



CONSULTATION / DRAFT SCOPING REPORT

**THE PROPOSED TOWNSHIP ESTABLISHMENT ON THE
REMAINDER OF THE FARM (RESERVED AS PORTION 51) OF
DWARSLOOP 248 KU, MPUMALANGA PROVINCE**

OCTOBER 2023

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DOCUMENT CONTROL RECORD

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Report Title	Township establishment on the Remainder of the farm (reserved as portion 51) of Dwarsloop 248 KU, Mpumalanga Province
Document ID	Consultation / Draft
Proponent / Applicant	Bushbuckridge Local Municipality
Date	October 2023
DOCUMENT APPROVAL	
EAP Name	Mankaleme M. Magoro
Signature	

EAP DECLARATION OF INDEPENDENCE

I, **Mankaleme Martina Magoro**, in my capacity as an Environmental Assessment Practitioner, hereby declare that I-

- Act as an independent environmental assessment practitioner.
- Do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act (No. 107 of 1998).
- As a registered member of the South African Council for Natural Scientific Professions and the Environmental Assessment Practitioners Association of South Africa, will undertake work in accordance with the Code of Conduct of the Councils.
- Based on information provided to us by the project proponent, and in addition to information obtained during this study, have presented the results and conclusion within the associated document to the best of our professional judgement.

Signature of EAP: 

Date Signed: 11 October 2023

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ABBREVIATIONS AND ACRONYMS

EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EAP	Environmental Assessment Practitioner
DARDLEA	Department of Agriculture, Rural Development, Land and Environmental Affairs
SR	Scoping Report
CSR	Consultation Scoping Report
DSR	Draft Scoping Report
FSR	Final Scoping Report
EA	Environmental Authorisation
RoD	Record of Decision
CA	Competent Authority
BLM	Bushbuckridge Local Municipality
EDM	Ehlanzeni District Municipality
S & EIR	Scoping and Environmental Impact Report
EMP	Environmental Management Plan/ Programme
EMPr	Environmental Management Plan/ Programme Report
Ptn	Portion
Ha	Hectares
PoS	Plan of Study
GN	Government Notice
LN	Listing Notice
EAPASA	Environmental Assessment Practitioners Association of South Africa
SACNASP	South African Council for Natural Scientific Professions
NEMA	National Environmental Management Act
SAHRA	South African Heritage Resource Agency
NEMA	National Environmental Management Act
NWA	National Water Act
NHRA	National Heritage Resources Act
NEMWA	National Environmental Management Waste Act
CARA	Conservation of Agricultural Resources Act
I & APs	Interested and Affected Parties
PPP	Public Participation Process

GLOSSARY OF TERMS

Township establishment: a process of converting an agricultural zoned land into residential, commercial or industrial properties.

Environmental assessment practitioner: is a consultant responsible for conducting environmental impact assessment.

Environmental impact assessment: a systematic process of identifying, assessing and reporting environmental impacts associated with an activity.

Plan of study of environmental impact assessment: a study contemplated in regulation 22 which forms part of a scoping report and sets out how an environmental impact assessment will be conducted.

Proponent / applicant: a person intending to submit an application for environmental authorisation

Significant impact: means an impact that may have a notable effect on one or more aspects of the environment or may result in noncompliance with accepted environmental quality standards, thresholds or targets and is determined through rating the positive and negative effects of an impact on the environment based on criteria such as duration, magnitude, intensity and probability of occurrence.

Development: means the building, erection, construction or establishment of a facility, structure or infrastructure, including associated earthworks or borrow pits, that are necessary for the undertaking of a listed or specified activity, [including any associated post development monitoring,] 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.

Development footprint: means any evidence of physical alteration as a result of the undertaking of any activity.

Indigenous vegetation: refers to vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years.

Earth works: this involves construction machinery, dampening and general preparation of the site for construction purposes.

Mitigation measures: all actions taken to eliminate, offset or reduce potentially adverse environmental impacts to acceptable levels (World Bank, 1999:1).

Interested & affected party: a person, group of people, an organisation (public or private), a business, or other party that has an interest or is affected in terms of their health, property rights, or economy by a proposed activity.

Listed activities: activities that have been recognised as having a detrimental impact on the environment

I. INTRODUCTION

Leago Environmental Solutions was appointed by Nkanivo Development Consultants on behalf of Bushbuckridge Local Municipality as independent environmental assessment practitioners to undertake an environmental impact assessment process in terms of the National Environmental Management Act (No. 107 of 1998) read together with the Environmental Impact Assessment Regulations (GNR 326 of 7 April 2017) for the purpose of establishing a township. The proposed township establishment will be situated on the Remainder of the farm (reserved as Portion 51) of Dwarsloop 248 KU, within the Bushbuckridge Local Municipality in Mpumalanga Province.

The proposed development site measures 69.34 hectares in extent and is expected to yield 444 stands / land uses. The proposed township establishment is to be named "Relane Township".

I.1. Purpose of the Report

This Scoping Report has been prepared in accordance with the EIA Regulations published in Government Notice No. R 326 of 07 April 2017. These regulations fall under Section 24(5) read with Section 44 of the National Environmental Management Act (No. 107 of 1998) as amended. NEMA Section 24(5) stipulates that listed activities require environmental authorisation from the Competent Authority. Government Notice No. R327, Listing Notice 1 and Notice No. R325, Listing Notice 2 of the Environmental Impact Assessment Regulations (2017) identifies the following listed activities associated with the development of a township that require environmental authorisation by means of full EIA (Scoping and Environmental Impact Reporting).

1.1.1. Listing Notice 2, Activity 15

The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for - (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

Applicability to the project: the clearance of an area of 69.34 hectares of indigenous vegetation.

1.1.2. Listing Notice 1, Activity 24 (ii)

The development of a road - (ii) a road with a reserve wider than 13.5 meters, or where no reserve exists where the road is wider than 8 metres.

Applicability to the project: the development of roads / streets with widths of 12, 13, 16 and 20 meters.

1.1.3. Listing Notice 1, Activity 19(i)

The infilling or depositing of any material of more than 10 cubic meters into, or the dredging, excavation, removal of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic meters from a [(i)] a watercourse.

Applicability to the project: encroachments into the watercourse (drainage line) during the construction phase that might require infilling. The infilling or deposit material might exceed 10m.³

1.1.4. Listing Notice 1, Activity 12

The development of—canals exceeding 100 square metres in size; channels exceeding 100 square metres in size bridges exceeding 100 square metres in size; dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size; weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size; bulk storm water outlet structures exceeding 100 square metres in size; marinas exceeding 100 square metres in size; jetties exceeding 100 square metres in size; slipways exceeding 100 square metres in size; buildings exceeding 100 square metres in size; boardwalks exceeding 100 square metres in size; or infrastructure or structures with a physical footprint of 100 square metres or more.

Applicability to the project: the project includes the development of the storm water culverts but the size of the culverts can only be determined at the detailed design phase, however they might exceed 100m.²

1.2. Environmental Impact Assessment Process

This process is controlled through regulations published under Government Notice No. R326 of 07 April 2017 along with the associated guidelines promulgated in terms of Chapter 5 of the National Environmental Management Act (No. 107 of 1998).

Three phases recognised in the environmental impact assessment process are:

- Application phase
- Scoping phase
- Environmental impact reporting phase

1.2.1. Application Phase

The application phase consists of completing the EIA application form by the Environmental Assessment Practitioner and signing of the declaration by the applicant. The EIA application form is then submitted to the Competent Authority. As part of the requirements of Regulation 16 (1)(v) of GNR 326, an application for an environmental authorisation is accompanied by the environmental screening report generated through the national web-based environmental screening tool.

(a) Details of the Competent Authority

This application and any queries thereof will be directed to:

Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs

Environmental Impact Management

Riverside Office Park, Aqua Street (opposite Audi)

Building 4, East Tower

Nelspruit

1200

Tel: 013 759 4000

1.2.2. Scoping Phase

The Scoping Phase aims to identify the key environmental issues associated with the project, in part through public consultation; consideration of project alternatives and to also provide focus for the EIA phase. At the end of the scoping phase a report is compiled, known as a scoping report. As per the EIA Regulations, this consultation scoping report will be circulated amongst stakeholders, interested and affected parties to provide them with the opportunity to comment on the proposed development.

(a) Consultation / Draft Scoping Report

The aim of this scoping report is to document the following:

- Details of the Environmental Assessment Practitioner undertaking the environmental impact assessment process.
- Details of the project proposal.
- Details of alternatives considered in formulating the project proposal.
- Description of the legislation and guidelines applicable to the proposed activity.
- A description of the receiving environment.
- Documentation of the process and drafting of the public participation.
- An identification of environmental issues and impacts associated with the project proposal and alternatives.
- A description biophysical and environmental issues that require investigation.
- A description of the methodology to be used in the assessment of impacts.
- A plan of study for environmental impact assessment that will include a description of the public participation process.

This consultation scoping report will be circulated to stakeholders, interested and affected parties for observation and comments for a period of 30 days.

(b) Final Scoping Report

Once this draft report has been reviewed by the Competent Authority, stakeholders, interested and affected parties, comments will be collected and the report will be amended as appropriate and finalised. The final scoping report will then be submitted together with the plan of study for environmental impact assessment to the Competent Authority for decision making. Once the final scoping report and the plan of study for EIA have been approved by the Competent Authority, the project will proceed into the EIA Phase.

1.2.3. Environmental Impact Reporting Phase

During the EIA phase, a consultation / draft environmental impact assessment report which takes into consideration all the identified key issues and associated impacts from the scoping phase, environmental management plan and specialist studies which specifies the way the identified impacts are to be mitigated, will be produced by Leago Environmental Solutions. The consultation / draft EIAR will be made available to the stakeholders, I&APs for review and comments for a period of 30 days. Once the stakeholders and I&APs comments have been integrated into the EIAR it will be submitted to the Competent Authority for decision making.

2. DETAILS OF THE PROPOSED ACTIVITY

2.1. Location of the Proposed Development

The proposed township will be situated on the Remainder of the Farm (Reserved as Portion 51) of Dwarsloop 248 KU, 11km north of Bushbuckridge town along the R40 highway. The site is located roughly at the following coordinates: 24°46' 32.45" S, 31°5' 19.35" E. Figure 1 and 2 below depicts the locality of the project area.



Figure 1: Aerial locality map of the proposed development site

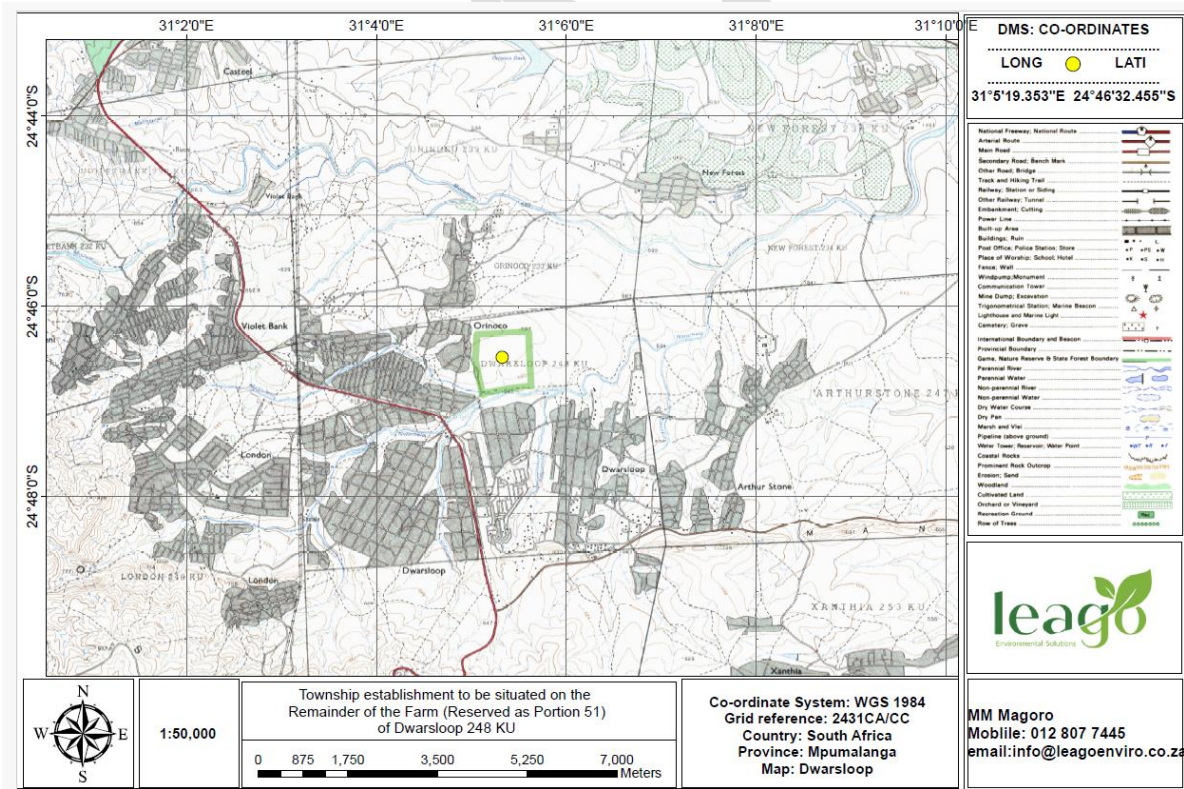


Figure 2: Topographical locality map of the proposed development site

2.2. Description of the Proposed Development

The proposed development is a township establishment which will entail 444 stands / land uses. The proposed land uses are:

- 425 Residential I (dwelling units)
- 4 Business I (retail)
- 2 Institutional (crèche)
- 2 Institutional (place of worship)
- 1 Educational (primary school)
- 1 Government / Municipal (cemetery)
- 3 Government/ Municipal (municipal uses)
- 1 Government/ Municipal (sports facility)
- 5 Open Space (public open space)

Figure 3 below depicts the layout plan of the proposed township establishment.

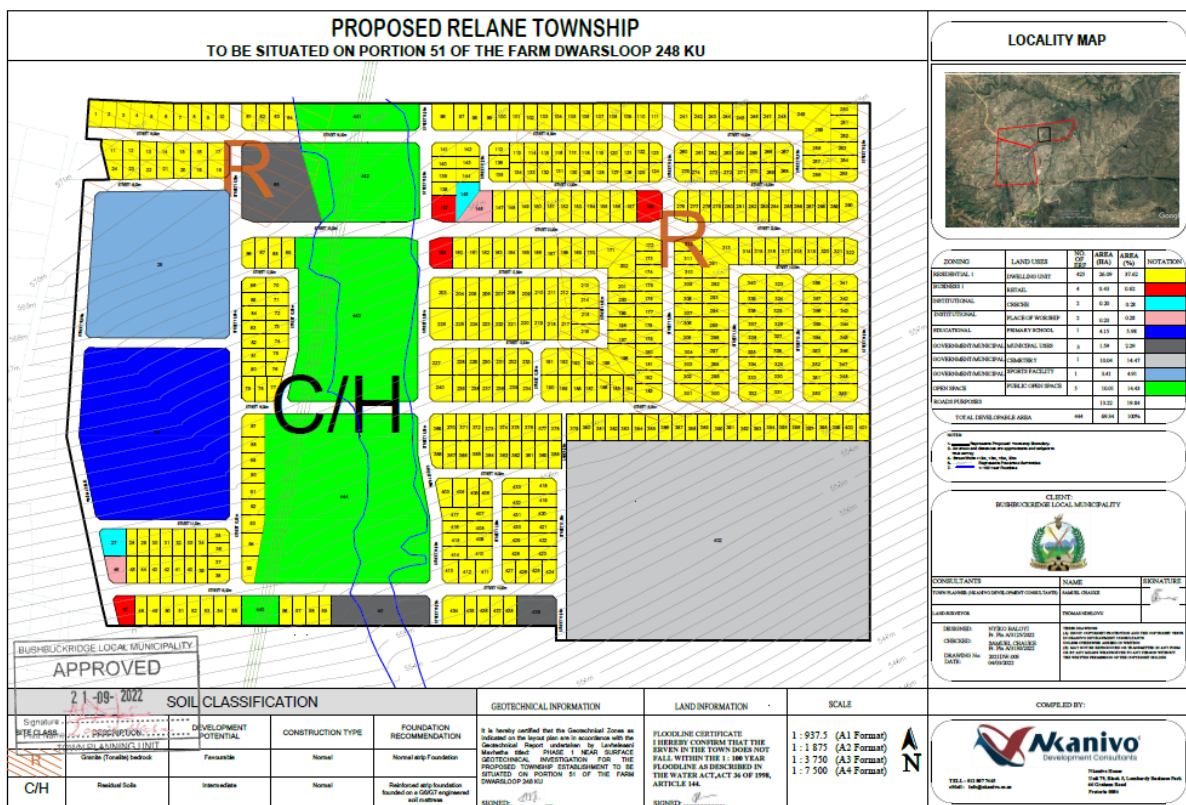


Figure 3: Township layout plan

2.3. Civil Services Envisaged for the Proposed Development

2.3.1. Roads

The site can be accessed through existing gravel internal streets within Dwarssloop C / Baromeng villages.

2.3.2. Water

The Dwarsloop area water source is the Inyaka Dam Bulk Water Treatment Works (WTW), whose custodian is Bushbuckridge Water.

2.3.3. Solid Waste

A regional landfill situated closet to the site will be used to dispose the solid waste. The local municipality will be engaged for collecting and disposing the solid waste.

2.3.4. Sewer

A portion of Dwarsloop area is serviced by the Dwarsloop Waste Water Treatment Works (WWTW) and areas that are currently not serviced by the WWTW currently depend on septic tanks and pit toilets.

2.3.5. Electricity

There is MV feeder network that supply the area is Nwarele Orinoco 132/22kV and Substation name is Nwarele Substation.

3. ALTERNATIVES

The EIA Regulations stipulate that a requirement of the environmental impact assessment process is to investigate feasible and reasonable alternatives to the project proposal.

The EIA Regulations define “alternatives”, in relation to a proposed activity, as “different means of meeting the general purpose and requirements of the activity, which may include alternatives to –

- (a) The property or location where the proposed activity is to take place.
- (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.

The concept of alternatives is aimed at ensuring that the best among all possible options in all aspects (environmental, economic, etc.) is selected. The option of not carrying out the proposed actions (no-go option) or developments is discussed to demonstrate environmental conditions without the project.

This means that for any project that is proposed, there should be a number of possible proposals or alternatives for accomplishing the same objectives or meeting the same need. Alternatives that would still meet the objective of the original proposal, but which would also have an acceptable impact on the environment (referring to physical, biological, aesthetic or visual) must be considered.

3.1. Feasible and Reasonable Alternatives Considered for the Proposed Activity

3.1.1. Site Alternatives

Site alternatives will not be investigated further since the applicant, Bushbuckridge Local Municipality has been allocated this portion of land to develop the proposed township establishment. The site was also selected so that the disturbed land can be developed.

3.1.2. Activity Alternatives

The current preferred activity is deemed to be the only feasible activity alternative as this activity will result in improved housing which can accommodate more people and reduce the number of informal settlements and illegal sand mining. No other activities were considered in this application due to the assessed need and feasibility of the proposed activity.

3.1.3. Design Alternatives

The unique character and appeal of Dwarsloop were taken into consideration with the design philosophy. Various layout alternatives were considered by the applicant and town planners, also taking terrain and environmental constraints into account, hence the current township layout plan being the result.

3.1.4. Operational Aspects

The operational aspects of the activity relate to the improved housing for the local community. No other alternatives were deemed feasible other than the proposed activity.

4. No-Go Alternatives

This option would come into effect if this assessment reveals fatal flaws in the process. To date no fatal flaws have been revealed. The no-go alternative of not developing the proposed site would leave the environment in the current state.

5. LEGISLATION AND POLICY GUIDELINES CONSIDERED

Table 1: The most pertinent relevant legislation to the proposed development.

	ACT	SUMMARY	RELEVANCE TO DEVELOPMENT
5.1	Constitution (Act 108 of 1996)	Everyone has the right to an unarmful environment which must be protect for the benefit of future generations. This is achieved through measures such as; preventing pollution and degradation, promoting conservation, promoting sustainable development and sustainable use of natural resources.	Ensure conservation principles are promoted, that the proposed activity is ecologically sustainable and will not result in pollution and ecological degradation.
5.2	National Environment Management Act (No. 107 of 1998)	NEMA creates the legal framework that ensures that environmental rights are guaranteed. The core principal relates to promoting sustainable development. The duty of care concept extends to prevent, control and rehabilitate pollution and degradation. Failure to perform these duties may lead to criminal prosecution. NEMA also introduces the EIA Regulations.	The proposed development should be in accordance with the NEMA principals, where this is not possible, reasons for deviation must be strongly motivated.
5.3	National Water Act (No. 36 of 1998)	The purpose of this Act is to ensure that the nation's water resources are protected, managed and controlled in an environmentally sustainable way. Also, relevant to the proposed activity is Section 19 of the Act which deals with pollution prevention.	Any water use must be investigated, specified, registered and licensed. Developers are responsible for taking measures to prevent pollution of water resources, undertaking necessary clean up procedures and controlling waste.
5.4	National Environmental Management: Waste Management Act (No.95 of 2008)	Listed activities require Environmental Authorization in the form of a Basic Assessment or full Scoping and EIA.	The proposed development falls below thresholds.
5.5	National Heritage Resources Act (No. 25 of 1999)	The protection of archaeological and paleontological sites and material is the responsibility of a provincial heritage	Any artifacts uncovered during the construction phase must be reported to SAHRA.

		resources authority and all archaeological objects are property of the state.	
5.6	Conservation of Agricultural Resources Act (No. 43 of 1983)	CARA aims to conserve the natural agricultural resources by combating and preventing erosion, weeds and invader plants. No land user must affect the natural flow pattern of run- off water.	The developer / applicant will be responsible for weed and invader control, storm water control must also be implemented.

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6. DESCRIPTION OF THE RECEIVING ENVIRONMENT

6.1. Physical Environment

6.1.1 Climate

The climate in Dwarsloop can be characterised as semiarid climate which receive approximately 353 mm precipitation annually. The average highest temperatures in Dwarsloop are 29°C in January and 22°C is the lowest which occurs in the month of July.

6.1.2 Geology

According to literatures and geological maps of the site, it can be confirmed that the site geology is canning moor tonalite. Details on the geology of the area will be explicitly discussed on the geotechnical report.

6.1.3 Hydrology

Geotechnical investigation report will reveal the extent of groundwater seepage on site. Detail evaluation of groundwater seepage will be discussed on the geotechnical report that will form part of the specialist studies.

6.1.4. Topography and Drainage

The site is generally flat. Storm water generated onsite can be channeled to follow the natural slope of the ground, to the lowest point. A storm water management plan report will also form part of the specialist reports.

6.2. Biological Environment

6.2.1. Vegetation

The project area can be described as a degraded shrubland as result of the removal of the tree component of vegetation structure in the historic past as well as the removal of vegetation where sand is being mined.

6.2.2. Fauna

Based on the findings of the Ecological Impact Assessment, only mobile fauna such as birds, reptiles and small mammals will be able to move around habitats without difficulty and danger.

7. DESCRIPTION OF ENVIRONMENTAL ISSUES AND IMPACTS IDENTIFIED

7.1. Direct Habitat Destruction

The proposed development will result in loss of flora and fauna due to the clearance of vegetation.

Destruction or loss of floral diversity or vegetation communities

- The physical clearance of vegetation

- Construction activities can impact on surrounding vegetation by dust and altered surface run-off patterns
- Disturbance of the area could lead to an increase in the growth of alien vegetation.

Loss of faunal diversity and decline in animal numbers

- Installation of services by heavy vehicles could cause fauna mortalities.
- Habitat loss and construction activities will force animals out of the area and animal numbers will decrease.

Mitigation measures

- Damage to large indigenous trees should be kept to a minimum.
- Minimise cutting down of big indigenous trees where possible and also ensure that protected plants get conserved.
- Erosion must be prevented by the correct construction of roads that provide for storm water flow.
- Where there is a possible safety risk to fauna, precautions should be put in place to prevent this.
- Peripheral impacts around the township on the surrounding vegetation of the area should be avoided to ensure the impacts are kept at a minimum.
- Advice should be sought when using any sort of poisons or pesticides.
- Noise and visual impact should be kept minimal
- Construction activities must not exceed the footprint of buildings as outlined in the township layout plan.

7.2. Habitat Fragmentation

Natural movement patterns will be disrupted and could result in the fragmentation of natural populations.

Mitigation measures

- Use existing facilities where possible
- Ensure as little disturbance as possible during the construction phase.

7.3. Soil and Water Pollution

The development will always carry a risk of soil and water pollution, with large construction vehicles contributing substantially due to oil and fuel spillages. If not promptly dealt with, spillages or accumulation of waste matter can contaminate the soil and surface or ground water, leading to potential medium / long-term impacts on both the fauna and flora. During the construction phase,

heavy machinery and vehicles as well as sewage and domestic waste from workers would be the main contributors to potential pollution problems.

Mitigation measures

- Water falling on areas polluted with oil/ diesel or other hazardous substances must be contained.
- Any excess or waste material or chemicals should be removed from the site and discarded in an environmental friendly manner.
- All construction vehicles should be inspected for oil and fuel leaks regularly, and any vehicle showing signs of leaking should be serviced immediately.

7.4. Spread and Establishment of Alien Invasive Species

- Habitat disturbance provides an opportunity for alien invasive species to spread.
- Continued movement of personnel and vehicles, will result in a risk of importation of alien species.

Mitigation measures

- Weeds and invader plants must be controlled.
- Alien invasive species should be eradicated.
- Rehabilitate disturbed areas as quickly as possible.
- Institute a monitoring programme.
- Institute an eradication / control programme for early intervention.

7.5. Negative Effect of Human Activities

- An increase in human activity is anticipated.
- The risk of snaring, killing and hunting of certain faunal species will be increased.
- For construction sites, pollution could increase because of litter and inadequate sanitation and the introduction of invasive fauna and flora are increased.
- The increase in the number of people will result in increased risk of uncontrolled fires arising from cooking fires and improperly disposed cigarettes etc.

Mitigation measures

- Maintain proper firebreaks around entire development footprint.
- Construction activities must remain within defined construction areas and the road servitudes, no construction / disturbance should occur outside these areas.
- Construction activities should be restricted to working hours.
- Workers should be educated on the importance of conservation issues.

- Camp fires at construction sites must be strictly controlled to ensure that no veld fires are caused.

7.6. Visual Environment and Noise

Visual environment will be in line with the developments in the surrounding area. During the construction phase of the proposed development, noise and dust will be a factor. These impacts and mitigation measures will be addressed in detail in the Environmental Management Plan report (EMPr).

7.7. Surface Drainage

Adequate storm water drainage system and culverts must be designed to control the volume, speed, and location of runoff to avoid soil erosion and damage to structures.

7.8 Air Quality

During the construction phase of the development, especially when clearing the site, dust particles will be dispersed into the atmosphere which might have an impact on the air quality in the area. These impacts and mitigation measures will be addressed in the impact table as well as in the environmental management plan report.

7.9. Noise Impact

During the construction phase of the development, there will be noise generated by the machinery and construction vehicles.

7.10. Visual

The clearance of the area will result in a change of the visual attributes of the site, however, the proposed development will not impact negatively on the visual / landscape attributes of the site as the proposed development will be located next to the boundaries of the existing townships.

7.11. Technical

Materials and methods of construction must all be based on the “Guidelines for Human Settlement planning and design” Redbook, as well as “SABS Standard specifications and Codes of Practice” as applicable.

A geotechnical site investigation was undertaken to identify potentially adverse geotechnical conditions at the site in order to facilitate and inform the planning phase of the proposed development.

8. ENVIRONMENTAL IMPACT STATEMENT

8.1. Summary of Key Findings

8.1.1. Biodiversity/ Ecological Impact Assessment

Based on the findings of the ecological impact assessment, there are no sensitive ecological features or biota on site that will be affected by the proposed township. The vegetation on site as well as the geomorphology has been subject to significant negative human induced modifications. The devastation caused to the environment as consequence of the sand mining and the modifications to the vegetation structure on site has reduced the habitat quality to such an extent that it can be considered as a suitable alternative site for this activity as opposed to sites located in natural habitat.

8.1.2. Heritage Impact Assessment

Portions of the study area is characterised by high vegetation cover after the recent rains, limiting archaeological visibility. Extensive sand mining resulted in areas of high erosion and in these areas low density scatters of mainly Middle Stone Age (MSA) and possibly isolated occurrences of Later Stone Age (LSA) artefacts were recorded at multiple locations (DL 001 – DL003). These show signs of weathering possibly due to secondary positioning by water. This low-density occurrence of artefacts is referred to as background scatter (Orton 2016) and generally of low significance.

DL004 and DL005 marks the location of a large cemetery that was identified within the study area. The cemetery contains more than 120 graves of varying designs, mostly dating to between 2003 and present. Some graves such as the one at DL005, are hidden among the overgrowth around the cemetery which would indicate that the cemetery is larger than what is perceived by casual observation. Figure 4 below depicts the locations of the artefacts and cemetery found within the project area.

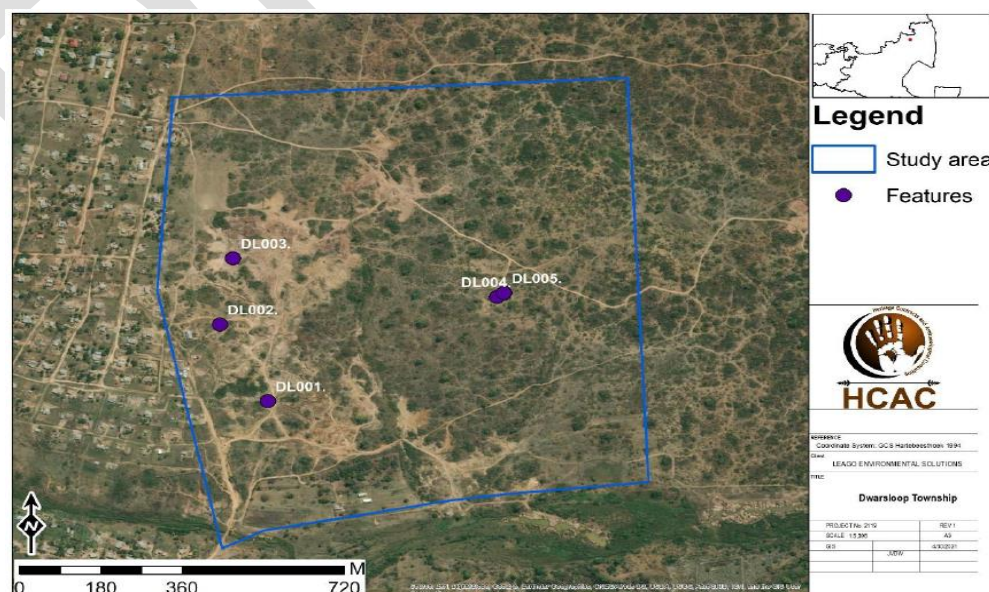


Figure 4: Artefacts and cemetery locations

8.1.3. Floodline

In terms of section 114 of the National Water Act (No. 36 of 1998) the project area is affected by flood water within the 1:100 period from the stream / river.

9. NEED AND DESIRABILITY OF THE PROPOSED DEVELOPMENT

- The proposed development site is located adjacent to the existing township of Orinoco.
- The proposed development will contribute towards improving the housing stock of the area and general livelihood of the residents.
- The establishment of the proposed township will prevent illegal settlement / land invasions, and illegal sand mining.
- The township will attract people through creation of a conducive environment for business, educational and institutional developments.

The development's location is therefore desirable due to its location in terms of:

- There will be sites for business opportunities for residents.
- The development will eventually be integrated with the environment, have proper service provision and it will be well planned.
- It will create job opportunities (permanent and temporary), ensure social upliftment of the area, create investment opportunities and create a sustainable development environment.
- The proposed development will not have a significant detrimental impact on the surrounding areas and is not in conflict with the adjacent land uses.

10. PUBLIC PARTICIPATION PROCESS

As an important component of the EIA process, the public participation process involves public inputs from stakeholders, interested and affected parties. The public participation process would therefore ensure that the views of the stakeholders and I&APs would be reflected and considered by the applicant and the Competent Authorities.

10.1. Methodology

The public participation process will be undertaken in terms of provisions of the EIA Regulations of 2017 of the National Environmental Management Act (No. 107 of 1998) as amended.

The key objectives of the public participation process are to:

- Identify a broad range of stakeholders and I&APs, inform them about the proposed project.
- Provide sufficient background information regarding the proposed development to ensure informed participation.
- Understand and clearly document all issues, underlying concerns and suggestions raised by the stakeholders and I&APs.

10.1.1. Newspaper Publication

The proposed development was advertised in the local newspaper, Hazyview Herald on the 11th October 2023 to inform people about the development and request them to register their names and comment on the proposed development.

10.1.2. On - Site Notices

Site notices will be placed at various points on and around the proposed development site. Notices regarding the background information of the proposed development will also be hand delivered to the landowners adjacent to the proposed development site.

10.1.3. Consultation with Stakeholders

Consultations / invitations to stakeholders was done through emails on the 11th October 2023.

10.1.4. Issues and Responses

This is a draft report, therefore no comments have been received from the stakeholders and I&APs so far that needed to be addressed by the Environmental Assessment Practitioner.

11. ENVIRONMENTAL IMPACT DETERMINATION AND EVALUATION

An environmental impact is defined as a change in the environment, be it the physical, chemical, biological, cultural and or socio-economic environment. Any impact can be related to certain aspects of human activities in this environment and this impact can be either positive or negative. It could also affect the environment directly or indirectly and the effect of it can be cumulative.

11.1 Methodology to Assess the Impacts

To assess the impacts on the environment, the process has been divided into two main phases namely the construction and operational phases. The activities present in these two phases have been studied to identify and predict all possible impacts.

In any process of identifying and recognising impacts, one must recognise that the determination of impact significance is inherently an anthropocentric concept. Duinker and Beanlands, (1986) in DEAT 2002, Thompson (1988), (1990) in DEAT 2002 stated that the significance of an impact is an expression of the cost or value of an impact to society.

However, the tendency is always towards a system of quantifying the significance of the impacts so that it is a true representation of the existing situation on site. This has been done by using wherever possible, legal and scientific standards which are applicable.

The significance of the aspects/impacts of the process have been rated by using a matrix derived from Plomp (2004) and adapted to some extent to fit this process. These matrixes use the consequence

and the likelihood of the different aspects and associated impacts to determine the significance of the impacts.

The consequence matrix use parameters like severity, duration and extent of impact as well as compliance to standards. Values of 1-5 are assigned to the parameters that are added and averaged to determine the overall consequence. The same process is followed with the likelihood that consists of two parameters namely frequency and probability. The overall consequence and the overall likelihood are then multiplied to give values ranging from 1 to 25. These values as shown in the following table are then used to rank the significance.

Table 2: Significance ratings

Significance	Low	Low-Medium	Medium	Medium-High	High
Overall Consequence X Overall Likelihood	1-4.9	5-9.9	10-14.9	15-19.9	20-25

Table 3: Description of the parameters used in the matrixes

SEVERITY	
Low	Low cost/high potential to mitigate. Impacts easily reversible, non – harmful insignificant change/deterioration or disturbance to natural environments.
Low-medium	Low cost to mitigate small/ potentially harmful moderate change/deterioration or disturbance to natural environment.
Medium	Substantial cost to mitigate. Potential to mitigate and potential to reverse impact. Harmful Significant change/ deterioration or disturbance to natural environment.
Medium-high	High cost to mitigate. Possible to mitigate great/very harmful, very significant change/deterioration or disturbance to natural environment.
High	Prohibitive cost to mitigate. Little or no mechanism to mitigate. Irreversible. Extremely harmful Disastrous change/deterioration or disturbance to natural environment.
DURATION	
Low	Up to one month
Low-medium	One month to three months
Medium	Three months to one year
Medium-high	One to ten years
High	Beyond ten years

EXTENT	
Low	Project area
Low-medium	Surrounding area
Medium	Within Bushbuckridge Local Municipality
Medium-high	Within Ehlanzeni District Municipality
High	Regional, National and International
FREQUENCY	
Low	Once a year or once during operation
Low-medium	Once in 6 months
Medium	Once a month
Medium-high	Once a week
High	Daily
PROBABILITY	
Low	Almost never/ almost impossible
Low-medium	Very seldom/ highly unlikely
Medium	Infrequent/ unlikely/ seldom
Medium-high	Often/ Regularly/ Likely/ Possible
High	Daily/ Highly likely/ definitely
COMPLIANCE	
The following criteria are used during the rating of possible impacts.	
Low	Best practise
Low-medium	Compliance
Medium	Non-compliance/ conformance to Policies etc. – Internal
Medium-high	Non-compliance/ conformance to Legislation etc. – External
High	Directive, prosecution of closure or potential for non-renewal of licences or rights

12. KEY ENVIRONMENTAL IMPACTS

Table 4: Possible environmental impacts identified

Environmental Issues	Possible Cause	Potential Impacts
Air Pollution and Noise		
Smoke	<ul style="list-style-type: none"> • Vehicle emissions • Fires 	<ul style="list-style-type: none"> • Health problems • Air pollution
Dust	<ul style="list-style-type: none"> • During construction 	<ul style="list-style-type: none"> • Public nuisance

	<ul style="list-style-type: none"> • Vehicle operation on roads • Vegetation clearing 	<ul style="list-style-type: none"> • Noise pollution
Fumes	<ul style="list-style-type: none"> • Fumes from vehicles • Fumes from machinery 	
Noise	<ul style="list-style-type: none"> • Construction machinery and vehicles • Presence of construction camp • Operation noise (music and people) 	
Environmental Issues	Possible Cause	Potential Impacts
Water Quality		
Pollution of water sources	<ul style="list-style-type: none"> • Spillage of fuel & oil from vehicles • Spillage of building material e.g. cement etc. • Migration of contaminants off the site • Solid waste in storm water • Littering 	<ul style="list-style-type: none"> • Pollution of groundwater • Health risk • Lower water quality • Soil degradation • Erosion • Siltation
Silt deposition in surface water	<ul style="list-style-type: none"> • Erosion risk due to increased run-off from built up area • Erosion from cleared areas during construction 	
Pollution from sanitation system	<ul style="list-style-type: none"> • Leakages of system and incorrect management of sanitation system • Inadequate measures to prevent sewage spillages • Overflow of sewage to groundwater 	
Environmental Issues	Possible Cause	Potential Impacts
Water Quantity		
Impact on amount of water resources available	<ul style="list-style-type: none"> • Over-utilisation of available water 	<ul style="list-style-type: none"> • Lose scarce resource • Increased pressure on ground water supply sources
Environmental Issues	Possible Cause	Potential Impacts
Land/ Soil Degradation		
Soil contamination and degradation	<ul style="list-style-type: none"> • Spillages of oil, chemicals from machinery & vehicles 	<ul style="list-style-type: none"> • Soil degradation • Loss of topsoil • Dust formation

	<ul style="list-style-type: none"> • Removal of vegetation during clearing for construction • Sewage spillages • Erosion due to increased runoff from built-up areas • Increased erosion of drainage channels • Site clearing during construction 	<ul style="list-style-type: none"> • Erosion
Environmental Issues	Possible Cause	Potential Impacts
Biodiversity		
Decline in fauna and flora diversity	<ul style="list-style-type: none"> • Clearing of site for construction • Pollution of soil • Pollution of water resources • Physical establishment of development • Loss of habitat due to establishment of development 	<ul style="list-style-type: none"> • Loss of biodiversity • Loss of habitat. • Negative impact on biodiversity • Negative impact on rare /endangered/ endemic species and habitats
Environmental Issues	Possible Cause	Potential Impacts
Cultural / Heritage		
Possible loss of heritage sites	<ul style="list-style-type: none"> • Damage / loss during construction • Damage / loss during operation 	<ul style="list-style-type: none"> • Possible loss of cultural heritage
Environmental Issues	Possible Cause	Potential Impacts
Visual Impact		
Impact of the proposed development of sense of place.	<ul style="list-style-type: none"> • The physical existence of the development. 	<ul style="list-style-type: none"> • Negative impact on landscape quality character • Negative impact on sense of place
Visual impact	<ul style="list-style-type: none"> • Construction site and buildings • Lights at night • Presence of new development. • Overhead power lines. 	<ul style="list-style-type: none"> • Obstruction • Visual intrusion • Public nuisance
Environmental Issues	Possible Cause	Potential Impacts
Health and Safety		

Security	<ul style="list-style-type: none"> • Influx of people to area including construction workers and others after completion 	<ul style="list-style-type: none"> • Loss of safe and secure environment • Threat to health
Fires	<ul style="list-style-type: none"> • Accidental fires • Burning of waste • Cooking with fires 	<ul style="list-style-type: none"> • Danger to human life
Environmental Issues	Possible Cause	Potential Impacts
Socio-Economic Impacts		
Impact from change of land use from agriculture to township	<ul style="list-style-type: none"> • Change of land use to residential, business, institutional, educational and public open spaces 	<ul style="list-style-type: none"> • Land will no longer be used for agriculture
Impact of the residential and other development on adjacent landowners	<ul style="list-style-type: none"> • Noise from construction activities • Dust generated by construction vehicles and from site preparation • The visual impact of lights. • The visual impact of residential and other units (business, institutional etc.) 	<ul style="list-style-type: none"> • Nuisance and disruption • Noise pollution • Air pollution • Negative visual impact
Impacts related to the establishment of a construction camp with accommodation	<ul style="list-style-type: none"> • Location of construction camp • Environmental impacts of construction activities e.g. spillage of hazardous liquids such as oil and fuel onto the soil surface • Accommodation of construction teams on site • Littering, accidental fires, collecting of firewood and poaching • Undesirable visitors to the area 	<ul style="list-style-type: none"> • Adverse impact on the environment • Resentment from neighbouring residents
Impact ground and water pollution from littering and waste disposal	<ul style="list-style-type: none"> • The presence of a large work force and equipment and machinery during construction causing littering and dumping refuse and builder's rubble on site. • Construction activities from heavy vehicles and machinery 	<ul style="list-style-type: none"> • Soil and water pollution

during construction and operational phases	<ul style="list-style-type: none"> • The construction of structures such as open trenches and earth heaps might also hold safety risks for people. 	<ul style="list-style-type: none"> • Safety risks for motorists, passengers, pedestrians and residents of the area
	<ul style="list-style-type: none"> • A lack of proper ablution facilities for temporary workers during construction. 	<ul style="list-style-type: none"> • Soil and water pollution • Unhygienic conditions • Health risk
Impact from the provision of structures and infrastructure services	<ul style="list-style-type: none"> • The development, construction and provision of infrastructure services 	<ul style="list-style-type: none"> • Pollution from sanitation systems • Pollution of water resources • Negative visual impact of overhead power lines and electricity supply and waste removal • Soil erosion as a result of the construction of internal roads and water reticulation networks
Job creation	<ul style="list-style-type: none"> • Temporary jobs during construction phase • Permanent jobs during the operation phase • New housing 	<ul style="list-style-type: none"> • Positive impact – job creation

These key areas of impacts were further explored to detail the impacts, the impact ratings and mitigation measures. The following specialist investigations were conducted and used in assessing the environmental impacts of the different activities that form part of the development.

- Ecological / Biodiversity Impact Assessment
- Heritage Impact Assessment
- Geotechnical Investigation
- Civil Engineering Services Report (roads, water, and solid waste)
- Floodline Determination Report
- Electrical Services Report
- Traffic Impact Assessment Report
- Stormwater Management Plan

13. COMPARATIVE ASSESSMENT OF THE IMPLICATIONS OF PROPOSED ACTIVITY AND IDENTIFIED ALTERNATIVES:

13.1. Advantages of the proposed activity and alternatives

- The proposed development will eliminate the scarcity of accommodation by provide housing and related services for the local community.
- Temporary and permanent employment opportunities for the locals will be created.
- The implementation of this activity will contribute greatly on the socio-economic transformation and growth of the municipality.
- The establishment of this township will help prevent land invasions and illegal sand mining.

13.2. Disadvantages of the proposed activity and alternatives

- Domestic animal grazing land will be converted to residential area.
- Water use, waste, sanitation and other impacts will be impacted should they not be managed correctly. This can lead to extra environmental degradation.
- The cumulative impacts that the development will have in terms of pollution and other impacts can lead to extra environmental degradation, especially if not managed correctly.

14. CONCLUSION

The purpose of this consultation scoping report is to provide the Competent Authority with preliminary information regarding the potential impacts and scope of the development. It must be noted that this document is submitted as a draft. The Competent Authority is therefore respectfully requested to evaluate and consider this consultation scoping report as part of an application that is lodged in terms of Section 24(5) of the National Environment Management Act (No. 107 of 1998), in respect of the identified triggered listed activities.

CONSULTATION / DRAFT SCOPING REPORT FOR THE PROPOSED TOWNSHIP ESTABLISHMENT ON THE REMAINDER OF THE FARM (RESERVED AS PORTION 51) OF DWARSLOOP 248 KU, MPUMALANGA PROVINCE

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