



**FINAL SCOPING REPORT FOR THE PROPOSED TOWNSHIP
ESTABLISHMENT TO BE SITUATED ON VARIOUS PORTIONS
OF ESTOIRE SETTLEMENT, FREE STATE PROVINCE**

AUGUST 2022

Unit 79, Block 5
Lombardy Business Park
66 Graham Road
Pretoria, 0084

Mobile (+27) 81 428 6116

mankaleme@leagoenviro.co.za
leagoenviro.co.za

leago
Environmental Solutions

TABLE OF CONTENT

LIST OF TABLES.....	ii
LIST OF FIGURES.....	ii
ACRONYMS AND ABBREVIATIONS	iii
LIST OF APPENDICES.....	iv
I. INTRODUCTION.....	1
I.1. PURPOSE OF THE REPORT	1
I.2. EIA PROCESS	2
I.2.1. Application Phase	2
I.2.2. Scoping Phase	2
I.2.3. EIA Phase.....	3
2. DETAILS OF THE PROPOSED ACTIVITY	4
2.1. Location of the Proposed Activity.....	4
2.2. Description of Proposed Activity	5
2.3. CIVIL SERVICES ENVISAGED FOR THE PROPOSED DEVELOPMENT.....	6
2.3.1. Roads.....	6
2.3.2. Water Supply Infrastructure.....	6
2.3.3. Solid Waste.....	6
2.3.4. Electricity.....	6
3. ALTERNATIVES.....	6
3.1. FEASIBLE AND REASONABLE ALTERNATIVES CONSIDERED FOR THE PROPOSED ACTIVITY.....	7
3.1.1. Site Alternatives:.....	7
3.1.2. Activity Alternatives:	7
3.1.3. Design Alternatives:.....	7
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
6.1.2. Vegetation	11
6.1.3. Geology.....	11
6.1.4. Hydrology.....	11
6.1.5. Topography.....	11

6.1.6. Cultural and Historical Sites	11
7. DESCRIPTION OF ENVIRONMENTAL ISSUES AND IMPACTS IDENTIFIED.....	11
7.1. Direct Habitat Destruction	11
7.2. Habitat Fragmentation	12
7.3. Soil and Water Pollution.....	12
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. Air Quality	14
7.8. Archaeological and Historical Attributes.....	14
8. NEED AND DESIRABILITY	14
9. PUBLIC PARTICIPATION PROCESS.....	15
9.1. Introduction and Objectives	15
9.2. Methodology	15
9.2.1. Newspaper Publication	15
9.2.2. Site Notices	15
9.2.3. Consultation with Stakeholders.....	16
9.2.4. Comments and Responses.....	16
10. ENVIRONMENTAL IMPACT DETERMINATION AND EVALUATION.....	16
10.1. Methodology to Assess the Impacts.....	16
11. KEY ENVIRONMENTAL IMPACTS	19
12. ENVIRONMENTAL IMPACT STATEMENT	25
12.1. Ecology.....	25
12.2. Heritage Aspects	25
12.3. Visual.....	25
12.4. Technical.....	25
13. COMPARATIVE ASSESSMENT OF THE IMPLICATIONS OF PROPOSED ACTIVITY AND IDENTIFIED ALTERNATIVES.....	25
13.1. Advantages of the proposed activity and alternatives	25
13.2. Disadvantages of the proposed activity and alternatives	26
14. CONCLUSION.....	26

LIST OF TABLES

Table 1: Table presenting 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: Locality map of the proposed development 4

Figure 2: Google earth image showing the proposed development site.....5

Figure 3: Township layout plan 6

FINAL

ACRONYMS AND ABBREVIATIONS

FSDESTEA	Free State Department of Department of Economic, Small Business Development, Tourism and Environmental Affairs
CA	Competent Authority
RoD	Record of Decision
MMM	Mangaung Metropolitan Municipality
No.	Number
EMPr	Environmental Management Plan Report
NEMA	National Environmental Management Act
S & EIR	Scoping and Environmental Impact Reporting
SR	Scoping Report
FSR	Final Scoping Report
EIAr	Environmental Impact Assessment Report
I & APs	Interested and Affected Parties
EIA	Environmental Impact Assessment
SAHRA	South African Heritage Resource Agency
SAHRIS	South African Heritage Resource Information Systems
GN	Government Notice
LN	Listing Notice
Ha	Hectares
Ptn.	Portion
PoS	Plan of Study
GPS	Global Positioning Systems
RE	Remainder
HIA	Heritage Impact Assessment
TIA	Traffic Impact Assessment
PPP	Public Participation Process
EAP	Environmental Assessment Practitioner
EAPASA	Environmental Assessment Practitioners Association of South Africa
SACNASP	South African Council for Natural Scientific Professions
NWA	National Water Act
NHRA	National Heritage Resources Act
NEMWA	National Environmental Management Waste Act
CARA	Conservation of Agricultural Resources Act

LIST OF APPENDICES

Appendix 1	EIA Application and Draft Scoping Report Acknowledgement Letter
Appendix 2	Plan of Study of the Environmental Impact Assessment
Appendix 3	Locality Map
Appendix 4	Township Layout Plan
Appendix 5	Public Participation Process
Appendix 5.1	List of Stakeholders / Authorities and Interested & Affected Parties
Appendix 5.1.1	List of Stakeholders / Authorities
Appendix 5.1.2	List of Interested and Affected Parties
Appendix 5.2	Proof of Notice Delivery (Register)
Appendix 5.3	Communication with Stakeholders and Interested & Affected Parties
Appendix 5.4	Proof of Draft Scoping Report Circulation
Appendix 5.5	Proof of Newspaper Publication
Appendix 5.6	On - Site Notices
Appendix 5.7	Comments Received
Appendix 5.7.1	Comments from the Competent Authority
Appendix 5.7.2	Comments from Stakeholders and Interested & Affected Parties
Appendix 5.8	Comments and Response Report
Appendix 6	Site Photographs
Appendix 7	Additional Information
Appendix 7.1	Details and Expertise of EAP

I. INTRODUCTION

Leago Environmental Solutions has been appointed by KV Development Group on behalf of the Mangaung Metropolitan Municipality as an Independent Environmental Assessment Practitioner to undertake an Environmental Impact Assessment i.e., Scoping and Environmental Impact Reporting for the purpose of establishing a township. The proposed township establishment will be situated on various portions of Estoire Settlement in the Free State Province. The proposed development site is approximately 187.74 hectares in extent, and is expected to yield 1572 sites / land uses.

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 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” (i.e., those activities that have been recognised as having a detrimental impact on the environment) require environmental authorisation from the Competent Authority (Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs). Government Notice No. R325, Listing Notice 2 and GNR 327, Listing Notice I of the NEMA EIA Regulations of 2017 identifies the following listed activities associated with the proposed township establishment that requires environmental authorisation by means of a full EIA (Scoping and Environmental Impact Reporting).

GNR 325, 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 project: *The clearance of an area of 187.74 hectares*

GNR 327, Activity 24

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 project: *Roads with a width of 13m, 16m, 20m, 25m & 32m.*

1.2. EIA PROCESS

The EIA process is controlled through Regulations published under Government Notice No. R. 326 and associated guidelines promulgated in terms of Section 24, Chapter 5 of the National Environmental Management Act (No. 107 of 1998).

Three phases in the Environmental Impact Assessment process are typically recognised:

- Application Phase
- Scoping Phase
- Environmental Impact Reporting Phase

1.2.1. Application Phase

The Application Phase consists of completing the appropriate application form by the Environmental Assessment Practitioner, the proponent and the subsequent submission and registration of the project with the Competent Authority. An application form was completed and was submitted together with the web based environmental screening tool report, to the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs.

(a) Details of Authority

Queries regarding this application will be directed to:

Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs

Environmental Impact Assessment

113 St. Andrew Street

St. Andrew Building, 3rd Floor, Room 8

Bloemfontein

9300

Tel: 051 400 4815

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 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, a consultation / draft scoping report was compiled and circulated amongst the stakeholders, interested and affected parties to provide them with an opportunity to comment on the proposed activity.

(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.

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

(b) Final Scoping Report

The draft / consultation scoping report was sent to the competent authority, stakeholders and interested & affected parties for review and comments. Comments from competent authority, stakeholders and interested & affected parties were collected and the report was amended as appropriate and finalised. The final scoping report is submitted together with the plan of study of environmental impact assessment to the competent authority. Once this final scoping report and the plan of study for EIA is accepted by the competent authority, the project will then proceed into the EIA Phase.

1.2.3. EIA 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, together with a draft environmental management plan (inclusive of the specialist studies) which specifies the way proposed mitigation measures are to be implemented, will be produced by Leago Environmental Solutions. The consultation / draft EIAR will also be made available to the stakeholders and I&APs for review and comments for a period of 30 days. Once the stakeholders and the I&APs comments have been integrated into the EIAR it will be submitted to the Competent Authority for consideration / decision making.

2. DETAILS OF THE PROPOSED ACTIVITY

2.1. Location of the Proposed Activity

The proposed development will be situated on various Portions (Plot 55, Remainder of Plot 56, Portion 1 of Plot 56, Plots 72, 73, 74, 80, 81, 82, 83, 84, 85, Remainder of Plot 86, Portion 1 of Plot 86, Plots 87, 92, 93, Portion 1 of Plot 94, Portion 2 of Plot 94, Portion 3 of Plot 94, Plots 95, 96, 98, 99, 100, 106, 107, 108, 109, 110, 111, 112, 113, 119, 120, 121, 122, 123, 124, 125, 126, 127, 135, 136, 137, 138, 139, 142 and 143) of Estoire Settlement, Free State Province. The proposed development site is located approximately 6km from the Bloemfontein CBD. The site is located roughly at the following GPS coordinates: 26° 16' 43.54"E; 29° 06' 4.64"S. Figure 1 and 2 below depict the locality of the project area.

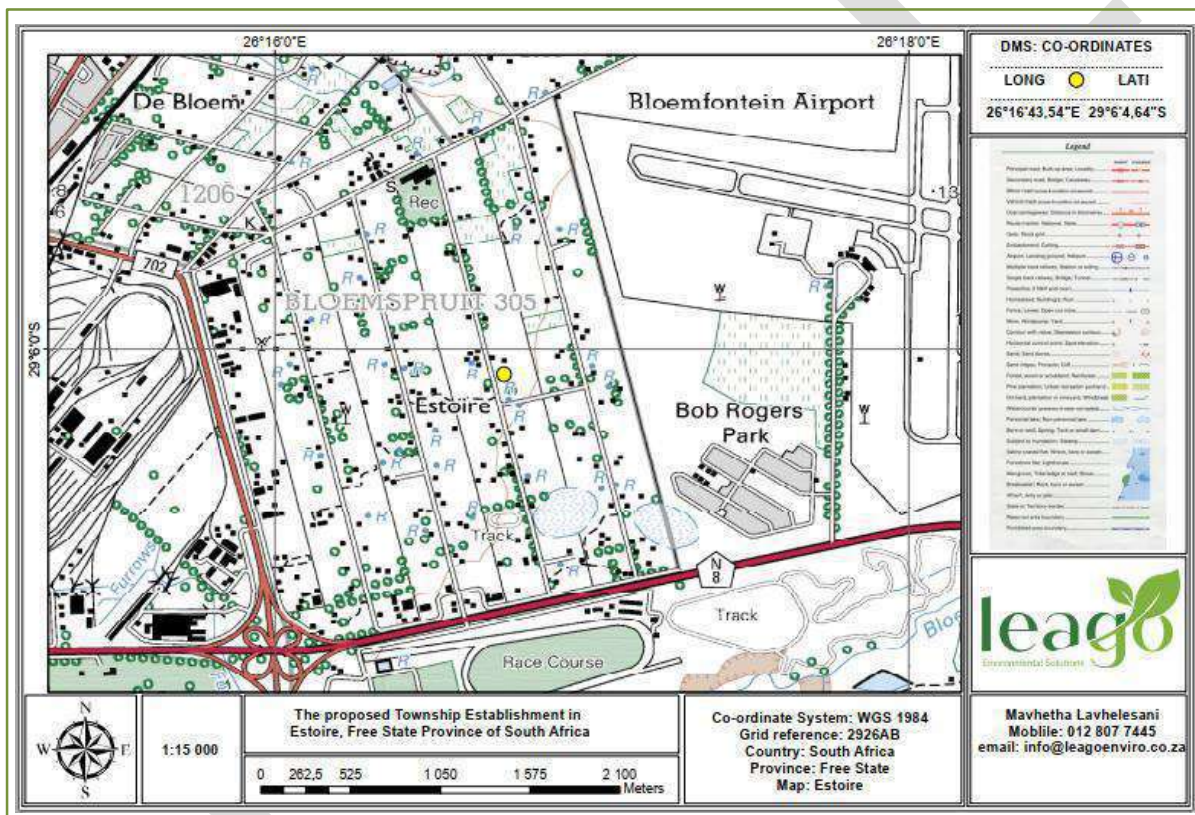


Figure 1: Locality map of the proposed development site



Figure 2: Google earth image showing the proposed development site

2.2. Description of Proposed Activity

The proposed activity is a township establishment with 1 572 stands / land uses.

The township will entail 1572 sites for:

- 1441 Residential 1
- 29 Residential 3
- 33 Commercial 1
- 4 Municipal
- 6 Educational (School / Crèche)
- 3 Government
- 6 Institutional
- 9 Public Open Spaces
- 2 Service Stations
- 37 Special
- 2 Community Facilities (Bus and Taxi)

The proposed development site covers 187.74 Ha in extent. Figure 3 below indicates the layout plan of the proposed township establishment.

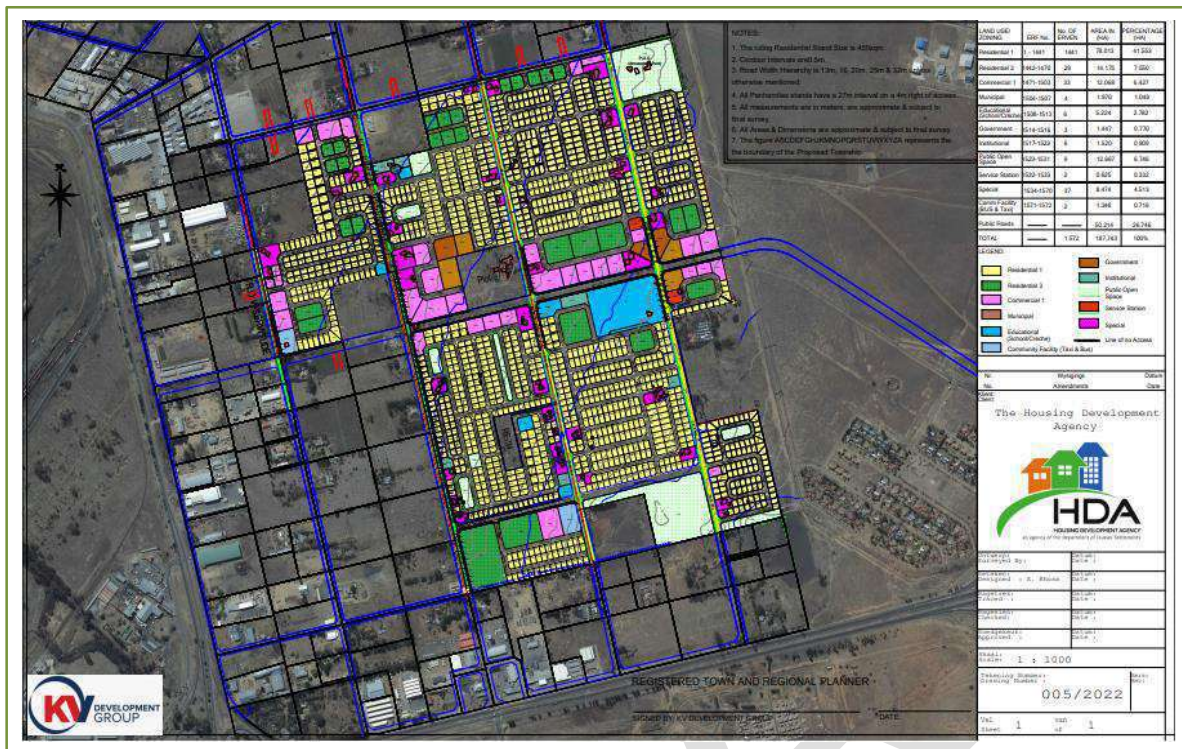


Figure 3: Township layout plan

2.3. CIVIL SERVICES ENVISAGED FOR THE PROPOSED DEVELOPMENT

2.3.1. Roads

Access to the proposed development site will be from existing road network in the area.

2.3.2. Water Supply Infrastructure

According to the Engineering Services Report, water will be extracted from the surrounding bulk services as provided by the Local Municipality.

2.3.3. Solid Waste

Solid waste from the proposed development must be collected as part of the normal municipal service. The municipality will have to be engaged for collecting and disposing the solid waste.

2.3.4. Electricity

An Electrical Report which addresses the specifications of electricity infrastructure network and connection points required to service the proposed township will be submitted with the EIA report.

3. ALTERNATIVES

The EIA Regulations stipulate that a requirement of the Scoping and Environmental Impact Reporting 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.

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 by the applicant for establishing a township. The applicant is landowner; therefore, 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.

3.1.3. Design Alternatives:

The unique character and appeal of Estoire were taken into consideration with the design philosophy. Various township layout alternatives were considered, also taking terrain and environmental constraints into account, hence the current township layout plan being the result, however there is 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.

FINAL

5. LEGISLATION AND POLICY GUIDELINES CONSIDERED

Table 1: Table presenting 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	Listed activities require Environmental Authorization in	The proposed development falls below

	Management: Waste Management Act (No.95 of 2008)	the form of a Basic Assessment or full Scoping and EIA.	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 resources authority and all archaeological objects are property of the state.	Any artifacts uncovered during the construction phase must be reported to SAHRA.
5.6	Conservation of Agricultural Resources Act (No. 43 of 1983) & CARA Regulations (1984)	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.

6. DESCRIPTION OF THE RECEIVING ENVIRONMENT

6.1. Physical Environment

6.1.1. Climate

The project area is highly influenced by the local steppe climate (dry and grassy plain), where there is not much rainfall all year long in the area. It has the annual temperature of 17.1°C with an average rainfall of 545 mm.

6.1.2. Vegetation

According to the findings of the ecological impact assessment and wetland report, the proposed development site falls within the Bloemfontein Dry Grassland.

6.1.3. Geology

Based on the findings of the geotechnical investigation report, the proposed development site is located on an area where dolerite intrusions and the sedimentary bedrock of the Karoo Supergroup occur.

6.1.4. Hydrology

The Geotechnical investigation report will reveal the extent of groundwater seepage on site, however, according to the findings of the ecological impact assessment and wetland report, there are two wetlands on the southern section of the proposed development site.

6.1.5. Topography

The topography of the proposed development site is relatively flat.

6.1.6. Cultural and Historical Sites

The Heritage Impact Assessment was conducted to obtain a comprehensive understanding of the project area and it is indicated that there are no identifiable archaeological remains on the surface, but subsurface chance finds are still possible.

7. DESCRIPTION OF ENVIRONMENTAL ISSUES AND IMPACTS IDENTIFIED

7.1. Direct Habitat Destruction

The proposed development site will result in minimal loss of flora and fauna as parts of the project area have already been developed.

Destruction or Loss of Floral Diversity or Vegetation Communities

- The physical removal of the 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.
- 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 and a monitoring programme should be implemented to ensure the impacts are kept at a minimum.
- Advice should be sought when using any sort of poisons or pesticides.
- 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 of a township 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 fauna and flora. During the constructional 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 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.

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 is 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 area. During the construction and operational phases of the proposed development, noise will be a factor. These impacts and mitigation measures will be addressed in detail in the Environmental Management Plan report (EMPr).

7.7. 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 hereunder as well as in the Environmental Management Plan report.

7.8. Archaeological and Historical Attributes

The archaeological and 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. Any discovery of heritage remains on the terrain will be reported to the archaeologist and SAHRA and may require further mitigation measures.

8. NEED AND DESIRABILITY

- The proposed development site is owned by the applicant (Mangaung Metropolitan Municipality)
- The proposed township can be accessed through the existing roads.
- The proposed development will contribute towards improving the housing stock of the area and general livelihood of the residents.
- Furthermore, the development will eventually be integrated with the environment, have proper service provision and it will be well planned.
- The proposed development will not have a significant detrimental impact on the surrounding areas and is not in conflict with the adjacent land uses.

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

- 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.

9. PUBLIC PARTICIPATION PROCESS

9.1. Introduction and Objectives

As an important component of the EIA process, the public participation process involves public inputs from stakeholders, interested and affected parties according to the 2017 NEMA Regulations. Stakeholders, interested and affected parties will be given an opportunity to comment on the proposed development.

The key objectives of the public participation process are to:

- Identify a broad range of I&APs, and inform them about the proposed project.
- Understand and clearly document all issues, underlying concerns and suggestions raised by the stakeholders and the I&APs.
- Identify areas that require further specialist investigation.

9.2. Methodology

The following activities were undertaken as part of the public participation process:

- Newspaper publication on the local newspaper
- Placement of the site notices
- Hand delivery of EIA application notice / background notice letters to the interested and affected parties as well as the adjacent landowners of the proposed development site.
- Phone calls and email consultation with stakeholders
- Circulation of reports

9.2.1. Newspaper Publication

The proposed development was advertised in the Mangaung Issue newspaper on the 20th April 2022 to inform people about the project and request them to register their names and comment on the proposed development. Kindly refer to Appendix 5.5 for the proof of newspaper publication.

9.2.2. Site Notices

Site notices were placed at various points on and around the proposed development site. Kindly refer to Appendix 5.6 for proof of on-site notices.

Notices regarding the background information of the proposed development were also hand delivered to the residents located in the project area and landowners adjacent to the proposed development site on the 13th April 2022. Kindly refer to Appendix 5.2 for proof of notice delivery (register).

9.2.3. Consultation with Stakeholders

The consultation scoping report was circulated to stakeholders, interested and affected parties for review and comments. Kindly see Appendix 5.4 for proof of draft scoping report circulation.

9.2.4. Comments and Responses

All issues / comments received from stakeholders and I&APs along with the responses from the EAP are documented in the comments and response report attached as Appendix 5.8.

10. 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.

10.1. 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 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 the Mangaung Metropolitan 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

II. KEY ENVIRONMENTAL IMPACTS

Table 4: Possible environmental impacts identified

Environmental Issues	Possible Cause	Potential Impacts	Proposed Mitigation Measures
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 	<ul style="list-style-type: none"> • Provide personal protective equipment (PPE), such as dust mask and goggles • Areas that generate dust particles should be sprinkled with water, this reduces dust blow out from wind, construction vehicles and machinery • Construction vehicles shall comply with speed limits and haul distances shall be minimised. • Regularly maintain and service construction machinery and equipment, this will minimize production of hazardous gases • It must be ensured that noise levels are kept to a minimum during the Construction Phase. All machinery and equipment to be utilized on the site should be fitted with mufflers and must be maintained in good working order to minimise noise levels. It is recommended further that the Contractor encourage construction workers to minimise shouting and hooting on the site.
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) 		

Water Quality			
Pollution of water sources / wetlands	<ul style="list-style-type: none"> • Spillage of fuel & oil from construction vehicles • Spillage of building material e.g. cement etc. • Migration of contaminants off the site • Littering 	<ul style="list-style-type: none"> • Pollution of surface and groundwater • Health risk • Lower water quality • Soil degradation • Erosion 	<ul style="list-style-type: none"> • Dirty water originating from the construction site and camp should be contained and disposed of correctly, preventing contamination of soil and any watercourses in the area • Maintenance of construction vehicles should be carried out in a well-designed and protected area and where oils / grease will be completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or water systems. • Regularly check vehicles, machineries and equipment operating on site to ensure that none have leaks or cause spills of oil, diesel, grease or hydraulic fluid. • Emergency incident reporting and remedial measures must be in place. • Drip trays should be used during the servicing of vehicles. The content thereof must be disposed in accordance with relevant hazardous material disposal requirement. • Measures to contain spills must be readily available on site (Spill Kits).
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 systems • Inadequate measures to prevent sewage spillages • Overflow of sewage to groundwater 		

			<ul style="list-style-type: none"> • A waste contractor must be appointed to oversee the entire waste management process during construction phase. • Storage areas must be bunded to protect groundwater quality • All solid waste generated during the construction process (including packets, plastic, rubble, cut plant material, waste metals etc.) must be placed in the waste collection area in the construction camp and must not be allowed to blow around the site • Planting of trees, aesthetic gardens and lawns by residents is recommended, as it will serve to minimise the amount of runoff • Erosion protection measures must be implemented on the site to reduce erosion and sedimentation of the receiving environment. Measures could include: sediment traps, sandbags, bunding around soil stockpiles
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 	<ul style="list-style-type: none"> • Soil degradation • Loss of topsoil • Erosion 	<ul style="list-style-type: none"> • Regular maintenance of the systems need to be done to ensure that no spillage occurs when the toilets are cleaned or emptied and that the contents are removed from the site to an appropriate

	<ul style="list-style-type: none"> • Sewage spillages • Erosion due to increased runoff from built-up areas • Site clearing during construction 		<p>location / facility, preventing overflow of sewage to groundwater</p> <ul style="list-style-type: none"> • Removal of vegetation should be restricted to areas identified on the project description / footprint
Biodiversity			
Decline in fauna and flora diversity	<ul style="list-style-type: none"> • Cleaning of site for construction • Loss of habitat due to establishment of development. 	<ul style="list-style-type: none"> • Loss of biodiversity • Loss of habitat • Negative impact on biodiversity 	<ul style="list-style-type: none"> • Restrict the clearing of vegetation to areas identified on the project footprint • Conserve vegetation on sites that are not developed • Indigenous trees must not be cut disturbed or removed without a permit from forestry as required by the National Forest Act
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 	<ul style="list-style-type: none"> • If any archaeological or paleontological artefacts or remains / graves are uncovered during the construction phase of the township, work in the vicinity of the find shall cease immediately. The Contractor shall immediately notify the Employer's Representative, who shall contact the relevant Competent Authority (SAHRA) who will take appropriate steps
Visual impact			

Impact of the proposed development of sense of place	<ul style="list-style-type: none"> • The physical existence of the development/ township • Potential visual impacts during the construction phase are related to temporary works, site activity, and vehicular movement within and around the subject site 	<ul style="list-style-type: none"> • Negative impact on sense of place • Obstruction • Visual intrusion • Public nuisance 	<ul style="list-style-type: none"> • Disturbed areas outside the proposed development site should be rehabilitated as soon as possible after construction • Ensure that no litter, refuse, wastes, rubbish, rubble, debris and builders wastes generated on the premises be placed, dumped or deposited on adjacent /surrounding properties including, roads or public places and open spaces during or after the construction period of the proposed developments but disposed of at an approved dumping site.
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 	<ul style="list-style-type: none"> • The Contractor must appoint a Fire Officer who shall be responsible for ensuring immediate and appropriate action in the event of a fire
Fires	<ul style="list-style-type: none"> • Accidental fires • Burning of waste • Cooking with fires 	<ul style="list-style-type: none"> • Threat to health • Danger to human life 	<ul style="list-style-type: none"> • All staff must carry identification, access control must also be enforced • A limited number of workers along with security guards will be allowed to sleep on site, however within a cordoned-off secure area • The Contractor shall ensure that basic fire-fighting equipment is available at all construction activities on site

			<ul style="list-style-type: none"> • Demarcation of the construction site to prevent public access (during the construction phase).
Socio Economic			
<p>Employment creation and skills development opportunities during the construction and operation phase, which is expected to give rise to new jobs.</p> <p>This impact is rated as positive.</p>	<ul style="list-style-type: none"> • The establishment of a township 	<ul style="list-style-type: none"> • Employment opportunities • Permanent jobs during operation • New housing 	<ul style="list-style-type: none"> • Enhance the use of local labour and local skills as far as reasonably possible. • Where the required skills do not occur locally, and where appropriate and applicable, ensure that relevant local individuals are trained. • Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible

These key areas of impacts are further explored and described below 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.

- Geotechnical Investigation
- Electrical Services Report
- Traffic Impact Assessment Study
- Civil Engineering Services Report
- Ecological Impact Assessment and Wetland Report
- Phase I Archaeology and Heritage Impact Assessment

12. ENVIRONMENTAL IMPACT STATEMENT

12.1. Ecology

From the site assessment / inspection findings conducted by the Ecological specialist, it is indicated that approximately 65% of the natural vegetation on site has been degraded due to cultivation field as well as building of structures that currently exist on site.

12.2. Heritage Aspects

According to the findings of the Phase I Archaeology and Heritage Impact Assessment, the study revealed that proposed development site has been significantly altered over several years of agricultural activities and other destructive land use patterns.

12.3. Visual

Clearing of areas will result in a change of the visual attributes of the site.

12.4. Technical

Materials and methods of the 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 preliminary geotechnical site investigation was conducted to identify potentially adverse geotechnical conditions at the site in order to facilitate and inform the planning phase of the proposed development.

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 provide proper housing and related services for the local community and eliminate the scarcity of accommodation in the area.

- Temporary and permanent employment opportunities for the locals will be created during the construction and operation phase of the township
- The implementation of this activity will contribute greatly on the socio-economic transformation and growth of the Municipality
- The establishment of the township will also help in preventing land invasions and illegal settlements.

13.2. Disadvantages of the proposed activity and alternatives

- Water use, waste, sanitation and other impacts will be impacted should they not 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 if not managed correctly.

14. CONCLUSION

The purpose of the final scoping report is to address all the comments and issues received from the competent authority, stakeholders, interested and affected parties. This also serves as a basis to provide the competent authority with preliminary information regarding the potential impacts and scope of the development. The Competent Authority is therefore respectfully requested to evaluate and consider this Final Scoping Report, as part of an application that has been lodged in terms of the National Environment Management Act (No. 107 of 1998), in respect of the following listed activities:

- *GN R325, Activity 15: "The clearance of an area of 20 hectares or more of indigenous vegetation"*
- *GNR 327, Activity 24: "The development of a road — [a road] with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres"*

**FINAL SCOPING REPORT FOR THE PROPOSED TOWNSHIP ESTABLISHMENT
TO BE SITUATED ON VARIOUS PORTIONS OF ESTOIRE SETTLEMENT, FREE
STATE PROVINCE**

REPORT PREPARED BY:

Leago Environmental Solutions
Unit 79, Block 5, Lombardy Business Park
66 Graham Road
Pretoria
0084

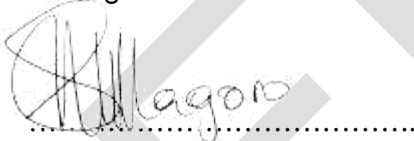
Cell: 081 428 6116
Tel: 012 807 7445
Email: info@leagoenviro.co.za

AUGUST 2022

EAP(s):

Mankaleme M. Magoro

EAP Signature:



.....