



CONSULTATION / DRAFT SCOPING REPORT

**THE PROPOSED TOWNSHIP ESTABLISHMENT ON THE
REMAINDER OF PORTIONS 2 AND 3 OF THE FARM SEVILLE
224 KU (GREATER SEVILLE EXTENSION I), BUSHBUCKRIDGE
LOCAL MUNICIPALITY, MPUMALANGA PROVINCE**

SEPTEMBER 2022

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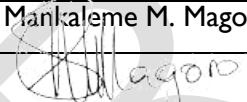
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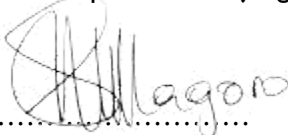
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Report Title	Township establishment on the Remainder of Portions 2 and 3 of the Farm Seville 224 KU (Greater Seville Extension 1), Bushbuckridge Local Municipality, Mpumalanga Province
Document ID	Consultation / Draft
Proponent / Applicant	Bushbuckridge Local Municipality
Date	September 2022
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 applicant, 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: 19 September 2022

TABLE OF CONTENT

DOCUMENT CONTROL RECORD.....	i
EAP DECLARATION OF INDEPENDENCE	ii
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vi
LIST OF APPENDICES.....	vii
ABBREVIATIONS AND ACRONYMS	viii
GLOSSARY OF TERMS	ix
1. INTRODUCTION.....	1
1.1. Purpose of the Report	1
1.2. Environmental Impact Assessment Process.....	2
1.2.1. Application Phase	2
1.2.2. Scoping Phase.....	3
1.2.3. Environmental Impact Reporting Phase.....	4
2. DETAILS OF THE PROPOSED ACTIVITY	4
2.1. Location of the Proposed Development	4
2.2. Description of the Proposed Development.....	6
2.3. Civil Services Envisaged for the Proposed Development.....	6
2.3.1. Roads.....	6
2.3.2. Water.....	7
2.3.3. Solid Waste.....	7
2.3.4. Sewer Services	7
2.3.5. Electricity.....	7
3. ALTERNATIVES.....	7
3.1. Feasible and Reasonable Alternatives Considered for the Proposed Activity	8
3.1.1. Site Alternatives.....	8
3.1.2. Activity Alternatives	8
3.1.3. Design Alternatives.....	8
3.1.4. Operational Aspects.....	8
4. No-Go Alternatives	8
5. LEGISLATION AND POLICY GUIDELINES CONSIDERED	9
6. DESCRIPTION OF THE RECEIVING ENVIRONMENT.....	11
6.1. Physical Environment.....	11
6.1.1. Climate.....	11
6.1.3. Hydrology.....	11

6.1.3.	Topography.....	11
6.2.	Biological Environment.....	11
6.2.1.	Vegetation.....	11
6.2.2.	Fauna.....	11
6.2.3.	Archaeological and Cultural Heritage.....	11
7.	DESCRIPTION OF ENVIRONMENTAL ISSUES AND IMPACTS IDENTIFIED.....	12
7.1.	Direct Habitat Destruction.....	12
7.2.	Habitat Fragmentation.....	12
7.3.	Soil and Water Pollution.....	13
7.4.	Spread and Establishment of Alien Invasive Species.....	13
7.5.	Negative Effect of Human Activities.....	13
7.6.	Visual Environment and Noise.....	14
7.7.	Surface Drainage.....	14
7.8.	Air Quality.....	14
7.9.	Noise Impact.....	14
7.10.	Visual.....	14
7.11.	Technical.....	14
8.	ENVIRONMENTAL IMPACT STATEMENT.....	15
8.1.	Summary of Key Findings.....	15
8.1.1.	Biodiversity and Ecological Impact Assessment.....	15
8.1.2.	Heritage Aspects.....	15
8.1.3.	Floodline.....	15
9.	NEED AND DESIRABILITY OF THE PROPOSED PROJECT.....	15
10.	PUBLIC PARTICIPATION PROCESS.....	16
10.1.	Methodology.....	16
10.1.1.	Newspaper Publication.....	16
10.1.2.	On - Site Notices.....	16
10.1.3.	Consultation with Stakeholders.....	16
10.1.4.	Issues and Responses.....	16
11.	ENVIRONMENTAL IMPACT DETERMINATION AND EVALUATION.....	16
11.1.	Methodology to Assess the Impacts.....	17
12.	KEY ENVIRONMENTAL IMPACTS.....	19
13.	COMPARATIVE ASSESSMENT OF THE IMPLICATIONS OF PROPOSED ACTIVITY AND IDENTIFIED ALTERNATIVES:.....	23
13.1.	Advantages of the proposed activity and alternatives.....	23
13.2.	Disadvantages of the proposed activity and alternatives.....	23

14. CONCLUSION.....23

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LIST OF TABLES

Table 1: The most pertinent relevant legislation to the proposed development.....9

Table 2: Significance ratings..... 17

Table 3: Description of the parameters used in the matrixes..... 17

Table 4: Possible environmental impacts identified..... 19

LIST OF FIGURES

Figure 1: Aerial locality map of the proposed development site.....5

Figure 2: Topographic locality map of the proposed development site.....5

Figure 3: Township layout plan6

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LIST OF APPENDICES

Appendix 1	Plan of Study of Environmental Impact Assessment
Appendix 2	Topographic Locality Map
Appendix 3	Township Layout Plan
Appendix 4	Public Participation Process
Appendix 4.1	List of Authorities / Stakeholders
Appendix 4.2	Communication with Authorities / Stakeholders
Appendix 5	Site Photographs
Appendix 6	Additional Information
Appendix 6.1	Details and Expertise of EAP

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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 of EIA
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: 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 Real Development Planning Company 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 Portions 2 and 3 of the Farm Seville 224 KU, Bushbuckridge Local Municipality, Mpumalanga Province. The proposed development site is 52.51 hectares in extent and is expected to yield 503 stands / land uses. The proposed township establishment is to be named "Greater Seville Extension 1".

1.1. 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 requires 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 52.51 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 with reserves of 15 and 35 meters.

1.1.3. Listing Notice 1, Activity 28

Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such

development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.

Applicability to the project: the development of residential, retail and institutional sites / land uses outside an urban area where the total land to be developed is 52.51 hectares.

1.1.4. Listing Notice 1, Activity 19(i)

The infilling or depositing of any material of more than [5] 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than [5] 10 cubic metres from [(i)] a watercourse; [(ii) the seashore; or (iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or estuary, whichever distance is the greater—] 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; [or] (c) falls within the ambit of activity 21 in this notice, in which case that activity applies (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in listing notice 2 of 2014 applies.

Applicability to the project: encroachments into the watercourse during the construction phase that might require infilling.

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 must be accompanied by a 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 sent 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 and interested & 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 Portions 2 and 3 of the Farm Seville 224 KU in Seville, Mpumalanga Province. The project area is located approximately 18km from Thulamahashe town. The site is located roughly at the following GPS coordinates: 24° 39' 20.41" S; 31° 24' 34.19"E. Figure 1 and 2 below indicate the locality of the proposed development site.



Figure 1: Aerial locality map of the proposed development site

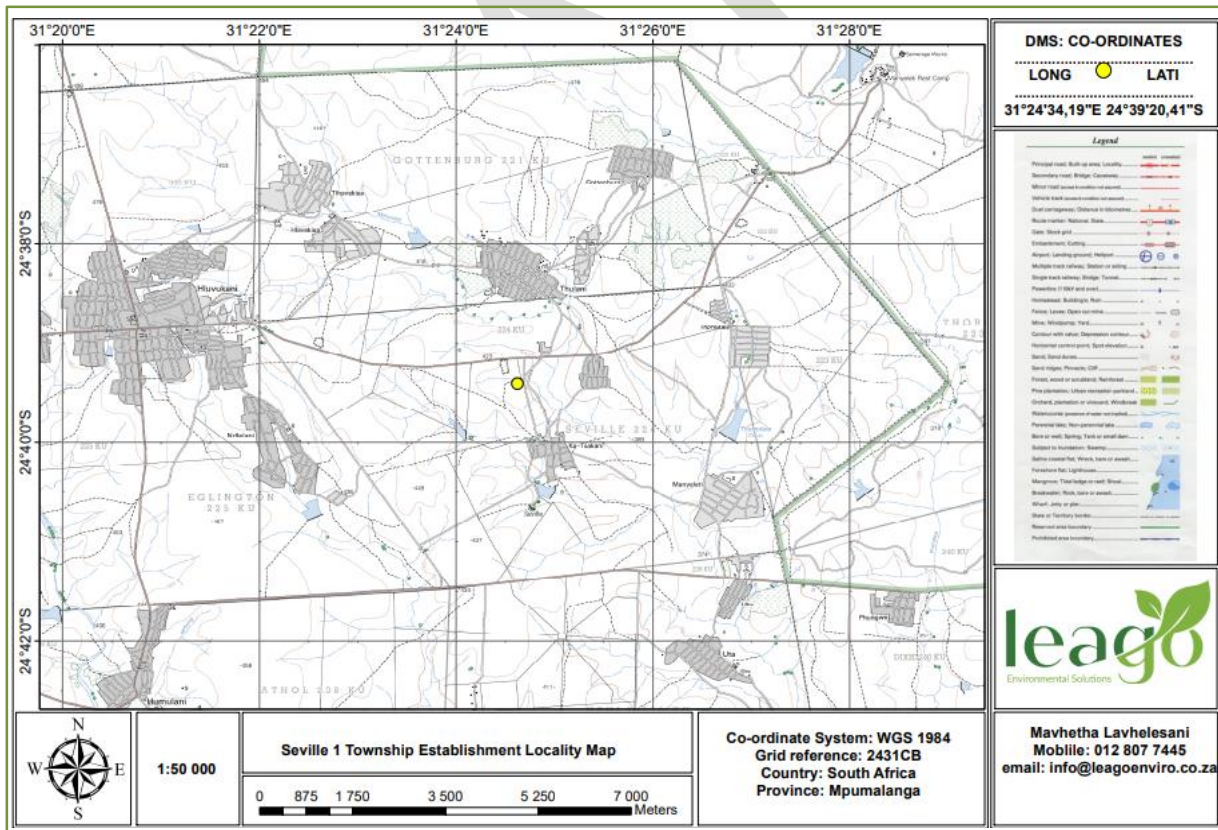


Figure 2: Topographic locality map of the proposed development site

2.2. Description of the Proposed Development

The proposed development is a township establishment which will entail 503 stands / land uses. The proposed land uses are:

- 483 Residential I (dwelling units)
- 15 Business I (shops / retail)
- 1 Municipal (sports facility)
- 1 Institutional (place of worship)
- 1 Educational (crèche)
- 2 Public open spaces (open space)

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

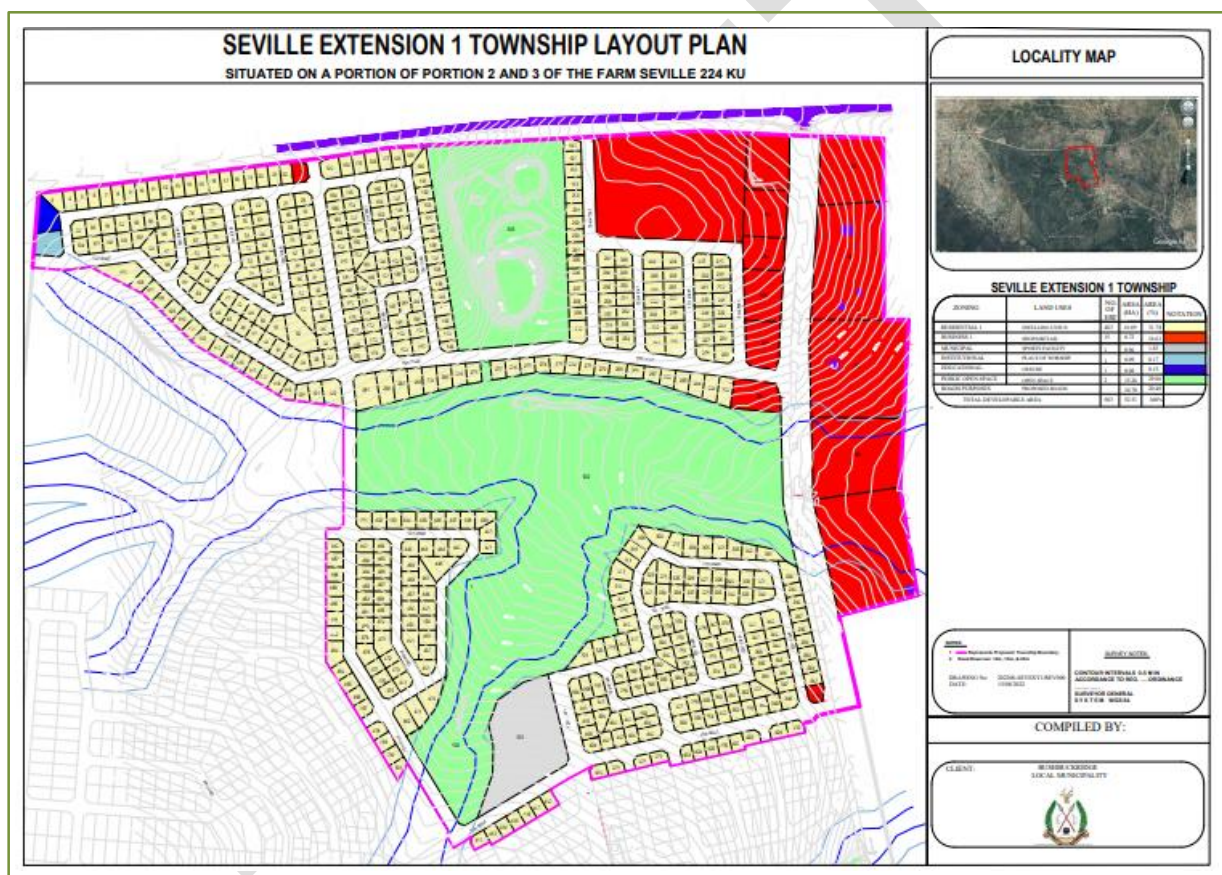


Figure 3: Township layout plan

2.3. Civil Services Envisaged for the Proposed Development

2.3.1. Roads

There is an existing functioning road network that can be used to access the proposed development site. The site can be accessed through D4418 from D4419 road.

2.3.2. Water

The proposed development site has an existing infrastructure for water. The township of Seville gets water from Thorn Dam, which is located 3.5 km east of the proposed development site.

2.3.3. Solid Waste

A regional landfill situated nearest to the proposed development site should be used to dispose solid waste. The local municipality must be responsible for the collection and disposal of the solid waste

2.3.4. Sewer Services

The township of Seville has no existing wastewater treatment works. The community depends entirely on pit toilets and septic tanks for sanitation purposes.

2.3.5. Electricity

There is no electrical infrastructure present on the proposed development site. However, there is an existing electrical infrastructure in the vicinity of the project area. This could be utilised to supply the proposed township, subject to approval from the supply authority.

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 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

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

Due to land availability, the proposed development site is the only site that has been identified for establishing the township. Site alternatives are not applicable for this project.

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. 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 Seville 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, however there is still a possibility of a layout alternative that will still meet the objective of the project scope.

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 Seville is a local steppe climate. There is little rainfall throughout the year and it is classified as hot semi-arid (BSh) by the Köppen-Geiger system. The average annual temperature in Seville is 21.7 °C.

6.1.2. Geology

The proposed development site is located within the lithologies of the Metamorphic Makhutswi Gneiss rocks. The Makhutswi Gneiss is complex folded, and in some areas intruded by younger, unmigmatized biotite gneiss of tonalitic composition. The findings of the geotechnical investigation indicate the phaneritic texture granatoid rocks which are predominately composed of felsic minerals such as quartz, plagioclase feldspars and mafic (amphiboles and pyroxene) accessory minerals.

6.1.3. Hydrology

No ground water seepage was encountered in any of the test pits during the geotechnical investigations and there were also no indications of temporary perched water tables in the soil profiles.

6.1.3. Topography

The topography of the proposed development site is generally flat.

6.2. Biological Environment

6.2.1. Vegetation

The proposed development site falls within the vegetation of the Granite Lowveld. This type of vegetation usually occurs in Limpopo and Mpumalanga province. The Granite Lowveld comprises of tall shrubland with few trees to moderately dense low woodland dominated by *Terminalia sericea*, *Combretum zeyheri* and *C. apiculatum* and a ground layer consisting of *Pogonarthria squarrosa*, *Tricholaena monache* and *Eragrostis rigidior* (grasses).

6.2.2. Fauna

The proposed development site is impacted by the existing nearby townships and is therefore subject to a level of anthropogenic disturbance, which is not conducive to its use by large mammals, other than domestic species.

6.2.3. Archaeological and Cultural Heritage

No archaeological or historical materials were found within the proposed development site.

7. DESCRIPTION OF ENVIRONMENTAL ISSUES AND IMPACTS IDENTIFIED

7.1. Direct Habitat Destruction

The proposed development will result in significant loss of flora and fauna due to 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 to 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 of Seville and Ka-Tsakani.

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 and Ecological Impact Assessment

According to the findings of the ecological impact assessment report, the proposed development site is within an Ecological Support Area, Other Natural Area as well as Heavily Degraded Area (an old borrow-pit area). Although the bigger part of the site is within Other Natural Area, it must be noted that there protected plant species scattered within the area.

8.1.2. Heritage Aspects

The heritage impact assessment was conducted to assess the conditions or availability of heritage features such as remains from the Stone Age, Iron Age or Historical Period or places designated for spiritual or social gatherings, historical and/or modern graves on site. No heritage sites were recorded within the proposed development site.

8.1.3. Floodline

According to the findings of the floodline determination report, the project area is affected by flood water within the 1:100 periods from the stream / river. A floodline determination report was compiled and will form part of the specialist reports in the environmental impact assessment report

9. NEED AND DESIRABILITY OF THE PROPOSED PROJECT

- The proposed development site is located adjacent to the existing townships of Seville and Ka-Tsakani.
- 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
- The township will attract people through creation of a conducive environment for business, educational and institutional development.

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 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 will be advertised in the local newspaper 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 with stakeholders and other I&APs will be done through telephones and emails.

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 EAP.

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 were 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 • Public nuisance • Noise pollution
Dust	<ul style="list-style-type: none"> • During construction • Vehicle operation on roads • Vegetation clearing 	
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 surface and 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	<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

Available		
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 • 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"> • Soil degradation • Loss of topsoil • Dust formation • 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 	<ul style="list-style-type: none"> • Obstruction • Visual intrusion

	<ul style="list-style-type: none"> • Presence of new development. • Overhead power lines. 	<ul style="list-style-type: none"> • 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 • Danger to human life
Fires	<ul style="list-style-type: none"> • Accidental fires • Burning of waste • Cooking with fires 	
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
- Storm Water 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

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 PORTIONS 2 AND 3 OF THE FARM SEVILLE 224 KU (GREATER SEVILLE EXTENSION 1), BUSHBUCKRIDGE LOCAL MUNICIPALITY, MPUMALANGA PROVINCE

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EAPASA-2020/2254

APPENDIX I



Plan of Study of EIA



PLAN OF STUDY OF EIA

THE PROPOSED TOWNSHIP ESTABLISHMENT ON THE REMAINDER OF PORTIONS 2 AND 3 OF THE FARM SEVILLE 224 KU (GREATER SEVILLE EXTENSION I), MPUMALANGA PROVINCE

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DOCUMENT CONTROL RECORD

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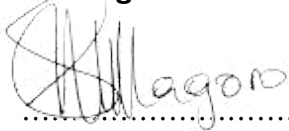

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TABLE OF CONTENTS

DOCUMENT CONTROL RECORD.....	i
ACRONYMS AND ABBREVIATIONS	iv
1. INTRODUCTION	1
1.1. Project Background.....	1
1.2. Description of Alternatives	1
1.2.1. Feasible and Reasonable Alternatives Considered for the Proposed Development.....	2
1.2.1.1. Site Alternatives	2
1.2.1.2. Activity Alternatives	2
1.2.1.3. Design Alternatives.....	2
1.2.1.4. Operational Aspects.....	2
1.2.1.5. No-Go Alternatives.....	3
1.3. Specialists Assessments and Reports.....	3
1.3.1. Ecological / Biodiversity Impact Assessment	4
1.3.2. Heritage Impact Assessment	4
1.3.3. Geotechnical Study	5
1.3.4. Traffic Impact Assessment.....	6
1.3.5. Floodline Delineation	6
1.3.6. Civil Engineering Services	7
1.3.7. Electrical Services	7
1.3.8. Storm Water Management Plan.....	7
2. IMPACT ASSESSMENT METHODOLOGY.....	7
2.1. Methodology to Assess the Impacts	7
3. CONSULTATION WITH THE COMPETENT AUTHORITY: MPUMALANGA DEPARTMENT OF AGRICULTURE, RURAL DEVELOPMENT, LAND AND ENVIRONMENTAL AFFAIRS.....	10
3.1. Application Phase	10
3.2. Scoping Phase	10
3.3. Environmental Impact Assessment Phase.....	10
4. PUBLIC PARTICIPATION PROCESS	10
4.1 Objectives of the Public Participation Process.....	10
4.2. Methodology:.....	11
4.2.1. Finalisation of Public Participation Report	11
4.2.2 Making the Draft and Final Reports Available for Public Comment	11
4.2.3 Notification of Environmental Authorisation	11
5. CONCLUSION.....	12

LIST OF TABLES

Table 1: Significance Ratings.....	8
Table 2: Description of the parameters used in the matrixes.....	8

ACRONYMS AND ABBREVIATIONS

EIA	Environmental Impact Assessment
EAP	Environmental Assessment Practitioner
SR	Scoping Report
PoS	Plan of Study
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
DARDLEA	Department of Agriculture, Rural Development, Land and Environmental Affairs
NEMA	National Environmental Management Act
I & APs	Interested and Affected Parties
PPP	Public Participation Process

I. INTRODUCTION

I.1. Project Background

Leago Environmental Solutions was appointed by Real Development Planning Company on behalf of Bushbuckridge Local Municipality as independent Environmental Assessment Practitioners to undertake an environmental impact assessment process for the purpose of establishing a township. The proposed township establishment will be situated on the Remainder of Portions 2 and 3 of the Farm Seville 224 KU, Bushbuckridge Local Municipality, Mpumalanga Province. The proposed development site is 52.51 hectares in extent and is expected to yield 503 stands / land uses.

This plan of study of the Environmental Impact Assessment is prepared to meet the requirements for a plan of study as prescribed in Appendix 2 (2)(i) of Government Notice R 326, a plan of study for undertaking the environmental impact assessment process to be undertaken, including-

- (i) A description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity;
- (ii) A description of the aspects to be assessed as part of the environmental impact assessment process;
- (iii) aspects to be assessed by specialists;
- (iv) A description of the proposed method of assessing the environmental aspects, including a description of the proposed method of assessing the environmental aspects including aspects to be assessed by specialists
- (v) A description of the proposed method of assessing duration and significance;
- (vi) An indication of the stages at which the competent authority will be consulted
- (vii) Particulars of the public participation process that will be conducted during the environmental impact assessment process; and
- (viii) A description of the tasks that will be undertaken as part of the environmental impact assessment process
- (ix) Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

I.2. Description of Alternatives

The National Department of Environmental Affairs stresses that the no-go option be considered as a base case against which to measure the relative performance of the other alternatives. The impacts of other alternatives are expressed as changes to the base case or status quo. If considered viable the decision not to act may be considered in the Plan of Study EIA.

The EIA Regulations stipulate that a requirement of the Scoping 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 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

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 / visual) must be considered.

1.2.1. Feasible and Reasonable Alternatives Considered for the Proposed Development

1.2.1.1. Site Alternatives

Due to land availability, the proposed development site is the only site that has been identified for establishing the township. Site alternatives are not applicable for this project.

1.2.1.2. 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. No other activities were considered in this application due to the assessed need and feasibility of the proposed activity.

1.2.1.3. Design Alternatives

The unique character and appeal of Seville 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, however there is still a possibility of a layout alternative that will still meet the objective of the project scope.

1.2.1.4. 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.

1.2.1.5. 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.

1.3. Specialists Assessments and Reports

The identification and assessment of environmental impacts during this scoping phase reveal the following potentially significant environmental aspects which require further detailed assessment

- **Ecological / Biodiversity Impact Assessment**

A specialist flora / fauna study was undertaken to determine sensitive areas and impacts on red listed plant and faunal species on site.

- **Heritage Impact Assessment**

The purpose of this study is to identify heritage resources within a proposed development area, assess their significance, the impact of the development on the heritage resources and to provide relevant mitigation measures to alleviate impacts to the heritage resources

- **Geotechnical Study**

The main objective of this study is aimed at defining the founding materials and establishing broader geotechnical conditions and their suitability to the proposed development.

- **Traffic Impact Assessment Study**

A traffic impact study is undertaken to assess the traffic impact of the proposed development on the adjacent road network around the proposed development.

- **Floodline Delineation**

The main objective of the floodline delineation is to check if whether the proposed development / activity is affected by any floodline.

- **Civil Engineering Services Study**

A report on the civil services, including sewage, solid waste and water is compiled in order to demonstrate the provision of infrastructure required to service the proposed township.

- **Electrical Services Report**

An electrical services report is compiled in order to demonstrate the provision of electrical infrastructure required to service the proposed township.

- **Storm Water Management Plan**

The storm water management plan will look at storm water infrastructure provision in the area.

1.3.1. Ecological / Biodiversity Impact Assessment

The objectives of the ecological / biodiversity study are:

- To assess the proposed development in order to determine the general ecological state of the proposed project area
- To survey and delineate environmentally sensitive areas
- To provide mapping of the environmentally sensitive and critical areas with respect to the proposed development
- To assess and identify the potential impacts that may arise from the proposed project on the fauna and flora taxa
- To provide mitigation measures to prevent and/or mitigate identified environmental impacts that may occur due to the proposed project
- The provision of an assessment report, indicate findings, recommendations and maps indicating sensitivities and /or no-go areas.

Methodology

A site visit was conducted during which the observed presence of flora and fauna associated with the recognised habitat types will be recorded.

Data recorded will include a list of the fauna and flora species present, including trees, shrubs, and grasses.

1.3.2. Heritage Impact Assessment

The purpose of this study is to identify heritage resources within a proposed development area, assess their significance, the impact of the development on the heritage resources and to provide relevant mitigation measures to alleviate impacts to the heritage resources.

The objectives of the study were to also define the heritage component of the Environmental Impact Assessment process which described as Phase I Heritage Impact (HIA). The report will evaluate both the accumulated heritage knowledge of the area as well as information derived from direct physical observations.

Methodology:

A Heritage Impact Assessment was conducted to determine the impacts on heritage resources within the study area.

The following was required to perform the assessment:

- A desktop investigation of the area;
- A site visit to the proposed development site
- Identification of the possible archaeological, cultural, historic, built and paleontological sites within the proposed development area
- Evaluation of the potential impacts of construction and operation of the proposed development on archaeological, cultural, historical resources; built and paleontological resources
- Recommendations on the mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural, historical, built and paleontological importance.

1.3.3. Geotechnical Study

This study evaluates the geotechnical characteristics associated with the underlying geology and any geotechnical constraints that might affect structural integrity of the subject property. However, it is also essential to identify engineering properties’ potential influence on the design, construction and operation of the intended infrastructures.

The following are some of the objectives of the geotechnical investigation:

- To determine the geology of the site
- To establish in broad terms, the nature and relevant engineering properties of the upper soil and rock strata underlying the site
- To ascertain the soil chemistry including pH determination and electrical conductivity of the soil
- To comment on suitable excavation procedures for the installation of services
- To present general foundation recommendations for the proposed development
- To comment on any other geotechnical aspects as these may affect the development
- Potential geotechnical limiting factors by determining the behaviour and suitability of soil/ rocks and their effects on the intended development
- Determine the presence or occurrence of groundwater from the surface to a maximum depth of 3 meters.
- Classification of the site material according to the TRH14 classification system

Methodology

The geotechnical investigation commenced with a desktop study using the existing geotechnical databases and maps of the site were reviewed.

The following information will be reviewed and consulted during the site investigation:

- National Home Builders Registration Council: Home Builders Manual 2015
- SAICE's Guidelines for Urban Engineering Geological Investigations
- Expansive Roadbed Treatment for Southern Africa: D J Weston (1980) 4th Int. Conf. on Expansive Soils, Vol. I, Denver pp 339-360
- Geological Map of South Africa from the database of Council for Geoscience: Scale 1: 100 000 Sheet – Geological series 2330CC/CD
- Schwartz, K. (1985) Collapsible soils. The Civil Engineer in South Africa, July, p379-393
- South African Weather Services
- Technical Recommendations for Highways – TRH14 Guidelines for Road Construction Materials by the National Institute for Transport and road research of the Council for Scientific and Industrial Research, (1985)

1.3.4. Traffic Impact Assessment

The traffic impact assessment study is aimed at assessing the traffic impact of the proposed development on the adjacent road network around the proposed development.

Methodology

- Determination of the existing, pre-development traffic volumes and patterns near the development site
- Assess the land use of the proposed development to establish the expected trips to be generated
- Assess any public transport operations in and around the proposed development
- Determination of the post-development, projected traffic volumes and assess its impact on the existing road network
- Provide recommendations on the suitability and safety of the proposed access arrangements
- Recommendations on the infrastructure improvements, if deemed necessary, to accommodate the expected development traffic

1.3.5. Floodline Delineation

The main objective of the floodline assessment was to check if the whether the proposed development will be affected by any floodline.

Methodology

- Determination of the catchment characteristics.
- Calculation of the floor peaks, using a minimum of three methods.
- Determination of the flood lines.
- Determination of the extent of developable areas through diagrammatic representation.

1.3.6. Civil Engineering Services

A report on the civil services, including sewage, solid waste and water is compiled in order to demonstrate the provision of infrastructure required to service the proposed township.

Methodology

The study focuses on the extent of the development to determine the availability of basic bulk infrastructure services required for the proposed development.

1.3.7. Electrical Services

A report on electrical services is conducted to demonstrate the provision of electrical infrastructure required to service the proposed development.

Methodology

The study focused on the extent of the development to determine the availability of electrical infrastructure services required for the proposed development.

1.3.8. Storm Water Management Plan

The storm water management plan focused at storm water infrastructure provision in the area.

Methodology:

The first part of modelling was done for a series of storms with a return period of 1:100 and different durations falling over the catchment. Storms with durations of 1, 1.5, 2, 4, 6, 8, 10, 12, 16, 20 and 24hour will be synthesised using procedures to estimate design rainfall in South Africa (J.C. Smithers and R.E. Schulze, "Rainfall Statistics for Design Flood Estimation in South Africa" (WRC Project KS/1060).

2. IMPACT ASSESSMENT METHODOLOGY

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.

2.1. Methodology to Assess the Impacts

To assess the impacts on the environment, the process has been divided into two main phases namely the construction phase and the operational phase. The activities, products and services 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 1: 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 2: 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 the Bushbuckridge Local Municipality
Medium-high	Within the 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

A combination of the above methodologies will be used during the EIA phase of the project to determine the significance of the potential impacts associated with the proposed development as well as the alternatives investigated.

3. CONSULTATION WITH THE COMPETENT AUTHORITY: MPUMALANGA DEPARTMENT OF AGRICULTURE, RURAL DEVELOPMENT, LAND AND ENVIRONMENTAL AFFAIRS

The competent authority will be consulted during the following steps in the EIA Process:

3.1. Application Phase

- Lodge an EIA application
- The applicant receives confirmation of application (acknowledgement letter) from the Competent Authority

3.2. Scoping Phase

- Site inspection with the Competent Authority
- Public participation process
- Submission of the scoping report including Plan of Study of EIA to the Competent Authority to consider the Scoping Report and the Plan of Study for EIA.
- The Environmental Assessment Practitioner to receive confirmation of acceptance of Scoping Report and / or the Plan of Study for EIA.

3.3. Environmental Impact Assessment Phase

- Public participation process
- Submission of the Environmental Impact Assessment (consultation and final) Report to the Competent Authority
- Record of Decision from the Competent Authority.

4. PUBLIC PARTICIPATION PROCESS

4.1. Objectives of the Public Participation Process

The main objectives of the public participation process are to:

- Inform the interested and affected parties of the EIA process

- Provide sufficient background information regarding the proposed development to ensure informed participation
- Create networks and feedback mechanisms whereby I& APs could participate and raise their views (issues, comments and concerns) with regard to the proposed development.

The public participation process would thus ensure that the views of all the registered interested and affected parties would be reflected and considered by the applicant and the Competent Authority.

4.2. Methodology:

The proposed public participation process for the EIA phase of the project will consist of:

4.2.1. Finalisation of Public Participation Report

The Public Participation Report would be completed and finalised at the end of the public review period. The report will consist of the following:

- Background of the proposed project
- A description of the public participation process followed
- A list of issues, comments and concerns raised during the public participation process
- Minutes of meeting (if applicable) and written comments received during the public participation process

4.2.2. Making the Draft and Final Reports Available for Public Comment

The draft EIA report will be made available to the public for their perusal and comment. All the registered stakeholders and I&APs will also be notified of the availability of the report. A 30-day review period is recommended for each of the reports. On completion of the review period, the EAP will update the report in respect of comments received. The draft and final report will be made available in the office or couriered and emailed to registered stakeholders and I&APs upon request.

The final report will then be presented to the authority and will also be made available to the public.

4.2.3. Notification of Environmental Authorisation

Once an environmental authorisation has been issued by the competent authority, the stakeholders and I&APs on the database will be notified of the decision within 14 days of receipt of the decision from the Competent Authority. The full environmental authorisation will be made available to stakeholders, interested and affected parties upon request. The public will also be informed of their right to appeal and the process to follow.

5. CONCLUSION

During the environmental impact assessment phase there are different alternatives considered, and, will be compared in terms of the potential environmental impacts associated with the alternative. Specialist studies will also be included during the EIA phase. All the specialists' recommendations, comments from I&APs and other stakeholders will also be used to determine the final township layout plan of the proposed development so that it has the least environmental impacts

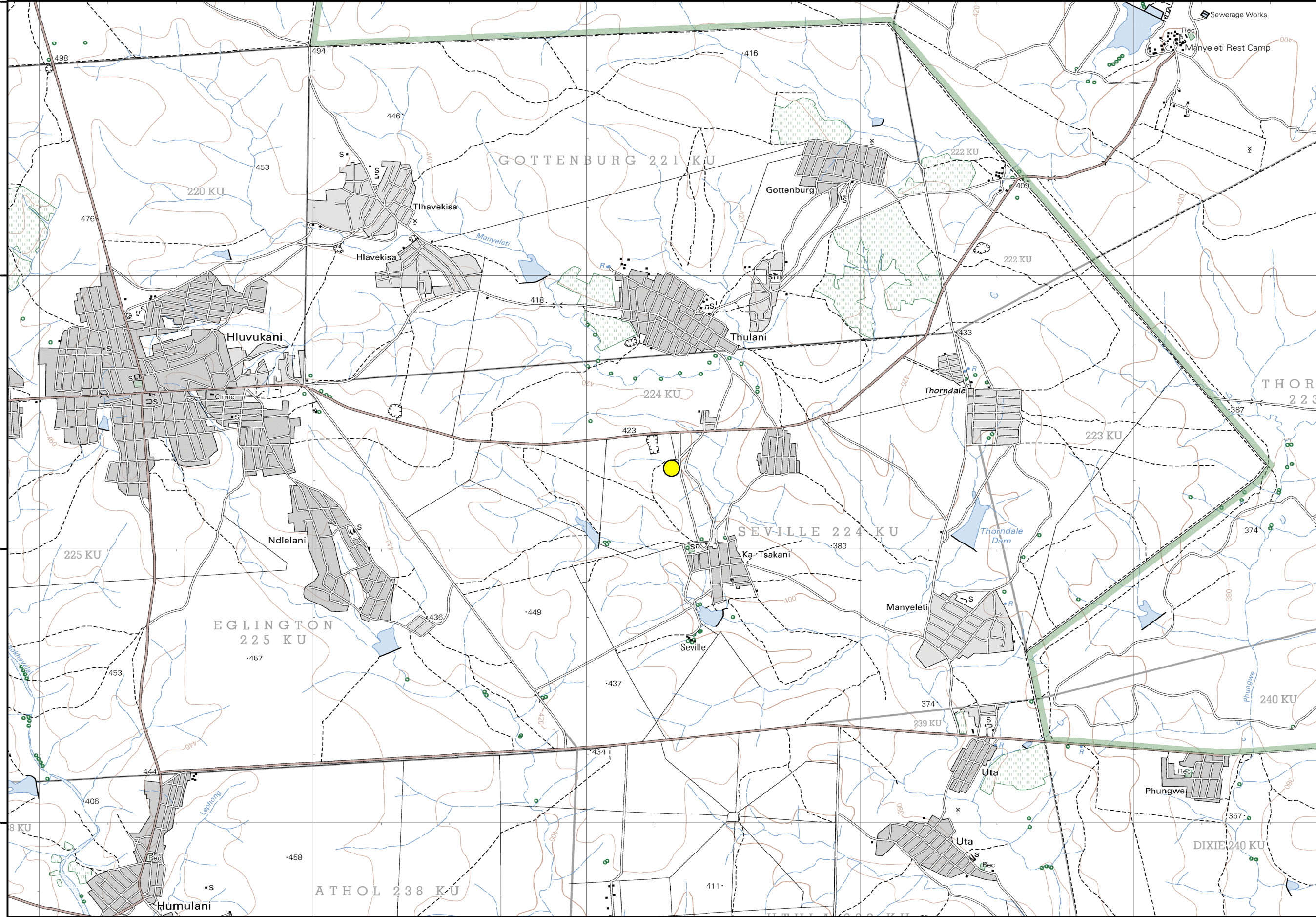
APPENDIX 2

Topographic Locality Map



31°20'0"E 31°22'0"E 31°24'0"E 31°26'0"E 31°28'0"E

24°38'0"S
24°40'0"S
24°42'0"S



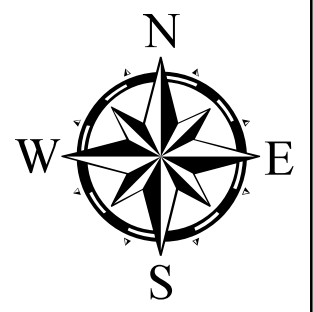
DMS: CO-ORDINATES

LONG ● LATI

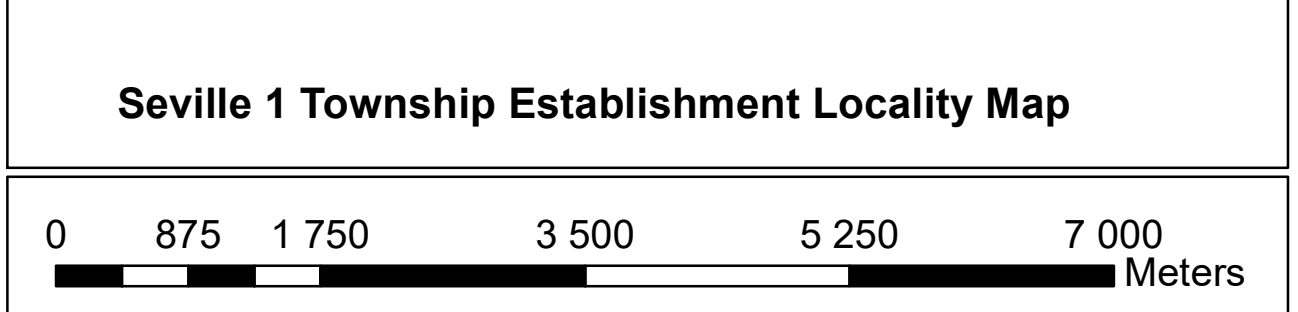
31°24'34,19"E 24°39'20,41"S

Legend

Principal road; Built-up area; Locality	sealed unsealed
Secondary road; Bridge; Causeway	
Minor road (access & condition not assured)	
Vehicle track (access & condition not assured)	
Dual carriageway; Distance in kilometres	
Route marker: National, State	
Gate; Stock grid	
Embankment; Cutting	
Airport; Landing ground; Heliport	
Multiple track railway; Station or siding	
Single track railway; Bridge; Tunnel	
Powerline (110kV and over)	
Homestead; Building; Ruin	
Fence; Levee; Open cut mine	
Mine; Windpump; Yard	
Contour with value; Depression contour	
Horizontal control point; Spot elevation	
Sand; Sand dunes	
Sand ridges; Pinnacle; Cliff	
Forest, wood or scrubland; Rainforest	
Pine plantation; Urban recreation parkland	
Orchard, plantation or vineyard; Windbreak	
Watercourse (presence of water not implied)	
Perennial lake; Non-perennial lake	
Bore or well; Spring; Tank or small dam	
Subject to inundation; Swamp	
Saline coastal flat; Wreck, bare or awash	
Foreshore flat; Lighthouse	
Mangrove; Tidal ledge or reef; Shoal	
Breakwater; Rock, bare or awash	
Wharf; Jetty or pier	
State or Territory border	
Reserved area boundary	
Prohibited area boundary	



1:50 000



Co-ordinate System: WGS 1984
Grid reference: 2431CB
Country: South Africa
Province: Mpumalanga



Mavhetha Lavhelesani
Mobile: 012 807 7445
email: info@leagoenviro.co.za

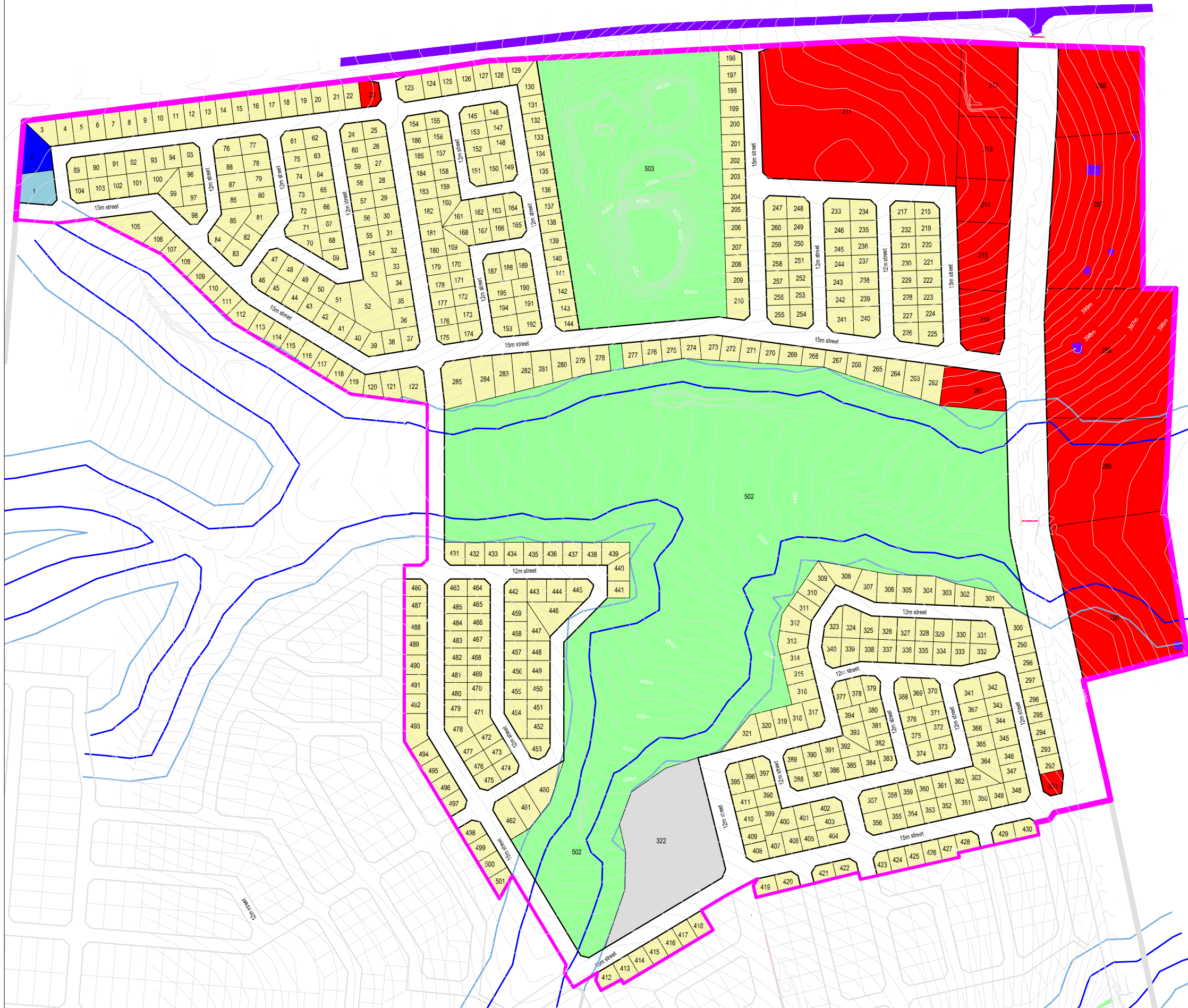
APPENDIX 3

A stylized, light gray graphic of two overlapping leaves on a stem, positioned behind the title text.

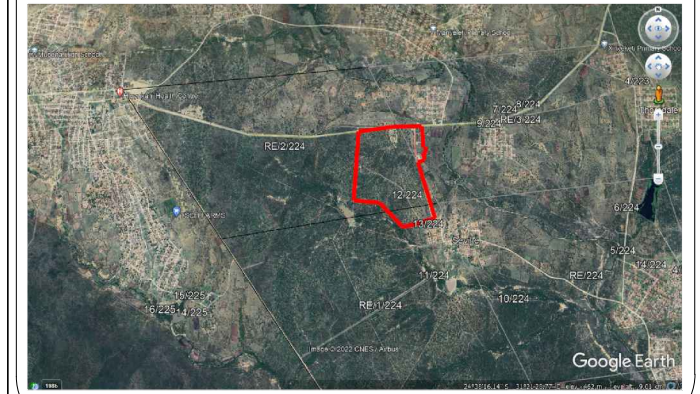
Township Layout Plan

SEVILLE EXTENSION 1 TOWNSHIP LAYOUT PLAN

SITUATED ON A PORTION OF PORTION 2 AND 3 OF THE FARM SEVILLE 224 KU



LOCALITY MAP



SEVILLE EXTENSION 1 TOWNSHIP

ZONING	LAND USES	NO. OF ERF	AREA (HA)	AREA (%)	NOTATION
RESIDENTIAL 1	DWELLING UNIT'S	483	16.69	31.78	Yellow
BUSINESS 1	SHOPS/RETAIL	15	8.72	16.61	Red
MUNICIPAL	SPORTS FACILITY	1	0.96	1.83	Blue
INSTITUTIONAL	PLACE OF WORSHIP	1	0.09	0.17	Light Blue
EDUCATIONAL	CRECHE	1	0.08	0.15	Dark Blue
PUBLIC OPEN SPACE	OPEN SPACE	2	15.26	29.06	Green
ROADS PURPOSES	PROPOSED ROADS		10.70	20.40	
TOTAL DEVELOPABLE AREA		503	52.51	100%	

NOTES:

1. Represents Proposed Township Boundary.
2. Road Reserves: 12m, 15m, & 35m

DRAWING No: 202208-SEVEXT1/REV000
DATE: 15/08/2022

SURVEY NOTES:

CONTOUR INTERVALS 0.5 M IN ACCORDANCE TO REG.ORDINANCE
SURVEYOR GENERAL SYSTEM WGS 84

COMPILED BY:

CLIENT:

BUSHBUCKRIDGE LOCAL MUNICIPALITY



APPENDIX 4

A stylized, light gray graphic of two overlapping leaves on a stem, positioned behind the main title text.

Public Participation Process

APPENDIX 4.1

List of Stakeholders / Authorities



APPENDIX 4.2



Communication with Stakeholders / Authorities

APPENDIX 5

A stylized, light gray graphic of a leaf with a central vein and two smaller leaflets, positioned behind the text.

Site Photographs

APPENDIX 6

Details and Expertise of the EAP

