of information. The requirements of the Environmental Impact Assessment are aimed at assisting the proponents with sustainable guidance on how the development may impact the environment to which the development shall be taking place. The process must be undertaken by an Environmental Assessment Practitioner who is independent from the developer or proponent.

Rustenburg Local Municipality has appointed Tshikovha Green and Climate Change Advocates (Pty) Ltd as an independent Environmental Assessment Practitioners (EAP) for the proposed project to conduct an Environmental Impact Assessment Process in terms of the National Environmental Management Act (NEMA No. 107 of 1998) in order to ensure that the activity meets the regulatory requirements.

The Proposed activity may have negative impacts during construction phase such as Dust, Noise pollution, Traffic, Waste impact, spread of alien vegetation and impact on soil, however the impacts are temporary and they medium before mitigation and low after mitigation It is therefore anticipated that the impacts won't be detrimental to the environment. The activity will also bring positive Socio- economic impact such as employment and municipality services in the community.

SECTION A: ACTIVITY INFORMATION

1. PROJECT DESCRIPTION

1.1 Describe the project in association with the listed activities applied for

Rustenburg Local Municipality wants to formalize Boitekong extension 2 and 8 situated in farm JQ Boitekong,on portions 19765, 19120, 3236, 3264 and 2668 in Rustenburg Local Municipality under Bojanala District, North West Province.The proposed development triggers the NEMA Activities; Activity Number 15 of the GNR 324 Listing Notice 3 and Activity 9,10,and 19 GNR 327 Listing Notice 1 published (7 April 2017).

The subjected area to be formalized is approximately 24.18 hectares. An estimated 1000 residential stands with a ruling size of 150 square meters is expected in the area.

The proposed activity includes the installation of the following services :

- Electricity
- Sewage
- Roads
- Stormwater
- Bulk Water services
- Solid waste collection

1.2 The site characteristics where the proposed project will take place include the following:

(a) Climate

The climate here is mild, and generally warm and temperate. In winter, there is much less rainfall in Rustenburg than in summer. The average annual temperature is 18.6 °C in Rustenburg. In a year, the average rainfall is 663 mm. Precipitation is the lowest in July, with an average of 7 mm. With an average of 117 mm, the most precipitation falls in January **(Figure 1).**

At an average temperature of 23.7 °C, January is the hottest month of the year. July has the lowest average temperature of the year. It is 11.5 °C **(Figure 2)**.

Between the driest and wettest months, the difference in precipitation is 110 mm. During the year, the average temperatures vary by 12.2 °C **(Figure 3).**

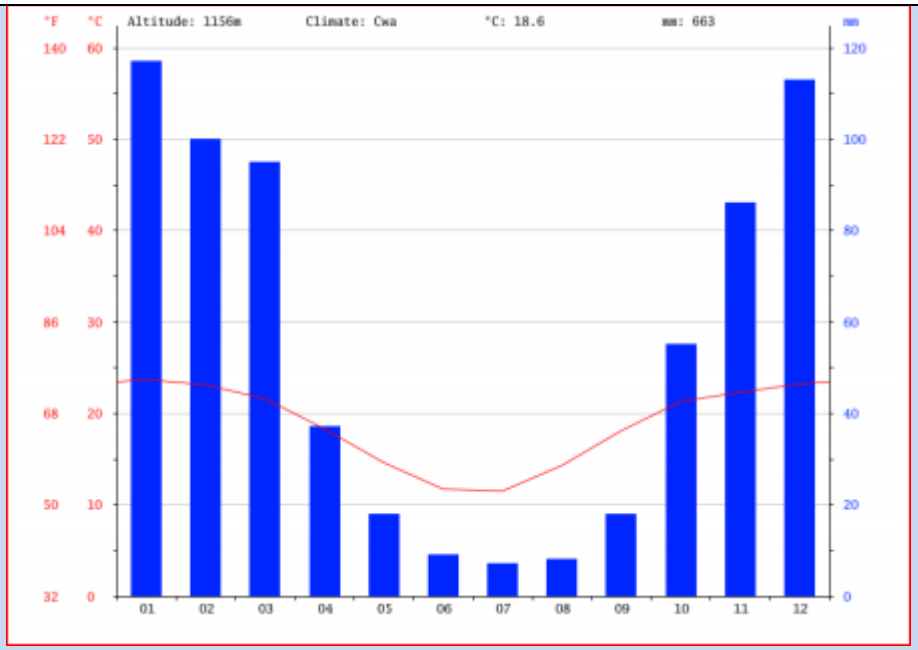

Figure 1: Precipitation graph

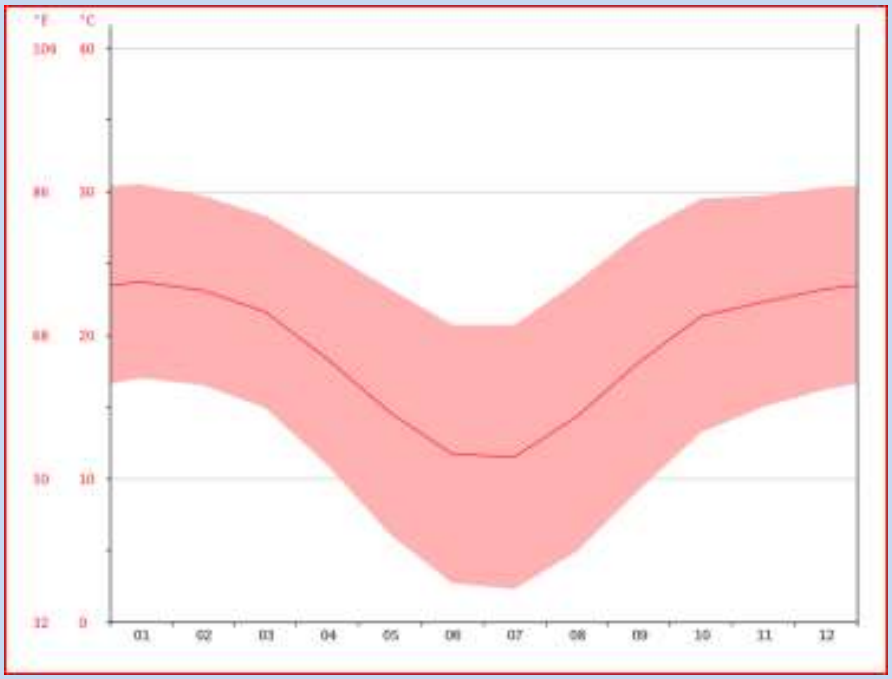

Figure 2:average temperature

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	23.7	23.1	21.6	18.3	14.6	11.7	11.5	14.3	18.1	21.3	22.3	23.2
Min. Temperature (°C)	17	16.5	14.9	10.9	6.1	2.7	2.3	4.9	9.2	13.2	15	16.2
Max. Temperature (°C)	30.5	29.7	28.3	25.8	23.2	20.7	20.7	23.7	27.1	29.5	29.7	30.3
Avg. Temperature (°F)	74.7	73.6	70.9	64.9	58.3	53.1	52.7	57.7	64.6	70.3	72.1	73.8
Min. Temperature (°F)	62.6	61.7	58.8	51.6	43.0	36.9	36.1	40.8	48.6	55.8	59.0	61.2
Max. Temperature (°F)	86.9	85.5	82.9	78.4	73.8	69.3	69.3	74.7	80.8	85.1	85.5	86.5
Precipitation / Rainfall (mm)	117	100	95	37	16	9	7	8	18	55	86	113

Figure 3:Historical weather data

(b) Ecology

According to Mucina and Rutherford's (2006) classification and delineation of South Africa's vegetation, the proposed project area contains elements of two vegetation types of the Savanna Biome the Marikana Thornveld and Moot Plains Bushveld Both vegetation types are considered to be "Vulnerable". It must however be noted that the project site is agricultural in nature and therefore has been cultivated over the years, thus having lost much or even all of the vegetation type that would have been found in that area.

The Marikana Thornveld vegetation occurs in the North West and Gauteng Provinces. It occurs on plains from the Rustenburg area in the west, through Marikana and Brits to the Pretoria area in the east. Altitude ranges from 1050 – 1450m (Mucina & Rutherford, 2006). The Marikana Thornveld Ecosystem is described by the National List of Threatened Terrestrial Ecosystems (2011) as being "Vulnerable". The conservation target for the area is 19% and less than 1% is statutorily conserved in for example, Magaliesberg Nature Area. More of the vegetation type is conserved in other reserves such as De Onderstepoort Nature Reserve. The vegetation type is considerably impacted. With 48% transformed, mainly by cultivation and urban or built up areas. Most agricultural development of this area is in the western regions towards Rustenburg, while in the east industrial development is a greater threat. Erosion is very low to moderate. Alien invasive floral species occur localised in high densities, especially along drainage lines (Mucina & Rutherford, 2006). In terms of recent vegetation classifications, the assessed area occurs within the Marikana Thornveld vegetation type (Mucina & Rutherford, 2006). This vegetation occurs as open Acacia karroo woodland, in valleys and slightly undulating plains and some lowland hills. Shrubs are denser along drainage lines, on termitaria and rocky outcrops or in other habitats protected from fire. Key indicator species of this vegetation type include:

Tall tree: Acacia burkei; • Small trees: Acacia caffra (d), A. gerrardii, A. karroo (d), A. nilotica, A. tortilis subsp. heteracantha, Combretum molle (d), Rhus lancea (d), Ziziphus mucronata (d), Pappea capensis, Dombeya rotundifolia, Peltophorum africanum, Celtis africana, Terminalia sericea; • Tall shrubs: Euclea crispa subsp. crispa (d), Olea europaea subsp. africana (d), Rhus pyroides var. pyroides (d), Diospyros lycoides subsp.

guerkei, Ehretia rigida subsp. rigida, Euclea undulata, Grewia flava, Pavetta gardeniifolia; • Low shrubs: Asparagus cooperi (d), Rhynchosia nitens (d), Indigofera zeyheri, Justicia flava; • Woody climbers: Clematis brachiata (d), Helinus integrifolius; • Herbaceous climber: Cyphostemma cirrhosum, Pentarrihum insipidum (d); • Graminoids: Elionurus muticus (d), Eragrostis lehmanniana (d), Setaria sphacelata (d), Themeda triandra (d), Aristida scabrivalvis subsp. scabrivalvis, Fingerhuthia Africana, Heteropogon contortus, Hyperthelia dissoluta, Melinis nerviglumis, Pogonarthria squarrosa; • Herb: Hermannia depressa (d), Ipomoea obscura (d), Vernonia oligocephala; • Geophytic herbs: Ledebouria revoluta, Ornithogalum tenuifolium, Sansevieria aethiopica. *d = dominant species

The Moot Plains Bushveld vegetation type occurs in the Northwest and Gauteng provinces and is found immediately south of the Magaliesberg mountain range (Mucina & Rutherford, 2006). This vegetation type is considered vulnerable. Some 13% is statutorily conserved, mainly in the Magaliesberg Nature Reserve. About 28% is transformed, mainly due to cultivation and urban and built-up areas. Alien invasive plants have a scattered occurrence and are dominated by species such as *Cereus jamacaru, Eucalyptus* sp., *Jacaranda mimosifolia, Lantana camara, Melia azedarach* and *Schinus* sp. Erosion is mainly very low to low, but moderate in some areas (Mucina & Rutherford, 2006). This vegetation type may be described as being open to closed, low, often thorny savanna dominated by *Acacia* spp. in the plains and bottomlands. Woodland of varying height is found on the lower slopes and hillsides and the herbaceous layer is typically dominated by grasses. The dominant and typical floral species for the vegetation type are presented below.

- Small Trees: *Acacia nilotica, A. tortilis, Rhus lancea*;
- Tall Shrubs: *Buddleja saligna, Euclea undulata, Grewia occidentalis, Gymnosporia polyacantha, Mystroxylon aethiopicum, Olea europaea;*
- Low Shrubs: *Aptosimum elongatum, Felicia fascicularis, Lantana rugosa, Teucrium trifidum;*
- Succulent Shrub: *Kalanchoe paniculata;*
- Woody Climber: *Jasminum breviflorum;*
- Herbaceous Climber: *Lotononis bainesii;*
- Grass species: *Aristida congesta, Chloris virgata, Cynodon dactylon, Heteropogon contortus, Setaria sphacelata, Sporobolus nitens, Themeda triandra, Tragus racemosus;*
- Herbs: *Achyropsis avicularis, Corchorus asplenifolius, Evolvulus alsinoides, Helichrysum nudifolium, H. undulatum, Hermannia depressa, Osteospermum muricatum, Phyllanthus maderaspatensis*

(c) . Topography

Topographically, the North West Province is indicated to have one of the most uniform terrains of all the provinces within South Africa. The topography of the eastern region is more variable than that of the southern

and western regions and ranges in altitude from 920 mamsl to 1782 mamsl across the province. The eastern region gives rise to the Magaliesberg and the Pilanesberg mountain range of the Transvaal Sequence, another prominent feature in the east, remnants of an ancient volcano which consists of a formation of concentric hills or ring-dykes.

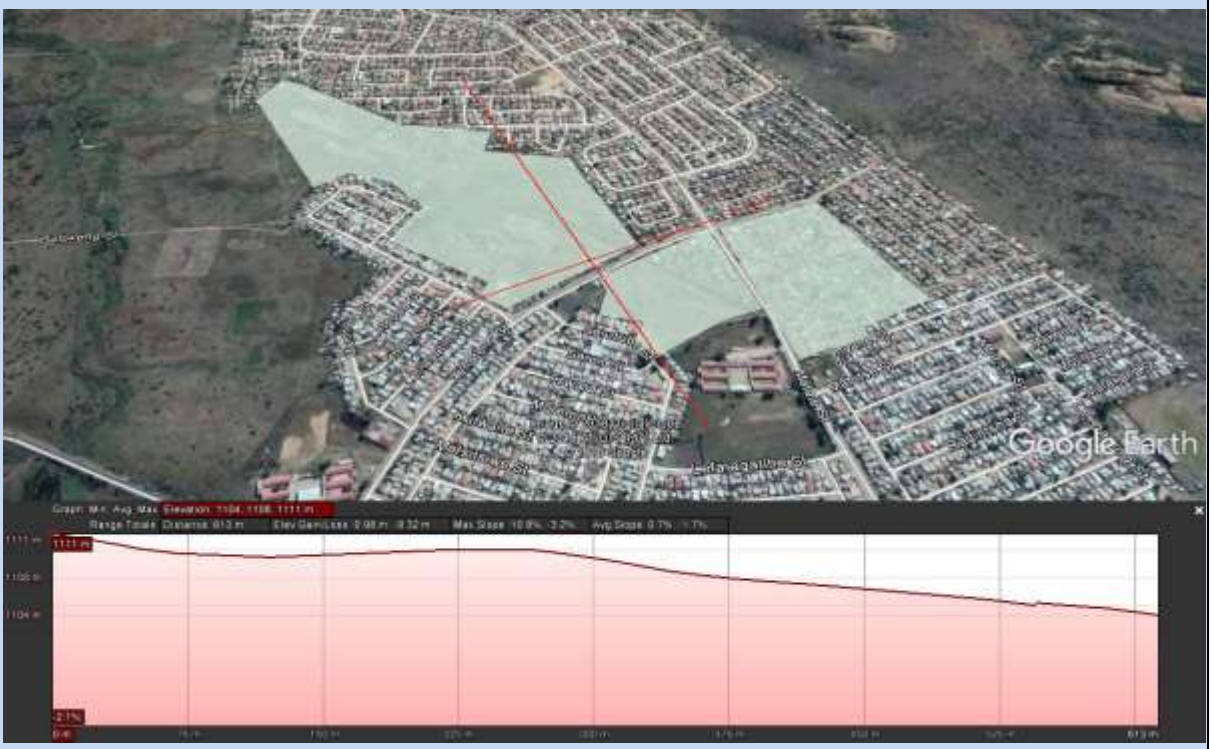

Figure 4: Topography

(d) Geology

According to the 1: 250 000 scale geological map of the area (2526 Rustenburg) the site is underlain by mafic intrusive rocks of the Rustenburg Layered suite of the Bushveld Igneous rocks that include gabro, norite, pyroxenite and anorthosite. Some quartzites and shales associated with the Pretoria group part of the Transvaal super group.

Figure 5: Geology of the site

(e) Hydrology

The site is located within quaternary catchment A22H which is under the Crocodile (West) and Marico Water Management Area. This catchment receives mean annual rainfall ranging between 600 – 800 mm. The main rivers within the catchment are the Crocodile (West) and Marico and the closest perennial river to the site is the Hexrivier flowing in a northerly direction. However, the Crocodile (West) and Marico catchment is too big to be used for this assessment and therefore a catchment relative to the site was established using GIS Techniques.

There was a single stream identified within close proximity to the property, an unnamed seasonal stream which flows to the north on the west of Extension 2 and 8 of Boitekong. The stream was identified using the National Freshwater Ecosystem Priority Area (NFEPA), and the NGI Raster Topo sheets together with World Imagery.

(f). Demographics

Boitekong Extension 2 and 8 falls within the Rustenburg Local Municipality under the jurisdiction Bojanala District in the North West Province. According to Rustenburg Local Municipality NW373, the total population of Rustenburg was 626 522 in 2016, with population of individuals under the age 15 of 28.1%, ages between 15 and 64 had a population of 68.9% and those over the age of 65 occupied 3.0% of the total population (Table). The proposed project will increase availability of basic human needs such as flush toilet connection to sewage system, weekly refuse removal, tap water inside dwellings and proper electricity connectivity within the local

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

The proposed project will trigger listed activities (detailed in the table below) in terms of the Environmental Impact Assessment (EIA) Regulations as promulgated under the National Environmental Management Act (No. 107 of 1998) (NEMA). Therefore, the proposed development requires Environmental Authorisation in terms of the EIA Regulations prior to commencement of construction and operation.

Table 2: Listed Activities

Listed activity as described in GN R.324, 326 and 327	Description of project activity
GNR 324 Activity 15 The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, such land was zoned open space, conservation or had an equivalent zoning, on or after 02 August 2010. **e. North West** i. Inside urban areas; or ii. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act as adopted by the competent authority.	The proposed site is zoned as public open space and institutional and it is going to be changed in to residential area.
GNR 327 Activity 9 The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or	The proposed development entails the construction of bulk transportation of water infrastructure to supply the community

(b) where such development will occur within an urban area.	
GNR 327 Activity 10 The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.	The proposed project entails the construction of a sewer pipeline and associated infrastructure
GNR 327 Activity 19 The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving **a.** will occur behind a development setback; **b.** is for maintenance purposes undertaken in accordance with a maintenance management plan;	For the construction of the following services within a watercourse: • water pipelines; • sewer pipelines; • Stormwater infrastructure.

1.4 Property description/physical address

Table 3: Property description

Province	North West
District Municipality	Bojanala
Local Municipality	Rustenburg
Ward Number(s)	20 and 40

Farm name and number	JQ Boitekong
Portion number	19765, 19120, 3236, 3264 and 2668
21-digit Surveyor General Code	T0JQ00610001924700000

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

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 EIA Regulation, 2014 Appendix 1(h) . 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.

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 using the Hartebeeshoek94 WGS84 co-ordinate system.

2.1 Site alternatives

List alternative sites, if applicable.

Site Alternatives	**Description**
Alternative Site 1 (preferred or only site alternative)	There are approximately 1000 Informal dwellings currently occupying Boitekong extension 2 and 8 informal settlement site. The option to remove the informal residents to another site cannot be considered as alternative site exists
Alternative Site 2	[redacted]
Alternative Site 3	

Site Co-ordinates

	Latitude (S):			**Longitude (E):**		
Alternative S1 (preferred or only site alternative)	**25 °**	**36'**	**21.75"**	**27 °**	**18'**	**47.54"**
Alternative S2 (if any)	°	'	"	°	'	"
Alternative S3 (if any)	°	'	"	°	'	"

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
Alternative S1 (preferred or only route alternative)	[redacted]	

• Starting point of the activity	o	'	"	o	'	"
• Middle/Additional point of the activity	o	'	"	o	'	"
• End point of the activity	o	'	"	o	'	"
Alternative S2 (if any)						
• Starting point of the activity	o	'	"	o	'	"
• Middle/Additional point of the activity	o	'	"	o	'	"
• End point of the activity	o	'	"	o	'	"
Alternative S3 (if any)					'	"
• Starting point of the activity	o	'	"	o	'	"
• Middle/Additional point of the activity	o	'	"	o	'	"
• End point of the activity	o	'	"	o	'	"

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 metres 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.**

2.2 Lay-out alternatives

Alternatives	Description
Alternative 1 (preferred or only alternative)	The layout alternative will be discussed once the we receive the layout plan
Alternative 2	

Alternative 3	

2.3 Technology alternatives

Alternatives	Description
Alternative 1 (preferred or only alternative)	Energy and water saving technologies associated with the installation of services to erven. An alternative to these saving technologies would be the installation / implementation of conventional technologies of all water and electrical services
Alternative 2	
Alternative 3	

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

Alternatives	Description
Alternative 1 (preferred or only alternative)	
Alternative 2	
Alternative 3	

2.5 No-go alternative

This option must always be considered as a baseline against which the other alternatives are measured and refers to maintain the status-quo (informal settlement, with limited services) / not continuing with the activity. This alternative is not considered to be desirable from both social and environmental perspectives (erosion, pollution and health & safety risks).

Should the No-Go Option be implemented, the site would maintain its status quo. Residents will remain with no water, no electricity, and sanitation which may be a health hazard As such, the No-go Option would not be environmentally, socially or economically feasible in the long-term and is thus not deemed feasible. However,

the No-Go Option is nevertheless considered and assessed in relation to the potential implications of the proposed project, as required in terms of NEMA and its EIA Regulations

2.6 Please motivate for preferred site, activity and technology alternative

There are people already residing where the proposed activity is going to take place which means it is not going to be easy to find a vacant land to relocate them to. Energy saving light bulbs will be used for the development; the use of this energy saving bulbs will improve the efficiency of the development. Furthermore, sensor lights will be used thus reducing the energy usage required for lighting

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

3. PHYSICAL SIZE OF THE ACTIVITY

3.1 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 alternative)	241800.0m^2
Alternative A2 (if any)	[redacted] m^2
Alternative A3 (if any)	[redacted] m^2

or, for linear activities:

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

.

3.2 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 activity alternative)	[redacted] m^2
Alternative A2 (if any)	[redacted] m^2
Alternative A3 (if any)	[redacted] m^2

4. SITE ACCESS

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

Describe the type of access road planned:

The site can be accessed through Bophuthatswana Street which is connected to R510 road

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;)
- the accurate indication of the site in relation to closest protected environments or national parks (i.e. within 2.5 km)
- 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, minutes and seconds using the Hartebeeshoek94 WGS84 co-ordinate system

Figure6: Locality map

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 B** 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 Department of Water and Sanitation);
- ridges;
- for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas and ecological support area.
- protected areas (e.g Magaliesberg Protected Environment, Pilanesberg National Park etc.)

The sensitivity map must also cover areas within 100m of the site and must be part of **Appendix B**

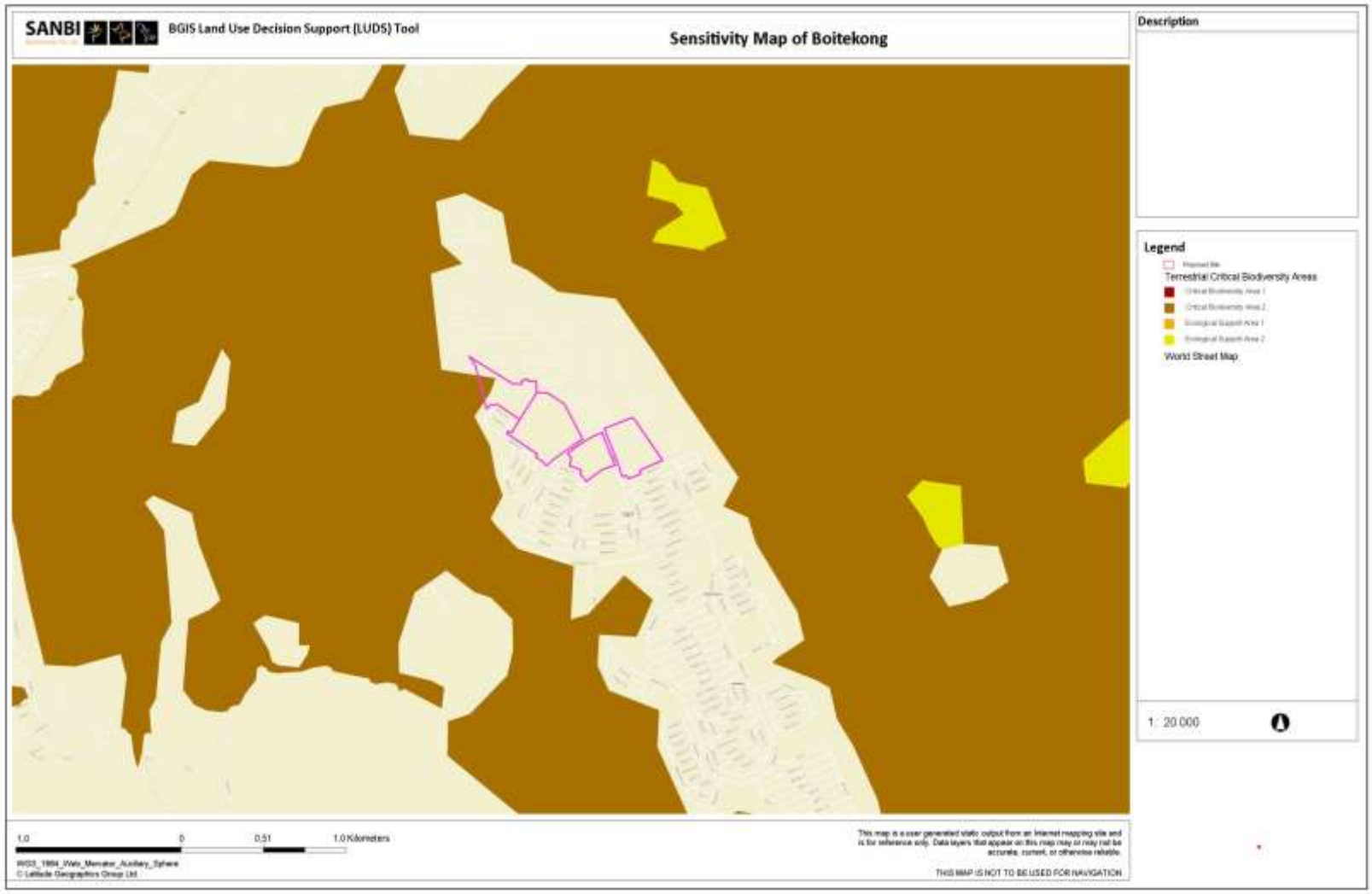

Figure 7: Sensitivity map

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 C** 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 D** for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?		**NO**	**Please explain**
The proposed development area is zoned as public open space and Institutional. However, the proposed development is surrounded by residential area Boitekong Extension 2 and 8. The proposed formalisation will form part of Boitekong Extension 2 and 8 respectively.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	**YES**		**Please explain**
The development strategies of the North West Spatial Development Framework need to be supportive of the objectives of the Vision 2030 National Development Plan, North West Development Plan 2030, and international and national policies, principles and initiatives to reduce poverty and inequality over the next two decades. The core values for the North West Province include the development of productive land uses (creating economic opportunity) could stimulate needed economic growth, job creation and tax base expansion. This will increase municipal income enabling increased public sector investment to be focused towards social up-lifting. In cases where low economic potential exists investments should be directed at projects and programmes to address poverty and the provision of basic services in order to address past and current social inequalities. The spatial development values states that environmental integrity and sustainability through achieving a balance between safeguarding natural resources, optimizing the livelihoods of communities and developing a flourishing economy. It also promotes the development of productive land uses (creating economic opportunity) could stimulate needed economic growth, job creation and tax base expansion.			

(b) Urban edge / Edge of Built environment for the area	**YES**		**Please explain**
The proposed development is situated in township of Rustenburg Local Municipality			
(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 municipality encourages that land can be used to harness economic development opportunities and it focuses on improving the spatial conditions in the municipal area to attract investment.			
(d) Approved Structure Plan of the Municipality	**YES**		**Please explain**
There are site layout plans that has been approved by Rustenburg 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**
The proposed development is located in the area which is environmentally mismanaged; residents are using open space as a dumping site, so in environmental perspective the development will bring positive impacts.			
(f) Any other Plans (e.g. Guide Plan)		**NO**	**Please explain**
There are no other plans which the EAP is aware of regarding proposed development site			
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**
The municipal spatial development framework does not confer or take away land use rights but guides and informs decisions to be made by the Municipality relating to land development. Although, the spatial development framework of the municipality is shaped by the rich Mining history characterizing large pieces of land in the area. Mining has become a focal point in all economic development prospects for the municipality constituency.			

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**
Current living conditions of people living in the informal settlement are poor and there is no access to formal services. The construction of an existing formalised portion did not need environmental approvals, and as such there is tension between the people of within the small formalised section and the rest within the informal section. There is therefore an urgent need to formalise the entire area for the people that live on the site so that they both enjoy the benefits of formalised service delivery.			
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 E.)	**YES**		**Please explain**
The Municipality took a decision to formalise this area with a view that the Municipality will be able to provide necessary services to the community			
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**
The Municipality took a decision to formalise this area with a view that the Municipality will be able to provide necessary services to the community. Furthermore, the process to formalise this area has been budgeted for by the Municipality.			
7. Is this project part of a national programme to address an issue of national concern or importance?	**YES**		**Please explain**
This proposed development shall tackle unemployment issues through job creation during construction phase and solve service delivery issues			

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**
Some part of the proposed site is currently vacant with vegetation cover that comprises of natural veld and scattered aliens. The use of the land for residential area is suitable because the land shall be utilized with respect to the improvement of socio-economic development of the local municipality. The land capability shall therefore not be compromised.			
9. Is the development the best practicable environmental option for this land/site?	**YES**		**Please explain**
The formalisation of Boitekong informal settlement is the best option since it will reduce environmental mismanagement due to the invasion of the area by people.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	**YES**	**NO**	**Please explain**
The environment will be negatively affected and mitigation will be set in place in the EMPr. The benefits from the project will include water service, construction of roads and storm water drains, electricity, sewage and waste collection by the municipality.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	**YES**	**NO**	**Please explain**
The proposed development is surrounded by formalised Boitekong Extension 2 and 8. The development will blend with the exiting surrounding residential area			
12. Will any person's rights be negatively affected by the proposed activity/ies?		**NO**	**Please explain**
The Constitution of South Africa under section 24 indicates that everyone has a right to an environment that is not harmful to their health or well-being. This right will not be compromised by the proposed development as there will be continuous monitoring of waste will be prevented and/or mitigated thereof. The proposed development will be socially, environmentally and economically sustainable			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		**NO**	**Please explain**
The proposed development is located outside the urban edge of the Rustenburg Local Municipality			

14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	**YES**		**Please explain**
The right to adequate housing as one of the most important of all basic human rights is recognized in the constitution. Section 26(1) of the Constitution provides that everyone shall have the right of access to adequate housing. Accessibility means that the State must create conducive conditions for all its citizens, irrespective of their economic status, to access housing. Housing entails more than bricks and mortar. It requires available land, appropriate services such as the provision of water, electricity and the removal of sewage. For a person to have access to adequate housing all of these conditions need to be met there must be land, there must be services, and there must be a dwelling.			
15. What will the benefits be to society in general and to the local communities?			**Please explain**
The benefits from the project will include water service, construction of roads and storm water drains, electricity, sewage and waste collection by the municipality			
16. Any other need and desirability considerations related to the proposed activity?			**Please explain**
• Formalization of existing stands will improve the service delivery to the residents as the municipality will be aware of the number of people and households it have to service. • The formalization will identify where the existing and proposed stands are located on sensitive areas if there are any. • There is a Non perennial stream on the eastern side of the site which require proper management and maintenance and delineation of buffer zone. • The project will prevent illegal occupation of land which results in environmental concerns as there is a growing concern for utilization of natural resources in a sustainable manner.			
17. How does the project fit into the National Development Plan for 2030?			**Please explain**
The formalization of Boitekong is aligned with the 2030 vision of the National Development Plan to address issues such as poverty, inequality and underdevelopment. This goal will be achieved through the creation of jobs and by meeting people's basic needs which is service delivery.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in Section 23 of NEMA as amended have been taken into account.
The Environmental Impact Assessment has been done to identify potential impacts in the receiving environment and mitigation measures for these negative impacts for activities which will take place during the Construction of the Proposed development. The evaluation of socio –economic factors has been considered. Public Participation Process has been done to some extent; a notification of the proposed development will be published in the local newspaper. Stakeholders have been identified and they will be informed about the proposed project. Furthermore, a public meeting with the interested and affected parties (I&APs) will be held and the Background Information Document (BID), Basic Assessment Report (BAR) which is this report, including the Environmental Management Programme Report (EMPr) will be available for all stakeholders and I&APs. The stakeholders and I&APs will be given a 30 days period to comment on the project.
19. Please describe how the principles of environmental management as set out in Section 2 of NEMA as amended have been taken into account.
The basic needs of landowners and public were considered during the planning phase of the proposed development, which is aimed at economic growth stimulation and opportunities for employment creation. The potential of negative impacts minimisation and optimisation of potential positive impacts will be ensured by the implementation of Environmental Management Programme Report. The proposed development is deemed to be environmentally, socially and economically sustainable.

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:

Table 4: Applicable Legislation

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
The Constitution of the Republic of South Africa 1996, (Act No. 108 of 1996)	The proposed development will not temper with the rights of humans to a clean and safe environment. The communities' well-being and safety shall be put into consideration and impacts on the receiving environment will be mitigated to ensure sustainability for the future generations.	National & Provincial	1996
National Environmental Management Act 1998, (Act No. 107 of 1998) as Amended in 2017	The National Environmental Management Act (Act No. 107 of 1998) (NEMA) is the principal framework for environmental legislation as well as the Regulations for Environmental Impact Assessment. It sets out the principles that assist as a general framework for environmental planning, as guidelines by reference to which organs of state must exercise their functions and guide other laws concerned with the protection or management of the environment. The application takes into account the environmental and socioeconomic conditions in compliance with the NEMA principles	National & Provincial	27 November 1998
National Water act 1998 (Act No. 36 of 1998)	The general use of water in the construction and operational phase.	National & Provincial	1998
National Road Traffic Act, 1996 (Act No. 93 of 1996)	Road safety	National & Provincial	1996

Hazardous Substances Act 1973 (Act No.15 of 1973)	Hazardous Substances Act No. 15 of 1973 gives provision for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxicity, strong sensitizing or flammable nature and the generation of pressure thereby in certain circumstances. It further provides for the division of such substances or products into groups in relation to the degree of danger; to provide for the prohibition and control of the importation sale, use, operation, application, modification, disposal or dumping of such substances and products; and to provide for matters connected therewith.	National & Provincial	1973
National Environmental Management: Waste Act 2008, (Act No. 59 of 2008)	The proposed development will not generate any waste during operation, only the construction phase will generate waste which is also expected to be minimal. Proper waste management procedures will be implemented during construction.	National & Provincial	01 July 2009
National Environmental Management: Air Quality Act 2004, (Act No. 39 of 2004)	The NEMA: AQA provides the framework for addressing air quality issues. The Act sets norms and standards for air quality management. During the construction phase, dust can become a substantial factor, especially to the surrounding communities. Nevertheless, the mitigating measures for these potential impacts can be successfully implemented the proposed development's contribution to air pollution and the generation of air can become less substantial.	National & Provincial	2004
Occupational Health and Safety Act (No 85 of 1993)	The Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of machinery; the protection of persons other than persons at work, against hazards to health and safety arising out of or in connection with the activities of persons at work.	National & Provincial	1993
National Heritage Resources Act	The Act stipulates that any person who intends to undertake a development	Province and national	1999

No 25 of 1999 (Act No 25 of 1999 as amended)	"must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with detail regarding the location, nature and extent of the proposed development" The heritage resources authority must, within 14 days of receiving notification, request the submission of an impact assessment report if there is reason to believe that heritage resources will be affected by such development. The National Heritage Resources Act aims to promote good management of cultural heritage resources and encourages the nurturing and conservation of cultural legacy so that it may be bestowed to future generations.		
Basic Conditions of Employment Amendment Act, 2002 (Act No. 11 of 2002)	No employee should work beyond his or her own job description or unfairly dismissed	Department of Labour /Parliament of South Africa.	2002
The National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004)	The removal of vegetation disrupts habitats and ecosystems which impacts biodiversity, therefore conditions of this act should be adhered to.	DEA/NWREAD	2004
Sustainable Development	The principle of Sustainable Development has been established in the Constitution of the Republic of South Africa (108 of 1996) and given effect by NEMA and the ECA. Section 1(29) of NEMA states that	DEA/NWREAD	Sustainable Development
National Water Act, 1998 (Act 36 of 1998)	There is an unnamed stream onsite which is likely to be affected by the development	National	1998
The Development Facilitation	The need for the proposed activity is to Promote and fulfil the social, economic	Parliament of South Africa	1995

Act, Act 67 of 1995 (DFA) and the Spatial Planning and Land Use Management Bill, 2011 (SPLUMB);	and environmental rights of everyone and strive to meet the basic needs of disadvantaged communities		
National Development Plan 2030	The need for the proposed activity is to Promote and fulfil the social, economic and environmental rights of everyone and strive to meet the basic needs of disadvantaged communities	National	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

12.1 Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES / NO
If YES, what estimated quantity will be produced per month?	unknown

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

Building rubble and solid construction waste (such as sand, gravel concrete and spoil material) that cannot be used for filling and rehabilitation and other litter and waste (including packaging, plastics, waste metals, etc.) generated during the construction phase will be placed in a bulk waste collection areas in contractors camps. This waste will be disposed at an appropriately registered and licensed waste disposal facility.

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

All non-recycled general waste will be removed by a registered waste contractor and taken to appropriately registered and licensed waste disposal facility.

Will the activity produce solid waste during its operational phase?	YES / [redacted]
If YES, what estimated quantity will be produced per month?	Unknown

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

Rustenburg Local Municipality will collect, transport and dispose waste materials. The Municipality will provide containers / black refuse bins for general waste and will be collected once a week. Compaction vehicles or rear-end loaders will collect and dispose of at appropriately registered and licensed waste disposal facilities.

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

Waste will feed into the Rustenburg Local Municipality's waste stream. Solid Waste will be deposited into Waterval Landfill

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

Solid Waste will be deposited into Waterval Landfill

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?	[redacted] / 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.

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.

12.2 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
Will the activity produce any effluent that will be treated and/or disposed of on-site?	NO

If YES, describe the type of effluent and the disposal mechanism/method

N/A

Will the activity produce effluent that will be treated and/or disposed of at another facility?	NO

If YES, provide the particulars of the facility:

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

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

N/A

12.3 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?	YES	NO

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

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

The proposed activity will only generate small amount of dust and fumes from the construction vehicles

12.4 Waste Licence/Registration

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

If YES, please submit evidence that an application for a waste licence/registration has been submitted to the competent authority

12.5 Generation of noise

Will the activity generate noise?	YES	
If YES, is it controlled by any legislation of any sphere of government?		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.

If NO, describe the noise in terms of type and level:

Noise will be generated from construction vehicles, machinery and equipment that are being used during the construction phase.

13. WATER USE

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

Municipal	

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 and Sanitation?	NO

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

14. ENERGY EFFICIENCY

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

- **Low flow taps and faucets aerators-**Low flow faucets use aerators to reduce the flow of the water. These should be built into the faucet rather than be added as an aftermarket product. The faucets in bathrooms should have a peak flow of less than 10 litres per minute.
- **Geyser and pipe insulation-**Apart from the savings in terms of energy as detailed below, insulating geysers and pipes save water, as shorter periods of running the tap to get hot water are required.
- **Solar water heaters**
- **Energy efficient lighting-**i.e. No incandescent lights should be used - only Compact Fluorescent Lights (CFL) and Sodium Vapour (SV) lamps should be utilised (no Mercury Vapour (MV) lights should be considered).

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

N/A

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 F.**

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, as it appears on the Site Plan.

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

Current land-use zoning as per local municipality IDP/records:	Boitekong extension 2 is zoned as Public Open Space and Extension 8 is zoned as Institutional

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. **Attached as appendix L**

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

15. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

16. LOCATION IN LANDSCAPE

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

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

17. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

18. GROUNDCOVER

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

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

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

19. SURFACE WATER

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

Perennial River		NO
Non-Perennial River	YES	
Permanent Wetland		NO
Seasonal Wetland	YES	NO
Artificial Wetland		NO

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

The area is characterised by characterized by aeolian deposits or recent sea floor exposures the wet season water table may rise close to, or above, the soil surface, creating extensive areas of shallow inundation or saturated soils. In these circumstances the seasonal or permanently high groundwater table creates the conditions for wetland formation.

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

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

People already invaded the area some shacks are placed closer to the stream and wetland.

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

N/A

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

N/A

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

Critical Biodiversity Area (as per provincial conservation plan)		NO

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

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix B (as part of sensitivity map).

21. 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 B** 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)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	

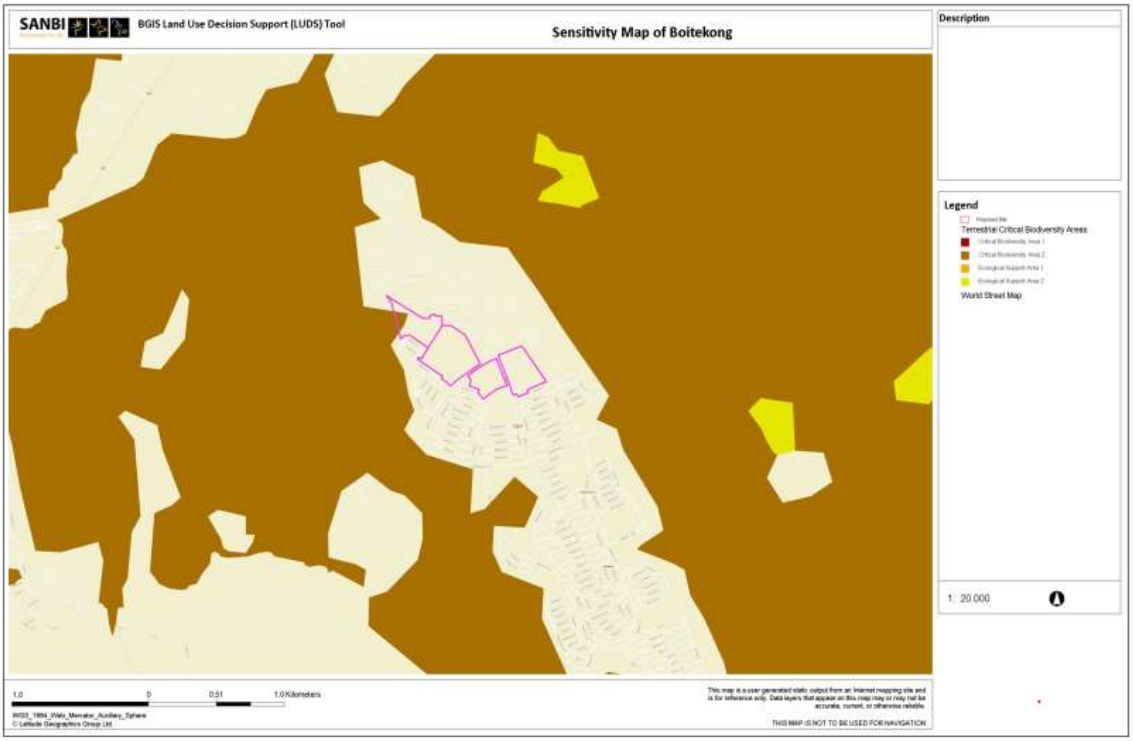

Figure 8: CBA Map

a) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (Including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	10%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	10%	Invasive plants were evident on site
Degraded (includes areas heavily invaded by alien plants)	10%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	60%	The site has been transformed by the people staying in the informal settlement .

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 Endangered Vulnerable**	**Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)**
	Least Threatened	**YES**

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)

22. 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:

N/A

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.

23. 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:

Rustenburg is the largest and one of the wealthiest municipalities in the North West Province. With about 581,000 inhabitants or 37% of Bojanala District municipality, it contributes more than 70% of the district GDP and about 40% of the provincial GDP. The municipality's unemployment rate at around 26.4% is in line with the rest of the country.

Economic profile of local municipality:

Rustenburg's economy is largely concentrated in the platinum mining industries, which contributed 66% to provincial GVA in 2013, followed by the trade and finance sector which contributed 29% and 28% respectively in the same period. It must be noted that Rustenburg experienced negative GDP growth (-3.5%) in 2012 which was largely influenced by a decline in the mining sector. This led to negative growth in the province of -0.9% compared to national GDP growth of 2.5%. In 2013 Rustenburg GDP recorded an improved growth of 1.8%.

Level of education:

The majority of Rustenburg local municipality population has some form of education, with only 5.4% of the population have no schooling, while 31% have matric and 8% have higher education in 2016. The table below shows the percentage of the population with no schooling increased from 2011 as compared to 2016, while also highlighting the increase I the number of higher education over the same period.

Table 5:Level of Education

Level of Education	2011	2016
No Schooling	4.7%	5.4%
Matric	34.6%	31%
Higher Education	7.4%	8.9%

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R2 Million
What is the expected yearly income that will be generated by or as a result of the activity?	R0.00
Will the activity contribute to service infrastructure?	YES
Is the activity a public amenity?	YES
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	R
What is the expected value of the employment opportunities during the development and construction phase?	R
What percentage of this will accrue to previously disadvantaged individuals?	100%
How many permanent new employment opportunities will be created during the operational phase of the activity?	N/A
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	100%

24. SPECIALIST(S) CONSULTATION

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 F.** All specialist reports must be contained in Appendix G and must meet the requirement in Appendix 6 of EIA Regulations, 2014.

The following specialist studies are to be included in final BAR:

- Geotechnical studies
- Flood line delineation
- Wetland

SECTION C: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

25. 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.

Table 6: List of impacts and Risk identified

POTENTIAL IMPACTS	PHASE	REVERSIBLE	IRREPLACEABLE DAMAGE	CAN IMPACT BE AVOIDED
Traffic , increase in traffic due to construction vehicles	Construction	Yes	Yes	No
Fuel spillages	Construction	Yes	No	Yes
Noise from construction vehicles	Construction	Yes	No	No
Visual disturbances with change in the land-use	Construction, Operational and Decommissioning	Yes	No	No
Cultural-historical resources	Construction and Operational	No	No	No
Socio-economic	Construction and Operational	Yes	No	No
Groundwater	Construction and Operational	No	Yes	Yes
Storm Water, increase in	Operational	No	No	No

surface runoff from various surfaces				

Table 7: Criteria used for rating impacts

CRITERIA	DESCRIPTION			
Extent	National (4) The whole of South Africa	Regional (3) Provincial and parts of neighbouring provinces	Local (2) Within a radius of 2 km of the construction site	Site (1) Within the construction site
Duration	Permanent (4) Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3) The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory	Medium-term (2) The impact will last for the period of the construction phase, where after it will be entirely negated	Short-term (1) The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
Intensity	Very High (4) Natural, cultural and social functions and processes are altered to extent that they permanently cease	High (3) Natural, cultural and social functions and processes are altered to extent that they temporarily cease	Moderate (2) Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	Low (1) Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected

Probability Of Occurrence	Definite (4) Impact will certainly occur	Highly Probable (3) Most likely that the impact will occur	Possible (2) The impact may occur	Improbable (1) Likelihood of the impact materialising is very low
Impact Reversal	Highly Impossible (4) Impact reversal will certainly be impossible	Moderate (3) Impact can be reversed to some extent with loss of natural resources	Possible (2) High possibility of impact reversal	Definite (1) Impact can be totally reversed
Loss of irreplaceable resources	Definite (4) Resources definitely be lost	Highly Probable (3) Most likely that resources will be lost	Possible (2) Resources may be lost	Improbable (1) Loss of resources is highly unlikely

Significance is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

The formula for calculating the Significance of the Impacts is as follows:

Significance = Extent + Duration + Intensity x Probability

Table 8: Impact Significance Rating

Low impact/ Minor (3 -10 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact/ Moderate (11 -20 points)	Mitigation is possible with additional design and construction inputs.

High impact (21 -30 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact/ Major (31 - 48 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a “very high impact” is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse.
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.	

Table 9: Methodology

Activity	Impact summary	Significance	Proposed Mitigation
CONSTRUCTION PHASE IMPACTS			
Site Establishment	**Direct impact:** Environmental degradation of the site establishment area and surrounding areas.	The extent of the impact will be local. (1) The duration of the impact will be short term (2). The impact will cease once the construction phase is over. The Intensity is (3) The probability of the impact to occurs is (3) Significance prior to mitigation: Medium (Negative)(18) Significance post mitigation The Extent (1) The Duration will be short term (2). The impact will cease once the construction phase is over.	• Limit the project footprint as much as possible (clear only vegetation essential). • Ensure contractor laydown and storage areas remain outside the specified 32m setback zone. • Permit only essential personnel within this zone, the wetland zone and the active channels of the freshwater resource and only when necessary to carry out essential construction work. • Undertake site clearing in a phased manner to allow for any faunal species present to move away from the construction site.

		The Intensity is (2) The probability of the impact to occurs is (2) Significance post mitigation: Medium (Negative low)(10)	
Earthwork and construction vehicles movement: Dust generation	***Direct impacts:*** The construction phase will involve the following dust generating activities: Construction of road, storm water pipes, electricity a, as well as sewage pipelines and. Storage of construction materials on site.	The extent of the impact will be local. (2) The duration of the impact will be short term (2). The impact will cease once the construction phase is over. The Intensity is (2) The probability of the impact to occurs is (2) Significance prior to mitigation: Medium (Negative) (12). Significance post mitigation: Negligible**.**	• Mitigation of potential dust impacts include: The use of water bowsers; Wetting down the site; Erection of shade netting to prevent off site dust migration; Covering construction materials (sand) with weighted down shade cloth or a similar material; and Regular manual sweeping of the surrounding roads and sidewalks.
	Indirect impacts: None	None	None

	Cumulative impacts: None	N/A	N/A
Social and Economic Impact: Employment opportunities	***Direct Impacts:*** During construction phase of the development, there will be temporal employment opportunities for local unskilled and skilled workers. This will improve livelihoods of those who will be employed and their dependents.	The extent of the impact will be local. (2) The duration will be long term. (3) The Intensity is (2) The probability of the impact to occurs is (2) Significance: Medium (Positive) (14) Significance post mitigation: None	• The impact is considered positive therefore no mitigation measures are required.
	Indirect Impacts: Improvement in the local economic activity, poverty eluviation and reduce crime in the surrounding area.	The extent of the impact will be local. (2) The duration will be long term. (3) The Intensity is (2) The probability of the impact to occurs is (2) Significance: Medium (Positive)(14) Significance post mitigation: None	The impact is considered positive therefore no mitigation measures are required.
	Cumulative impact: The benefits on local employment opportunities are considered cumulative on the surrounding area, as jobs opportunities associated with	The extent of the impact will be local. (2) The duration will be long term. (3) The Intensity is (2) The probability of the impact to occurs is (2)	The impact is considered positive therefore no mitigation measures are required.

	the construction	Significance: Medium (Positive)(14) Significance post mitigation: None	
Traffic	***Direct impacts:*** Increased use of roads by construction vehicles increasing the risk of an accident.	The extent will be local. (2) It will be for a short period which is the construction phase only.(2) The intensity will be (2) The probability of occurrence will be (1) Significance prior to mitigation: Low (Negative).(6) Significance post mitigation: Negligible.	• All drivers will be competent and in possession of an appropriate valid driver's license. • All vehicles travelling on site will follow the specified speed limits. • The movement of all vehicles will be controlled such that they remain on designated routes. • No member of the workforce will be permitted to drive a vehicle under the influence of alcohol or narcotic substances. • Should there be any abnormal traffic loads as a consequence of the construction phase activities, the local municipality and relevant traffic authorities should be notified.
	Indirect impacts: None	N/A	N/A
	Cumulative impacts: N/A	N/A	• Measures to mitigate cumulative traffic impacts can only be controlled on and adjacent to the site and as such the proposed mitigation measures outlined above still apply.

Noise Impacts	***Direct impacts:*** Increase in noise levels up to 60 dB in a public area (associated with the construction vehicles as well as the equipment which will be utilized for the construction phase of the project) and subsequent disturbance of the surrounding residents and landowners.	The extent of the impact will be local. (2) The duration of the impact will be short term and will only occur during working hours approved by the local municipality (anticipated to be 08h00 – 17h00 on weekdays and Saturdays, with no work taking place on Sundays. (2) The intensity will be(2) The probability will be (2) Significance prior to mitigation: Medium.(12)	Proposed mitigation measures include: • Prior to the commencement of work on site, all on site personnel should undergo training or have an information session regarding appropriate noise levels. • The construction contractor must use modern equipment, which produces the least noise. • Any unavoidably noisy equipment must be identified and reasonably located in an area where it has least impact. • The use of noise shielding screens must be considered and the operation of such machinery restricted to when it is actually required. • No noise generating work is to be conducted outside of normal working hours as approved by the local authority.
		The extent =2 Duration = 2 Intensity= 1 Probability=1 Significance post mitigation: Low (5)	
	Indirect impacts: None	N/A	N/A

	Cumulative impacts: The impact is cumulative due to the area is close to residential and agricultural land-uses.	The extent will be local.(2) It will be for a short period which is the construction phase only.(2) The intensity will be (2) The probability of occurrence will be (1) Significance prior to mitigation: Low (Negative).(6) The extent =2 Duration = 2 Intensity= 1 Probability=1 Significance post mitigation: Low (5)	• Measures to mitigate against cumulative noise impacts can only be controlled on an adjacent to the site and as such the proposed mitigation measures outlined above still apply
Visual impacts	***Direct impacts:*** The construction vehicles, machinery and construction camp as well as the construction materials located on site will have a minor visual impact on the immediate surrounding environment.	The extent of the impact will be local.(2) The duration will be long term.(3) The Intensity is (2) The probability of the impact to occurs is (2) Significance: Medium (14) The extent =2 Duration = 2	Proposed mitigation measures include: • Screening of the site during construction activities. • Management of the placement of vehicles, construction camp and materials placed on site. Vehicles can be parked in one specific area whilst materials placed on site can be placed in neat piles in specified sections of the site prior to use. • Construction materials stored on the site prior to their use and waste stored on the site prior to removal should be

		Intensity= 1 Probability=1 Significance post mitigation: Low (5)	kept in neat, separate piles to ensure good housekeeping at all times.
	Indirect impacts: Temporary loss of sense of place.	The extent =2 Duration = 2 Intensity= 2 Probability=1 Significance =6 Significance post mitigation: Negligible.	• Measures to mitigate indirect visual impacts can only be controlled on and adjacent to the site and as such the proposed mitigation measures outlined above still apply.
	Cumulative impacts: ***None***	N/A	N/A
Contamination of soil & groundwater (surface spillages):	***Direct impacts:*** • Loss of soil integrity as a result of soil disturbance (e.g. topsoil stripping and trenching). • Compaction of soil as a result of movement of people and vehicles over exposed soils.	The extent will be local. (2) It will be for a short period which is the construction phase only. (2) The intensity will be (2) The probability of occurrence will be (2) Significance prior to Mitigation is Medium (12) The extent =2 Duration = 2	• Adequate training of the construction personnel will ensure that the impact is minimized and, should it occur, rapid, informed action is taken to contain the spillage/ leak of any paints, bitumen, sealants, excess cement mixing water, etc. • In the event of such an emergency incident, a suitably trained clean-up contractor will be appointed to clean up the spill. Absorbent material or a hazardous material spill kit must be available to mop up the spill/ leak immediately

	• Contamination of soil resources through spills or leaks of asphalt, cement/concrete and other potential contaminants, including possible indiscriminate disposal of solid waste and wastewater. There may be some erosion risk as a result of soil disturbance associated with the development during the construction phase.	Intensity= 2 Probability=1 Significance post mitigation: Low (6) (Negative).	and prevent potential contamination. • The saturated material should be disposed of at a suitable hazardous landfill site or recycled with chain of custody documentation provided by the contractor as proof of end recipient. • The ECO should supervise any remediation procedures in order to ensure that the material is correctly treated. • Trained, permit holding contractors will be used during the construction process to minimize health and safety and environmental risk at the site. • Any spillages from contractors' equipment or vehicles on site must be controlled to prevent pollution of the water resources. • Storm water runoff must be controlled such that it does not run across any of the area where construction work is being carried out. • The precautionary principle applies at all times. If pollution of groundwater sources occurs, every effort must be made to reduce the contamination as far as possible.
	Indirect impacts: None	N/A	N/A

	Cumulative impacts: Spills and leaks will contaminate water	The extent will be local. (2) It will be for a short period which is the construction phase only. (2) The intensity will be (2) The probability of occurrence will be (2) Significance prior to Mitigation is Medium (12) The extent =2 Duration = 2 Intensity= 2 Probability=1 Significance post mitigation: (6) Low.	• Trained, permit holding contractors will be used during the construction process to minimize health and safety and environmental risk at the site. • Any spillages from contractors' equipment or vehicles on site must be controlled to prevent pollution of the water resources. • Storm water runoff must be controlled such that it does not run across any of the area where decommissioning or construction work is being carried out. • The precautionary principle applies at all times. If pollution of groundwater sources occurs, every effort must be made to reduce the contamination as far as possible.
Increase in erosion & runoff	***Direct impacts:*** The removal of topsoil, addition of spoil sites leading to wash and compaction by heavy machinery resulting in an increased runoff.	The extent will be local.(2) It will be for a short period which is the construction phase only.(2) The intensity will be (2) The probability of occurrence will be (2) Significance prior to mitigation: Medium (Negative).(12)	• Soil Management (erosion control): • To prevent erosion and sedimentation, construction activities should be undertaken during the dry season when flows will be substantially reduced. • Topsoil must be removed from the construction areas and not spoiled.

		The extent =2 Duration = 2 Intensity= 2 Probability=1 Significance post mitigation: Low (Negative).(6)	• Top-soil and sub-soil stockpiles to be placed in areas where they will cause the least impact • Vehicles should be parked out of the buffer areas when not in use in order to prevent compaction of the soil profile. • The construction camp should be located more than 100m from watercourses if possible. • Topsoil should be replaced in the correct order it was extracted and erosion prevention measures be put in place on areas with a steep gradient (such as geo-textiles). • Sediment barriers/controls should be installed if erosion is observed near the site • Any excess subsoil must be removed from the development area once back filling is completed, and spoiled at an agreed spoil site.
	Indirect impacts: None	N/A	N/A

	Cumulative impacts: The impact is considered cumulative in nature due to the runoff impacts from surrounding compacted surfaces and roadways.	The extent will be local. (2) It will be for a short period which is the construction phase only. (2) The intensity will be (2) The probability of occurrence will be (2) Significance prior to mitigation: Medium (Negative).(12) The extent =2 Duration = 2 Intensity= 2 Probability=1 Significance post mitigation: Low (Negative).(6)	Measures to mitigate against cumulative impacts can only be controlled on and adjacent to the site and as such the proposed mitigation measures outlined above still apply.
Pollution	***Direct impacts:*** An increase in pollution due to heavy machinery, storage of chemicals, ablution facilities and likely spills during construction. And also solid waste from adjacent residents	The extent will be local. (2) It will be for a short period which is the construction phase only. (2) The intensity will be (2) The probability of occurrence will be (2) Significance prior to mitigation: Medium (Negative).(12)	Pollution Control: • A Spill Contingency Plan for both construction and operational phases should form part of the Environmental Management Programme (EMPr). • The Spill Contingency Plan should address measures to prevent and mitigate the spillage of hazardous materials,

		The extent =2 Duration = 2 Intensity= 2 Probability=1 Significance post mitigation: Low (Negative).(6)	which include oil, grease and petrochemicals as well as herbicides which may be used as part of the alien clearing operation. • All chemicals should be appropriately stored and handled. • Storerooms must be more than 100m from watercourse zones and have appropriate concrete flooring. • No washing of construction equipment and vehicles must be done on site. • Any remnant rubbish, spoil, machinery and contaminants need to be removed from the development area.
	Cumulative impact: The impact is considered cumulative in nature due to the presence of pollutants that exist from the adjacent residents.	The extent will be local. (2) It will be for a short period which is the construction phase only. (2) The intensity will be (2) The probability of occurrence will be (2) Significance prior to mitigation: Medium (Negative).(12)	Measures to mitigate against cumulative impacts can only be controlled on and adjacent to the site and as such the proposed mitigation measures outlined above on the direct impacts will apply.

		The extent =2 Duration = 2 Intensity= 2 Probability=1 Significance post mitigation: Low (Negative) (6). Surrounding activities will exist until decommissioning.	
OPERATIONAL PHASE IMPACTS			
Storm water Impact: Increase in surface Runoff	***Direct impact***: Increase in impervious surfaces which may promote erosion and flash floods.	The extent will be local. (2) It will be for a short period which is the construction phase only. (2) The intensity will be (2) The probability of occurrence will be (2) Significance prior to mitigation: Medium (Negative). (12) The extent =2 Duration = 2 Intensity= 2 Probability=1 Significance post mitigation: Low (Negative)(6)	Soil Management (erosion control): • Erosion control measures should be installed to stabilize the banks and prevent future erosion that may affect the development and the vegetation. Pollution Control: • Sewerage and waste water systems should be properly connected

	Indirect impact: None	N/A	N/A
	Cumulative impact: The impact will be cumulative due to surrounding road network. Surfaces discharging runoff to the municipal storm water system.	The extent will be local.(2) It will be for a short period which is the construction phase only.(2) The intensity will be (2) The probability of occurrence will be (2) Significance prior to mitigation: Medium (Negative).(12) The extent =2 Duration = 2 Intensity= 2 Probability=1 Significance post mitigation: Low (Negative)(6)	• Measures to mitigate against cumulative storm water impacts can only be controlled on and adjacent to the site and as such the proposed mitigation measures outlined above still apply
Socio-economic Impact:	***Direct impact:*** Provision of formal land tenure and services to residents of Boitekong extension 2 and 8	The extent will be local. (2) It will be permanent(4) The intensity will be (2) The probability of occurrence will be (2) Significance prior to mitigation: Medium (Positive).(16) Significance post Mitigation:	The impact is considered a positive and therefore no mitigation measures are required.

		N/A	
	Indirect impact Reduction in community protests/ unrest.		The impact is considered a positive and therefore no mitigation measures are required.
	Cumulative impact: Meeting local, provincial & national service delivery targets.	N/A	The impact is considered a positive and therefore no mitigation measures are required.
Road access	***Direct impact*** Allowing emergency and medical vehicles into site.	The extent will be local. (2) It will be permanent(4) The intensity will be (2) The probability of occurrence will be (2) Significance prior to mitigation is Medium (positive)(16)	The impact is considered a positive and therefore no mitigation measures are required.
	Indirect impact Increased health and safety of community.	N/A	The impact is considered a positive and therefore no mitigation measures are required.
	Cumulative impact: N/A	N/A	The impact is considered a positive and therefore no mitigation measures are required.
DECOMMISSIONING PHASE			
Please note: Decommissioning phase impacts are of a similar nature to the above-mentioned construction, operational phase impacts; and the same mitigation measures would			

apply In addition, upon closure of the site.

A complete impact assessment which include process undertaken to identify, assess and rank the impacts, the activity will impose on the site through the life of the activity in terms of EIA Regulation 2014, Appendix 1(i) and (j) of GN R.982 must be included as Appendix H.

26. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

The Proposed activity will have negative impacts during construction phase such as Dust, Noise pollution, Waste impact, spread of alien vegetation and impact on soil, however the impacts are temporary and they medium before mitigation and low after mitigation. Based on the above impacts it won't be detrimental to the environment

The activity will bring positive Socio- economic impact such as employment and municipality services in the community.

No-go alternative (compulsory)

The current status-quo involves connection to limited electrical supply, poor sanitation, communal water pipe stands, poor access, etc. This alternative is not considered to be desirable from both social and environmental perspectives.

SECTION D: PUBLIC PARTICIPATION

27. ADVERTISEMENT AND NOTICE

Publication name	**Platinum Weekly**	
Date published	**01 March 2019**	
Site notice position	**Latitude**	**Longitude**
	25°36'34.28"S	27°18'38.02"E
	25°36'21.37"S	27°18'53.08"E
	25°36'27.91"S	27°18'42.00"E
	25°36'34.13"S	27°18'09.65"E
	25°36'15.70"S	27°18'50.33"E
Date placed	20 February 2019	

Proof of the placement of the relevant advertisements and notices has been attached as **Appendix I1.**

28. 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 R.982.

Key stakeholders (other than organs of state) identified in terms of Regulation 40(2)(d) of GN R.982:

Title, Name and Surname	**Affiliation/ key stakeholder status**	**Contact details (tel number or e-mail address)**
Mr Mcebisi Damoyi	Ward Councillor	clrdamoyi@gmail.com
Mr Patlama Seleka	Ward Councillor	patlamaslk@gmail.com

Include proof that the key stakeholder received written notification of the proposed activities as Appendix I2. 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.

This has been included as appendix 12

29. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
No Comment received at this stage	No Comment received at this stage

30. COMMENTS AND RESPONSE REPORT

The practitioner must make report (s) available to I&APs record all comments received from I&APs and respond to each comment before 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 I3.

31. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders. Key stakeholders identified in terms of Regulation 7(1) and (2) and Regulation 40(2) (a)-(c) of GN R.982:

Table 10: Authorities and organs of state identified as key stakeholders

Name	Organisation	Contact	Email Address
Provincial Department.			
Lucky Fourie	North West Local Government and Human settlement	Tel: 018 388 3614	lfourie@nwtg@gov.za
Nic Van Staden	North West Department of Public works	Tel: 018 987 4706	
Khwene Maduka	North West Department of Rural Development and Land Reform	Tel: 018 388 7042 / 082 465 7349	moduku.khwene@drdlr.gov.za
Sebenzile Ntshangase	North west Department of Water and Sanitation	Tel: 082 896 8228	ntshangases@dws.gov.za
Parastatals.			
Mpho Sebole	North West Eskom	Tel: 084 504 1730	sebolemd@eskom.co.za
Victoria Bota	North West SANRAL	Tel: 061 647 5212	botav@nra.co.za
Bojanala District Municipality			

P. Shikwane	Municipal Manager	Tel: 014 590 4502	Pogisos@bojanala.gov.za
Tsholofelo Dikgole	Executive Secretary of Municipal manager	Tel: 014 590 4502	tsholofelod@bojanala.gov.za
Rustenburg Local Municipality			
Mncebisi Damoyi	Ward Councilor Ward 40	Tel: 061 474 0072	clrdamoyi@gmil.com
Patlama Seleka	Word Councilor Ward 20	Tel; 078 154 2651	patlamasik@gmail.com
Kelebogile Mekgoe	Environmental Impact Assessement Practitioner	Tel: 014 590 3185	kmekgoe@rustenburg.gov.za

Include proof that the Authorities and Organs of State received written notification and draft reports of the proposed activities as **Appendix I4.**

32. 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 has been included as **Appendix I5**.

Copies of any correspondence and minutes of any meetings held have been included in **Appendix I6.**

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).

Not Applicable

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.

- Should the project applicant obtain the necessary environmental authorisation for the proposed activities, Environmental Management Programme (EMPr) must be implemented for the construction and operational phases of the development. The EMPr, as attached to this document, should be made part of the contractual documents of contractors.
- All mitigation measures as described in this report and specialist reports are adhered to by the developer (these measures will be made part of the EMPr).
- The construction of all structures, roads and implementation of services must be in accordance with the specifications of the geotechnical engineering assessment. Such specification will be in response to site specific soil characteristics, gradient and anticipated runoff.
- It is recommended that environmental construction audits be conducted on a monthly basis. In addition a pre-construction audit and post-construction audit (PCA) must be conducted. A second CA must take place three (3) or four (4) months after rehabilitation to monitor the effectiveness of the rehabilitation and erosion control.
- The contractor and his staff must attend an environmental awareness training course, presented by the site engineer or a suitably qualified EO from the engineers / contractors, prior to construction commencing. The environmental awareness training course should cover the following key aspects: (a) basic awareness and understanding of key environmental features of the work site and the surrounding environment, (b) understanding the importance of, and reasons why, the environment must be protected, (c) ways to minimize environmental impacts, and (d) requirements of the Environmental Authorisation and EMPr. The EAP must be on hand to aid with any environmentally-based questions.
- Construction activities must comply with designated working hours
- Emergency contact numbers must be placed at the construction camp.
- As there are no formal stormwater drainage facilities on site, the contractor must prepare a

Stormwater Control Method Statement (MS) to ensure that all construction methods adopted on site do not cause, or precipitate, soil erosion. The designated responsible person on site, as indicated in the Stormwater MS (usually the contractor) should ensure that no construction work takes place before the stormwater control measures are in place. The Stormwater MS must be submitted to the ECO prior to implementation.

- The duration of exposed soil must be kept to a minimum and rehabilitation of the disturbed area must be initiated as soon as construction is completed.
- Materials must be stockpiled in appropriate areas where storm water runoff cannot erode into the stockpile.
- Dust control must be implemented throughout the construction phase.
- Any alien vegetation found within the construction site must be cleared to ensure that invasion of disturbed areas does not occur.
- Cement mixing must take place on an impermeable surface or on cement mixing trays. Cement mixing will not be permitted to occur where run off can enter the watercourses. In addition cement and fuels must be stored within bunded and hard surfaced areas.
- Littering must not be permitted on the site and general housekeeping must be enforced.
- Waste must be stored in the bins within the waste collection area in the construction camp. Where possible the contractor must ensure recycling bins are available on site. Waste must be disposed of according to their denomination and recycled as such. Waste must be disposed of at an appropriate landfill site and safe disposal slips must be retained on site at all times. Hazardous waste must be stored on a hard surface within a bunded area and must not be allowed to enter watercourses and the surrounding environment.

The EMPr that meet the requirements of EIA Regulation,2014, Appendix 4, must be attached as Appendix J.

Is an EMPr attached?	YES	

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 K

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

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

SECTION F: AFFIRMATION BY EAP

I Ndivhuwo Maponya name of person representing Tshikovha Green and Climate Change Advocates (Pty)Ltd declare that the information provided is correct and relevant to the activity/ project and that, the information was made available to interested and affected parties for their comments. All specialist (s) reports are relevant for the competent authority to make informed decision.

_____ _____

SIGNATURE OF EAP **DATE**

SECTION F: APPENDICES

The following appendices must be attached:

Appendix A: A3 Locality Map

Appendix B: Layout Plan and Sensitivity Maps

Appendix C: Photographs

Appendix D: Facility illustration(s)

Appendix E: Confirmation of services by Municipality (servitude and infrastructure planning)

Appendix F: Details and expertise of Specialist and Declaration of Interest

Appendix G: Specialist reports (including terms of reference)

Appendix H: Impact Assessment

Appendix I: Public Participation

Appendix J: Environmental Management Programme (EMPr)

Appendix K: Details of EAP and expertise

Appendix L: Any other Information

Appendix M: Financial Provision (if applicable)

Appendix N: Closure Plan (where applicable) as described in Appendix 5 of EIA Regulations, 2014