CONSULTATION ENVIRONMENTAL IMPACT ASSESSEMENT REPORT FOR THE PROPOSED FORMALISATION AND PROCLAMATION OF SITES AT SASELAMANI CBD ON THE REMAINDER OF TSHIKUNDU'S LOCATION 262 MT, AND THE REMAINDER OF PORTION 1 OF TSHIKUNDU'S LOCATION 262, COLLINS CHABANE LOCAL MUNICIPALITY, LIMPOPO PROVINCE.

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LEDET REF NO: 12/1/9/2-V102

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DOCUMENT CONTROL	
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Client	COLLINS CHABANE LOCAL MUNICIPALITY
Date	22 OCTOBER 2020
Approval	
Name	Mankaleme M. Magoro
Title	Environmental Assessment Practitioner
Signature	

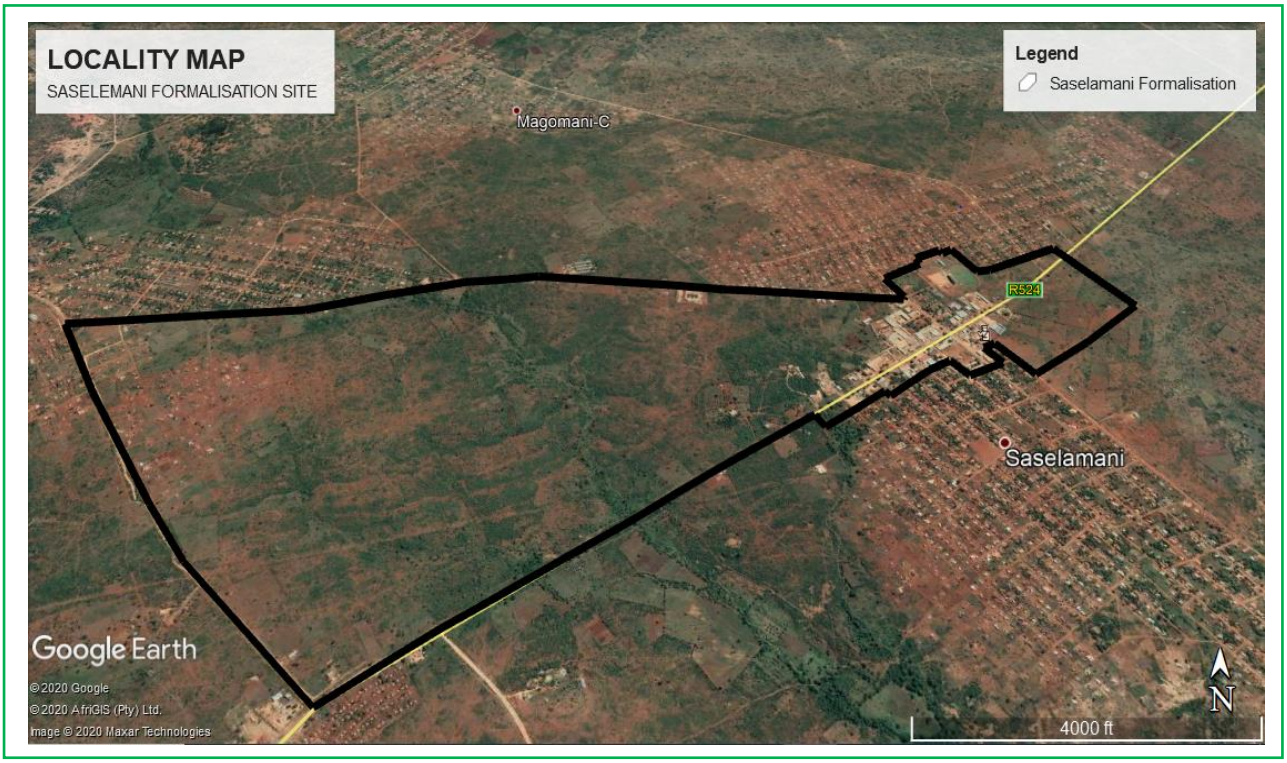
EXECUTIVE SUMMARY

Mang Geoenviro Services has been appointed by KV Development Group on behalf of Collins Chabane Local Municipality as an Independent Environmental Assessment Practitioners (EAP) to undertake a Scoping and Environmental Impact Assessment (EIA) for the proposed formalisation and proclamation of 1 635 sites at Saselemani CBD on the remainder of Tshikundu's Location 262 MT, and the remainder of portion 1 of Tshikundu's Location 262, Limpopo province**.**

The process was registered for an EIA (Scoping) process with the Limpopo Department of Economic Development, Environment and Tourism (LEDET) under Regulation 982 to 985 as amend by 324 to 327 of the National Environmental Management Act (Act No 107 of 1998) and was assigned the reference number: **12/1/9/2-V102.**

GENERAL SITE DESCRIPTION

Saselemani is located approximately 2.2 km from Magomani C and 7.5 km on the southern side of the existing settlement of Maphophe via R524. The proposed development site is under the jurisdiction of the Collins Chabame Local Municipality, under the Vhembe District Municipality.The proposed development site has an extent of approximately 563.64 hectares. The Applicant intends to develop residential, institutional, public open space, urban agriculture, municipal purpose, business, government purposes and light industrial range of land uses.



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ACRONYMS AND ABBREVIATIONS

LEDET	Limpopo Department of Economic Development, Environment and Tourism
EMPr	Environmental Management Plan Report
NEMA	National Environmental Management Act
S&EIR	Scoping and Environmental Impact Reporting
EIAr	Environmental Impact Assessment
I&AP	Interested and Affected Parties
EIA	Environmental Impact Assessment
SAHRA	South African Heritage Resource Agency
SAHRIS	South African Heritage Resource Information Systems
CCLM	Collins Chabane Local Municipality
HIA	Heritage Impact Assessment
TIA	Traffic Impact Assessment
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer

TABLES

FIGURES

LIST OF APPENDICES

1. NEMA REQUIREMENTS

In accordance with the NEMA Regulations f Chapter 5, 1998, Section 31 Environmental Impact Assessment Reports require the following:

Environmental Impact Assessment Reports

An environmental impact assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include-

(a). details of-

(i). the EAP who prepared the report; and

(ii). the expertise of the EAP, including a curriculum vitae;

(b). the location of the activity, including:

(i). the 21-digit Surveyor General code of each cadastral land parcel;

(ii). where available, the physical address and farm name; and

(iii). where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;

(c). a plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale, or, if it is-

(i). a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken;

(ii). on land where the property has not been defined, the coordinates within which the activity is to be undertaken;

(d). a description of the scope of the proposed activity, including-

(i). all listed and specified activities triggered and being applied for; and

(ii). a description of the associated structures and infrastructure related to the development;

(f). a motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred location;

(g). a motivation for the preferred development footprint within the approved site;

(h). a full description of the process followed to reach the proposed development footprint within the approved site, including:

(i). details of the development footprint alternatives considered;

(ii). details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;

(iii). a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;

(iv). the environmental attributes associated with the development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;

(v). the impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts-

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be avoided, managed or mitigated;

(vi). the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;

(vii). positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;

(viii). the possible mitigation measures that could be applied and level of residual risk;

(ix). if no alternative development locations for the activity were investigated, the motivation for not considering such; and

(x). a concluding statement indicating the preferred alternative development location within the approved site;

(i). a full description of the process undertaken to identify, assess and rank the impacts the activity and associated structures and infrastructure will impose on the preferred location through the life of the activity, including-

(i). a description of all environmental issues and risks that were identified during the environmental impact assessment process; and

(ii). an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;

(j). an assessment of each identified potentially significant impact and risk, including cumulative impacts;

(i). the nature, significance and consequences of the impact and risk;

(ii). the extent and duration of the impact and risk;

(iii). the probability of the impact and risk occurring;

(iv). the degree to which the impact and risk can be reversed;

(v). the degree to which the impact and risk may cause irreplaceable loss of resources; and

(vi). the degree to which the impact and risk can be mitigated;

(k). where applicable, a summary of the findings and recommendations of any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final assessment report;

(l). an environmental impact statement which contains-

(i). a summary of the key findings of the environmental impact assessment:

(ii). a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and

(iii). a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;

(m). based on the assessment, and where applicable, recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation;

(n). the final proposed alternatives which respond to the impact management measures, avoidance, and mitigation measures identified through the assessment;

(o). any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation

(p). a description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed;

(q). a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;

(r). where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required and the date on which the activity will be concluded, and the post construction monitoring requirements finalised;

(s). an undertaking under oath or affirmation by the EAP in relation to:

(i). the correctness of the information provided in the reports;

(ii). the inclusion of comments and inputs from stakeholders and I&APs;

(iii). the inclusion of inputs and recommendations from the specialist reports where relevant; and

(iv). any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;

(t). where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;

(u). an indication of any deviation from the approved scoping report, including the plan of study, including-

(i). any deviation from the methodology used in determining the significance of potential environmental impacts and risks; and

(ii). a motivation for the deviation;

(v). any specific information that may be required by the competent authority; and

(w*). any other matters required in terms of section 24(4)(a) and (b) of the Act.*

2. INTRODUCTION

Mang Geoenviro Services has been appointed by KV Development Group on behalf of Collins Chabane Local Municipality as an Independent Environmental Assessment Practitioners (EAP) to undertake a Scoping and Environmental Impact Assessment (EIA) for the proposed formalisation and proclamation of 1 635 sites at Saselemani CBD on the remainder of Tshikundu's Location 262 MT, and the remainder of portion 1 of Tshikundu's Location 262, Collins Chabane Local Municipality, Limpopo province**.**

2.1. COMPILATION OF EIA REPORT

The following report was compiled by Mang Geoenviro Services on acceptance of the submitted scoping report and advice from the competent authority in terms of regulation 30(1)(a) to proceed with the tasks contemplated in the plan of study for environmental impact assessment, including the public participation process. The report was compiled according to regulation 31 (2)(a) – (s) of the Regulations No. 543 of 18 June 2010 promulgated in terms of Chapter 5 of the National Environmental Management Act (Act No. 107 of 1998) stipulating the information that is necessary for the competent authority to consider the application and to reach a decision contemplated in regulation 35.

2.2. TERMS OF REFERENCE

The objective of this study is to conduct an environmental impact assessment. The broad terms of reference for an assessment exercise are to:

- Conduct an in-depth investigation into biophysical aspects, and socio economic aspects focusing on key issues;
- Address the issues that were identified during the scoping process and investigation, which are associated with this planned project;
- Advise the proponent about the potential impacts (positive and negative impacts) of their planned development, as well as the implications for the design, construction and operational phases of the project;
- Identify possible measures to mitigate the potential impacts of the planned project;
- Address the cumulative impact of all aspects of the planned development as well as recommend possible mitigating measures.

2.3. INFORMATION ON THE METHODOLOGY OF EIA

This report addresses the biophysical as well as the socio-economic environments. The information was captured in the following manner:

- Site visits to determine the setting, visual character and land-uses in the area;
- I & APs were informed and consulted by phone, newspaper advertisement, emails, letters and notice boards

- Identifying positive, as well as negative issues;
- Specialist studies done by independent specialists in areas where impacts were identified;
- Making recommendations and presenting guidelines for the mitigation of impacts identified during this exercise.

3. ENVIRONMENTAL ASSESSMENT PRACTITIONER

3.1. DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) WHO PREPARED THE REPORT:

Co-Ordination, Supervision, and Report Writing:

Mankaleme M. Magoro – Mang Geoenviro Services

Public Participation

Mankaleme M. Magoro – Mang Geoenviro Services

Lavhelesani Mavhetha – Mang Geoenviro Services

Key Qualifications of EAP:

- Key competencies and experience include environmental impact assessments, environmental management plans, public participation process, geotechnical investigation studies and project management.
- Registered with SACNASP

Education:

Bachelor of Earth Sciences in Mining and Environmental Geology.

4. PROJECT BACKGROUND

4.1. Particulars of Applicant

Collins Chabane Local Municipality (CCLM)
225 Hospital Road
Malamulele
0982

Contact person: Hulisani Mukwevho
Tel/ Cell: 071 497 1585
E-mail: hulisani@collinschabane.gov.za

5. PROPOSED ACTIVITY

5.1. Location of the Proposed Activity

The proposed development is located approximately 2.2 km from Magomani C and 7.5 km on the southern side of the existing settlement of Maphophe via R524.

The study area is located roughly at the following coordinates:

Latitude: 22°50’ 13.25 ’’ S and Longitude: 30°50’ 14.72’’ E.

SG 21: T0MT00000000026200000, T0MT00000000026200001

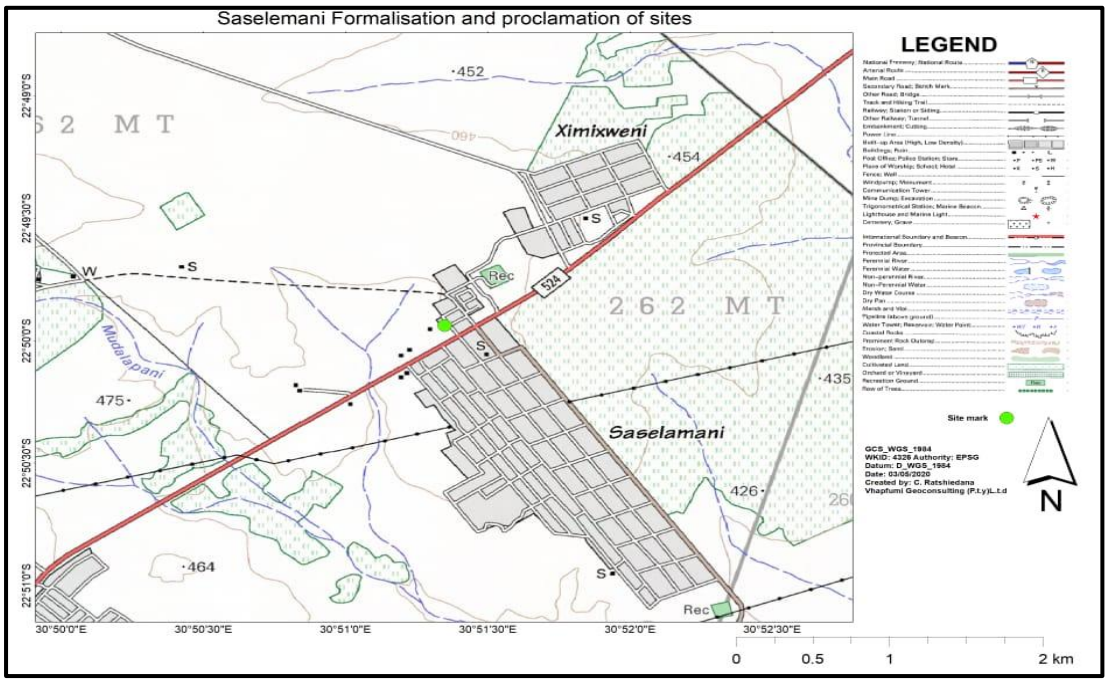

Figure 1: Locality map of the proposed development site.

5.2 Description of Proposed Activity

The proposed project entails the formalisation of 1 635 sites in Saselamani within the Collins Chabane Local Municipality.

The proposed project entails 1 635 sites for:

Zoning	Lan-use Descriptions	No. of residential opportunities	Area (Ha)	%
Residential	residential	1 429	188.74	33.48
Residential 3	guest houses	11	8.04	3.20
Institutional	community facilities	32	38.11	6.76
Public open spaces	Public open spaces/ recreational facilities	15	92.19	16.36
Urban Agriculture	Agricultural purposes	32	80.45	14.27
Municipal purposes	Municipal	5	8.88	1.57
Government purposes	State department	1	0.99	0.17
Business	Business purposes	97	7.57	1.34
light industrial use	warehouses	13	13.06	2.32
Roads and servitudes			115.56	20.50
Total		1 635	563.64	100

Table 1: Land-uses for the development site

Figure 2: Layout Plan

6. THE FOLLOWING ASSOCIATED INFRASTRUCTURE AND SERVICES ARE ALSO ENVISAGED FOR THE DEVELOPMENT:

6.1. Roads

The proposed development can be accessed via the existing tarred roads; R524, and D3639.

6.2. Water

The proposed development/ activity falls under the Xikundu WTW Water Scheme

6.3. Sewer Services

There is no existing bulk waste water treatment infrastructure in Saselamani. Domestic wet or dry sanitation is utilised in the village. This is the form of pit toilets, septic tanks and soakaways.

6.4. Solid Waste

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

6.5. Storm Water Drainage

The storm water will drain on according to the slope of the natural ground.

6.6. Electricity

Mhinga 22Kv feeder is fed from Malamulele substation and the capacity is 3x20MVA, 66/22kv. The current loading from Malamulele substation is 30MVA. The proposed development can be connected to the existing network.

7. NEED AND DESIRABILITY OF PROPOSED ACTIVITY

- The proposed development area is strategically located adjacent to the current boundaries of the existing village/ township.
- Access to the proposed development site will be from R524, and D3639. No new access roads are necessary as access already exists.
- The proposed development will contribute towards improving the housing stock of the area and general livelihood of the residents.

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

- The existing road leading to the existing village, which will provide access to the proposed development area.
- There will be sites for business opportunities for the residents in the surrounding area.
- Furthermore, 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 any significant detrimental impact on the surrounding areas and is not in conflict with the adjacent land uses.

8. FEASIBLE AND REASONABLE ALTERNATIVES

8.1. Site Alternatives:

Site alternatives are not applicable for this project due to the fact that the proposed development is the formalisation of the existing settlement. The site was also selected so that mainly disturbed land will be developed.

8.2. Activity Alternatives:

The proposed activity was identified by the developer to consist predominantly of a residential development, formalizing and extending the existing Saselemani CBD settlement. The option of not proceeding with the development is the only activity alternative. No other activities were considered in this application due to the assessed need and feasibility of the proposed activity.

8.3. Design Alternatives:

The unique character and appeal of Saselemani 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, the current design plan being the result.

8.4. No-go option:

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.

The no-go would not be the preferred alternative from a socio-economic perspective, as the development in general would result in a variety of employment opportunities and provide an economic boost to the area.

9. NEMA LISTED ACTIVITIES TO BE APPLIED FOR

In April 2006 the Minister of Environmental Affairs and Tourism passed Environmental Impact Assessment Regulations in terms of Chapter 5 of the National Environmental Management Act, 1998 (NEMA). The regulations replaced the Environmental Impact Assessment (EIA) regulations which were promulgated in terms of the Environment Conservation Act, 1989 in 1997. The most recent regulations came into place on 18 June 2010 and, therefore, all application must be made in terms of these NEMA regulations. The purpose of this process is to determine the possible negative and positive impacts of the proposed development on the surrounding environment and to provide measures for the mitigation of negative impacts and to maximise positive impacts.

Notice No. R 982 to 985, specifically 983, 984 and 985 as amended by Notice No. R 324 to 327 list activities that must be considered in the process to be followed. The Activities listed in Notice No. R 984 as amended by 325 requires that the Scoping and EIA process be followed. However, the draft guidelines document supplied by DEAT states that if any activity being applied for is made up of more than one listed activity and the scoping and EIA process is required for one or more of these activities, the full EIA process must be followed for the whole application.

The proposed development includes a number of listed activities and therefore it will be necessary to follow a full EIA process (as an independent process) in terms of NEMA. The applicant is therefore applying for the following listed activities.

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice	Describe each listed activity:
GNR 325 (7 April 2017)	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
GN. R 327 (7 April 2017)	Listing Notice 1; Activity 28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purpose or afforestation on or after 01 April 1998 and where such development: (ii). will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.

Table 2: Listed activities triggered by the development.

10. PUBLIC PARTICIPATION

10.1. INTRODUCTION AND OBJECTIVES

As an important component of the EIA process, the public participation process involves public inputs from interested and affected parties (I & APs) according to Section 56 of the NEMA 2010 Regulations. I & AP may comment during the planning phase of the proposed project.

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 I & APs; and
- Identify areas that require further specialist investigation.

10.2. METHODOLOGY

The public participation process was undertaken in accordance with the plan of study accepted in terms of Regulation 30(1). The following actions have already been undertaken as part of this process:

- Advertisement in the local newspaper
- On-site notices
- Delivery of notices to the landowners adjacent to the proposed development site.
- Phone calls and email consultation with stakeholders

Refer to appendix 5 for the list of authorities/ stakeholders identified.

10.2.1. Newspaper Advertisement

The proposed project was advertised in the local newspaper (Limpopo Mirror) on the 10th July 2020 to inform people about the project and request them to register their names and comment on the proposed development.

(Refer to appendix 6.4.)

10.2.2. Site Notices

Site notices were placed at various points around the site.

Notices/ letters regarding the background information of the proposed development activity were also hand delivered to the landowners/ occupiers located next to the proposed development site.

(Refer to appendix 6.3)

10.2.3. Consultation with Stakeholders

The scoping report was circulated to the stakeholders for observation and comments.

(Refer to appendix 6.1)

10.2.4. Comments Received

Refer to **Appendix 6.5** for comments received on the Scoping Report. The draft/ consultation EIA Report is currently being circulated for comments **(Refer to Appendix 6.1.1).**

10.3. SUMMARY OF KEY ISSUES RAISED BY THE I & AP's:

Organisation	Name	Date Received	Comments	Response
Collins Chabane Local Municipality	Tiko Shimange	14 September 2020	The Collins Chabane Local Municipality (CCLM) acknowledges your scoping report submitted to the municipality on the 19th August 2020 regarding the proposed formalisation and proclamation of sites at Saselemani CBD on portion 1 and the remainder of the farm Tshikundu's Location 262 in the magisterial district of Collins Chabane Local Municipality. **The Collins Chabane Local Municipality has no objections to the proposed scoping report subject to the following conditions:** •This letter only serves as a comment for the scoping report submitted to the municipality and should not be construed as approval of the proposed formalisation and proclamation. •The applicant/ developer will need to submit a full development application to the municipality in terms of the relevant section of the Collins Chabane Spatial Planning and Land Use Management By-Law 2019 read with relevant sections of the Spatial	Comments noted

			Planning and Land Use Management Act, 2013 (Act 16 of 2013). The municipality reserves the right to withdraw this letter should it be found that the submitted documents to the municipality were misleading and found to be incorrect.	
SAHRA	Nokukhanya Khumalo	02 October 2020	**Interim Comment:** South African Heritage Resources Agency (SAHRA) Archaeology, Palaeontology and Meteorites (APM) Unit cannot comment on this application as the HIA report does not adhere to SAHRA 2007 Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment Reports and section 38(3) of the NHRA. The HIA report does not contain a tracklog, a detailed literature review of the development areas historical record as well as detailed recommendations for the conservation of the two graves within the proposed township plans. Also, the report does not contain historical maps and does not contain a map of the proposed township plan with the identified graves indicated on the map. The proposed Saselamani township development is located in a moderately sensitive palaeontological zone as per the SAHRIS palaeo-sensitivity map: https://sahris.sahra.org.za/map/palaeo. This requires a desktop	Comments noted. The HIA will be amended by the specialist and the desktop palaentological study will also be conducted and submitted to SAHRA for commenting prior to the submission of the EIAr to the competent authority.

			palaeontological assessment. The EAP must undertake to commission a suitably qualified palaeontologist to carry out a Paleontological Impact Assessment. The amended HIA and the Palaentological desktop study reports must be submitted to SAHRA for commenting prior to the submission of the EIAr to the competent authority	

11. ENVIRONMENTAL ASPECTS

11.1 LITERATURE REVIEW

Literature pertinent to this area and its immediate environs has been reviewed.

11.2. DESCRIPTION OF THE ENVIRONMENT

11.2.1 Topography

Regarding physical geography, the majority of the Vhembe District Municipality (VDM) landscape is characterized by undulating rolling hills with flat plains occurring in the east. The area is generally flat and it is characterized by flat gentle undulating slopes with slope that range from 5-10%.

11.2.2. Climate

Climate of the area is characterized by dry winter and low rainfall in summer. Area has temperature ranging from 18-38 degrees in summer months and 15-24 degrees in winter months. Most of the rainy days are in summer. Climate is also characterized by hot summer and cold dry winter with mean annual rainfall from 200mm to 900mm. Temperatures range from 27◦C in June and 38◦C in December.

11.2.3. Geology of the Area

Geologically, the study area covers part of the Soutpansberg Group of sandstones with lessor amounts of conglomerate, shale and basalt are mostly exposed in this area.

11.2.4. Hydrology

According to the geotechnical investigation assessment report, no groundwater seepage was encountered in any of the trial pits excavated as part of the investigation.

11.2.5. Vegetation of area

Based on the findings of the ecological specialist report, during vegetation survey different plant species were identified on site and recorded. This included trees, shrubs and grass and herbs. Protected tree species as per National Forest Act 84 of 1998. Due to area being at its secondary succession it has more of bush encroaching species and most of big trees are having coppice branches after being cut for fire wood and other uses by local people. It has been witnessed during survey that trees are being cut.

11.2.6. Fauna/ Animals

The proposed development will be located on the on a thick savannah biome of Mopani sweet veld woodland which is having abundant species composition with more shrubs and trees. It was confirmed that reptile and mammal species are also likely to be found in the area and no red data species were observed nor are expected to exist in the area.

(Refer to the Ecological Assessment in Appendix 8.1)

11.2.7. 100 year flood line

The development is planned outside the 1:100 year floodline. It is recommended that a buffer zone of 20m should be provided between the 1:100 flood line area and any proposed development.

11.2.8. Historical, archaeological or cultural sites

A heritage specialist was appointed to assess the site and determine whether any significant material or graves are present at or near the site.

(Refer to the Heritage Report in Appendix 8.2)

11.3. SUMMARY OF FINDINGS AND RECOMMENDATIONS OF SPECIALIST STUDIES AND SPECIALIZED PROCESSES.

The necessary specialist studies and specialized processes have been performed in areas where possible negative impacts were identified. This was done according to Section 32 of Regulations No. R. 543 published in the Government Notice No. 33306 of 18 June 2010 of NEMA. Specialised studies relevant to the project include:

11.3.1 Ecological Assessment

An ecological study was conducted to assess the area for protected and endangered plant and animal species.

Details of the Specialist:

Africa Ecological and Development Services

P.O. Box 1163

Fauna Park
0787

Cell: 082 814 9780
Email: africaresources18@gmail.com
Contact Person: Netshitungulu T.I

Area of expertise: Ecology Specialist.

Findings:

The proposed development will be located on the on a thick savannah biome of Mopani sweet veld woodland which is having abundant species composition with more shrubs and trees. According to the ecological study; it was confirmed that reptile and mammal species are also likely to be found in the area and no red data species were observed nor are expected to exist in the area.

This is an area where there is still some potential biodiversity that can still be conserved and for kind of intended development some pockets will have to be conserved in order to retain and contain the status of the area.

Recommendations:

- A specialist (Environmental officer) must be appointed to deal with all environmental issues as indicated on the impact assessment. This will assist in implementing an environmental friendly development.
- A license to disturb or cut indigenous trees and also protected trees must be applied for from the Department of Agriculture, forestry and fisheries as per National Forest Act, 1998 (Act No. 84 of 1998)
- Conservation of Agricultural Resources Act, 1983. (Act No. 43 of 1983) must also be considered when dealing with invasive alien plants so that all measure can be based on this legislation and its regulations.
- Environmental management plan must be developed to cater for detailed mitigations during all development phases**.**
- Minimize cutting down of big indigenous trees where possible but also ensure that protected trees are not removed since they are few unless the lay out plan doesn't allow or can't be altered.
- Transportation of material must be done with care in order to minimize the transportation of alien plants seeds from one point to another.
- A 50 meter buffer zone on non-perennial stream must be adhered to.
- A conservation space must be reserved with corridors to protect big trees and promote greening and through park creation.

11.3.2. Geotechnical Specialist

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

Details of the Specialist:

Sonjas Geo Services (Pty) Ltd
Cell: +27(0)78 300 3707
Email: hlukeb@yahoo.co.za
Contact Person: Mr. Hluke Baloyi BSc Geology (Hon) (Can.Sci. Nat)

Area of expertise: Geotechnical Specialist

Findings:

- The geological map indicates that the investigated area is at depth underlain by sandstone, basalt, shale and minor tuff.
- Site characterized by the presence of a transported horizon comprising alluvial material overlying residual sandy clay, clayey sand, silty clay and gravelly sands classified as ML (inorganic silt), MH (inorganic silts), SM (silty sand), SC (clayey sand) and GM (silty gravels). Laboratory results indicate that the material encountered within the site exhibits low to moderate collapse potential and medium to high compressibility based on the LL.
- No groundwater or groundwater seepage was encountered in all the test pits encountered on the site. Residual clay was encountered, indicating the presence of a fluctuating seasonal or perched water table.
- Site is classified as 2/H1/C/S1
- The in-situ material indicates compaction characteristics classified as G7 and >G9 material.

Recommendations:

It is recommended that all foundations be inspected by a competent person prior to placing any concrete. Regular checks on the quality and compaction of the backfill to the terraces should be made. At some points, surface water is expected to pond around the building and even flood the buildings during heavy rainfall hence it is recommended that surface drainage be implemented to facilitate surface run-off away from the structures thereby also reducing the near surface soils' collapse potential. Determination and certification of flood line would be recommended.

While every effort has been made to ensure the accuracy of the information contained in this report, the results are based upon fieldwork and limited to laboratory testing only. The investigation has sought to highlight general

areas of potential foundation and excavation problems, and to provide early warning to the design engineers for the purpose of planning.

The ground conditions described in this report refer specifically to those encountered in the inspection trial pits profiled on site. It is thus possible that localized soil conditions at variance to those describe in the report may be encountered. Based on the recommendations and findings outlined in this report, the project site is considered suitable for the proposed development, should conditions at variance with the findings outlined in this reports be encountered during construction, these must be verified by a competent person.

11.3.3. Heritage and archeological Specialist

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.

Details of Specialist:

Vhufa Hashu Heritage Consultants
25 Roodt Street
P.O. Box 1856
Nelspruit, 1200

Tel: 013 752 5551
Mobile: 083 357 3669
Fax: 086 263 5671
E-mail: info@vhhc.co.za
Contact Person: Richard Munyai

Area of expertise: Heritage and Archeology Specialist

Findings:

Phase 1 Heritage Impact Assessment has been conducted to evaluate the archaeological sensitivity of the study area. No remains from the Stone Age, Iron Age or Historical Period were recorded on the proposed site. No places designated for spiritual or social gatherings recorded on the proposed site. However, there are three grave yards identified within the proposed development site. All graves yards are still used and well maintained and are demarcated on the town planner' layout Erf 1609, Erf 1611 and Erf 1612.

Recommendations:

Should any chance archaeological or any other physical cultural resources be discovered subsurface, heritage authorities should be informed. From an archaeological and cultural heritage resources perspective, there are no objections to the proposed Township Formalization and associated.

11.3.4. Desktop Paleontological Study

Details of Specialist

Banzai Environmental (Pty) Ltd
Elize Butler
Tel: +27 844478759
Email: elizebutler002@gmail.com

Findings

The proposed development is underlain by the Sibasa Formation, Soutpansberg Group. The Precambrian basalts of the Sibasa Formation, Soutpansberg Group are unfossiliferous and therefore have no paleontological potential.

Recommendations

It is consequently recommended that no further paleontological heritage studies, ground truthing and/or specialist mitigation are required pending the discovery of newly discovered fossils.

In the unlikely event that fossil remains are discovered during any phase of construction, either on the surface or exposed by excavations, the ECO in charge of these developments ought to be alerted instantly. These discoveries ought to be protected (preferably in situ) and the ECO must report to SAHRA so that appropriate mitigation (recording, collection) can be carry out by a professional paleontologist.

11.3.5. Traffic Impact Assessment Specialist

The main objective of the study is to determine 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;
• Determine 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
• Recommend infrastructure improvements, if deemed necessary, to accommodate the expected development traffic.

Details of Specialist:

Ajayi-Jantjies-Adams and Associates (AJA Consulting)
P O Box 2890
Faerie Glen, 0043

Tel: (012) 991 1993
Email: info@ajacce.co.za
Contact Person: Mongamo Jantjies Pr. Tech. Eng.

Area of expertise: Traffic Engineer

Findings:

- The site is in the Limpopo Province, Collins Chabane Local Municipality, in Tshikundu, along Road R524, approximately 44Km Northeast from Thohoyandou and about 21 km Southwest of Kruger National Park Punda Maria Gate.
- The proposed development site is on The Remainder of The Farm Tshikundu's Location 262 MT and measures 563.64 hectares in total size.
- Though Route R524's functional road classification is meant to be a Class 2 Rural Road, the developments near the road in areas such as Saselamani necessitates for the road to be classified as a Class 3 Urban Road.
- Accesses to the proposed CBD are proposed via accesses on Road R524 predominantly to the South of the Site, accesses on Road D3639 to the North and East of the Site and accesses on Road D3661 to the West of the site.
- Accesses along the R524 will have to be positioned in line with SANRAL requirements and recommendations.
- Traffic counts and site observations were conducted on the 10th of March 2020.
- Design and Planning Horizon analysis was undertaken for the development accesses.
- It can be noted that under Design Horizon Traffic Conditions, the proposed accesses / intersection will operate at acceptable Levels of Service with acceptable average delays for the intersections and all legs of the intersections and accesses.
- Public Transport constitutes about 9 to 16% of traffic in the study area.
- Public Transport facilities such as bus-stops must be provided along all major access roads.
- NMT infrastructure needs to be provided in line with SANRAL requirements along R524.
- SANRAL requirements as outlined in their 2016 report on R524 NMT and Safety Assessment need to be taken into consideration.

Recommendations:

- The proposed development should be considered favourably from a traffic engineering point of view by the relevant authorities given the proposed road, public transport and NMT upgrades.
- Detailed designs for the proposed improvements should be undertaken by a professional engineer / technologist with suitable road design experience.

11.3.6. Engineering and Services Specialist

A report on the civil services, including solid waste and water options to demonstrate the provision of infrastructure required for the required township.

Details of Specialist:

Dalimede Projects (Pty) Ltd
34 Jorrisen Street
Polokwane, 0699
Tel:079 368 8414

Fax: 086 518 0234
Email:admin@dalimede.com
Contact Person: Litmos Mthunzi

Area of expertise: Civil Engineer

Findings:

Water

The Xikundu WTW was built to supply Xikundu-Mhinga and Lambani areas. Raw water is abstracted from the weir on Luvuvhu River (22°48'26.71" S 30°47'53.35" E). Raw water is then pumped to the Xikundu WTW. The design capacity of the Xikundu water treatment works is 20Mℓ / day. The Xikundu WTW was also designed to have a future provision for further extension of 10Mℓ/day capacity.

This future extension would increase the design capacity to 30Mℓ/day. However, the actual capacity is 15.7 Mℓ/day. The Xikundu WTW pumps potable water to the NR3 command 5Mℓ reservoir in Xikundu Xifaxane Village Mountain. The NR3 command reservoir then feeds the water scheme reservoirs, through gravity pipelines, at the following villages; Xikundu Xifaxani, Ximixoni, Magomani, Manghena, Nhlengani, Botsoleni, Mabiligwe, Makahlule, Makuleke, Maphophe and Saselamani.

Electricity

There is an existing MV feeder line that are located along the tarred road R524. The MV line is Mink Conductor. Saselamani township will be connecting electricity from pole no: MMI 347 on 22kV. The Mhinga 22kV feeder is fed from Malamulele substation and the capacity is 3x20MVA, 66/22kV. The current loading from Malamulele substation is 30MVA. MV feeder will need to be constructed within the township connecting the distribution transformer.

Solid Waste Disposal

The solid waste generation range from 0.41 kg per capita per day in the poor areas, to 1.29 kg per capita per day. The lower rate of 0.41kg/c/d was adopted for the township.

Storm water

The storm water will drain on according to the slope of the natural ground.

Sanitation

There is no existing bulk wastewater treatment infrastructure in Saselamani. Domestic wet or dry sanitation is utilised in the village. This is the form of pit toilets, septic tanks and soakaways.

Floodline Report

In terms of section 114 of the National Water Act, Act 36 of 1998 the above-mentioned property is affected by flood water within the 1:100 period from the nearest river / stream as indicated in the floodline report. Development must be done outside of the floodline.

Recommendations:

Water

The proposed township will be serviced by house connections. It is proposed that the following infrastructure be developed to for the water supply;

• Upgrade Xikundu WTW by the planned additional 10Mℓ module.
• Upgrade the 4km pumping main from the Xikundu WTW.
• Concrete 3200kℓ reservoir to serve the township.
• 5km gravity bulkline to the proposed township.
• Water reticulation for the proposed township.

Electricity

MV feeder network that supply the township is Mhinga 22kV and substation name is Malamulele substation. The capacity is 3 x 20MVA, 66/22kV and Malamulele substation is currently loading 30MVA. MV line is mink

conductor. It is recommended that the township can be connected from the existing network. Implementation network must be installing according to Eskom distribution network standard.

Solid Waste Disposal

A regional landfill situated nearest the site is used to dispose solid waste. The local municipality is responsible for connecting and disposing the solid waste.

Storm Water

The storm water will then flow over the veld to the stream storm water discharge control will be applied in order to reduce the damaging effect of the increase in runoff due to densification.

Sanitation

It is proposed that a combination of private domestic dry sanitation toilet systems and septic tank and soakaways be utilised to handle the township wastewater. The dry sanitation toilets used in the township must not be smelly or attract flies.

Domestic septic tanks and soakaways can be utilised provided the insitu soil percolation test results permit the use of soakaways.

There are toilets that can be bought from commercial suppliers; viz,

• Enviro-loo domestic toilets.

• Precast complete concrete structure toilets.

Floodline Report

It is recommended that a buffer zone of 20m should be provided between the 1:100 flood line area and any proposed development.

11.3.6. Wetland and Functional Assessment Specialist

The purpose of this Wetland Delineation and Functional Assessment (WD&FA) was to identify sensitivities on site in order to determine the developable land and associated environmental legal requirements.

Details of Specialist

Triplo4 Sustainable Solutions (Pty) Ltd

Address: 35/37 Island Circle,

Island Office Park,

Block 5, 3rd Floor, Suite 535,

Riverhorse Valley

Telephone: +27 (0)31 563 4422

Facsimile: +27 (0)31 940 9847
Email: hantie@triplo4.com

Findings:

The proposed development was observed to fall within the Shingwedzi sub-Water Management Areas (WMA), which is situated within the greater Luvuhu and Letuba WMA, within Quaternary Catchment B90B. No Freshwater Ecosystem Priority Areas (FEPA) rivers or wetlands were identified to be at risk as a result of the proposed development, as the closest FEPA wetland is approximately 1.8km away.

Recommendations:

All the construction activities of the proposed development can occur but must take into cognizance the surrounding watercourses and their associated buffers (18m for constructional and operational) in which no construction activities should occur. Furthermore, the mitigation measures outlined in Wetland and Functional Assessment Report are to be included in the EMPr and must be followed.

12. IMPACT ASSESSMENT

An environmental Impact Assessment must take into account the nature, scale and duration of effects on the environment whether such effects are positive (beneficial) or negative (detrimental). Each issue / impact is also assessed according to the project stages from planning, through construction and operation to the decommissioning phase. Where necessary, the proposal for mitigation or optimisation of an impact is noted.

12.1. 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.
Tables below: 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

12.2 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 Collins Chabane Local Municipal area of jurisdiction
Medium-high	Within Vhembe District Municipality area
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

13. KEY ENVIRONMENTAL IMPACTS

The following possible environmental impacts were identified

Environmental issues	Possible cause	Potential impacts
Air Pollution and Noise		
Smoke	- Vehicle emissions. - Fires.	- Health problems. - Air pollution. - Public nuisance. - Noise pollution.
Dust	- During construction. - Vehicle operation on roads. - Vegetation clearing.	
Fumes	- Fumes from vehicles. - Fumes from machinery.	
Noise	- 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	- 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.	- Pollution of surface and groundwater. - Health risk. - Lower water quality. - Soil degradation. - Erosion. - Siltation.
Silt deposition in surface water	- Erosion risk due to increased run-off from built up area. - Erosion from cleared areas during construction.	
Pollution from sanitation system	- Leakages of system and incorrect management of sanitation system. - Inadequate measures to prevent sewage spillages. - Overflow of sewage to groundwater.	
Environmental issues	**Possible cause**	**Potential impacts**
Water quantity		
Impact on amount of water resources available	Over-utilisation of available water.	- Lose scarce resource - Increased pressure on ground water supply sources.

Environmental issues	Possible cause	Potential impacts
Land/Soil degradation		
Soil contamination and degradation	- Spillages of oil, chemicals from machinery & vehicles. - Removal of vegetation during clearing for construction. - Sewerage spillages. - Erosion due to increased runoff from built-up areas. - Increased erosion of drainage channels. -Site clearing during construction.	- Soil degradation - Loss of topsoil - Dust formation - Erosion
Environmental issues	**Possible cause**	**Potential impacts**
Biodiversity		
Decline in fauna and flora diversity	- Cleaning of site for construction. - Pollution of soil. - Pollution of water resources. - Physical establishment of development. - Loss of habitat due to establishment of development.	- 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	- Damage / loss during construction. - Damage / loss during operation.	- Possible loss of cultural heritage.
Environmental issues	**Possible cause**	**Potential impacts**
Visual impact		
Impact of the proposed development of sense of place.	- The physical existence of the development.	- Negative impact on landscape quality character. - Negative impact on sense of place.
Visual impact	- Construction site and buildings. - Lights at night. - Presence of new development. - Overhead power lines.	- Obstruction. - Visual intrusion. - Public nuisance.

Environmental issues	Possible cause	Potential impacts
Health and Safety		
Security	- Influx of people to area including construction workers and others after completion.	- Loss of safe and secure environment. - Threat to health. - Danger to human life.
Fires	- 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.	- Change of land use to residential, business, institutional, educational, public open spaces and streets.	- Impact negatively on agricultural production. - Land will no longer be used for agriculture.
Impact of the residential and other development on adjacent landowners	- 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.)	- Nuisance and disruption. - Noise pollution. - Air pollution. - Negative visual impact.
Impacts related to the establishment of a construction camp with accommodation	- 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.	Adverse impact on the environment. - Resentment from neighbouring residents.
Impact ground and water pollution from littering and waste disposal during construction and operational phases	- The presence of a large work force and equipment and machinery during construction causing littering and dumping refuge and builder's rubble on site. -Construction activities from heavy vehicles and machinery.	- Soil and water pollution
	- The construction of structures such as open trenches and earth heaps might also hold safety risks for people.	- Safety risks for motorists, passengers, pedestrians

		and residents of the area
	- A lack of proper ablution facilities for temporary workers during construction.	- Soil and water pollution - Unhygienic conditions - Health risk.
Impact from the provision of structures and infrastructure services	- The development, construction and provision of infrastructure services.	- 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.
Impact on archaeological /cultural / social features	- The development of structures and infrastructure services for residential and other sites. - Clearing of construction sites. - Construction of access roads. - Excavation of trenches for the installation of underground pipelines and cables.	- Negative impact on cultural or heritage resources.
Job creation Ownership	- Temporary jobs during construction phase. - Permanent jobs during operation. - New housing. - New businesses. - New schools.	- Positive impact – job Creation.

14. CONCLUSIONS

The development proposal has no fatal flaws in terms of the institutional, bio-physical or socio-economic environments. In fact, it is believed that the proposed development compliments the required and desired balance to be achieved between socio-economic and ecological / environmental factors.

The Environmental Management Program (EMPr) and all the mitigation measures addressed in all the specialist reports should be strictly adhered to, therefore mitigating impacts as far as possible. Should this site not be developed, it will remain as an isolated and unconnected land area that will be vulnerable to crime and potential illegal informal occupation.

15. RECOMMENDATIONS

It is recommended that the "Formalisation and Proclamation of sites" option which has been identified as the preferred alternative is used. It is further recommended that this application be approved with the following conditions:

- All requirements from the Collins Chabane Local Municipality be adhered to including:
- Engineering services report addressing provision of services.
- All other state departments' comments and input be adhered to
- The conditions of the Record of Decision from the competent authority (LEDET).
- The EMPr conditions as attached to this document.
- An Environmental Control Officer (ECO) should be appointed to audit the Environmental Management Plan on a bi-weekly basis during construction phase.