



## Final Scoping and Plan of Study for EIA Report

12/1/9/2-W41

**Proposed Thabo Mbeki Township Development on the Remainder of the farm Richards Lager 124 LR, Lephale Local Municipality, Waterberg District Municipality**

**August 2013**

Prepared for:

Pieterse, du Toit and Associates Town and Regional Planners on behalf of:  
**Department of Co-operative Governance, Human Settlement and Traditional Affairs**

**Document version 2.0 – Final**

**Compiled by: N. van der Walt**

**Reviewed by: J.H. Botha**



*Proudly Supporting*  
**TOUCHING AFRICA**

Prepared by



---

---

## Proposed Thabo Mbeki Township Development on the Remainder of the farm Richards Lager 124 LR, Lephale Local Municipality, Waterberg District Municipality

---

---

August 2013

**Conducted for:**

Pieterse, du Toit and Associates Town & Regional Planners on behalf of  
**Department of Co-operative Governance, Human Settlement and Traditional Affairs**

**Contact:**

Ms. Mbulaheni, M.

Physical address: Hensa Towers, Rabe Street, Polokwane

Postal address: Private Bag X 9485, Polokwane

Tel: 015 284 5067

Cell: 084 963 2321

**Compiled by:**



**N. van der Walt**

Environmental consultant



**Reviewed by:**

Mr. J.H. Botha (Senior Environmental Scientists – M.Sc. Environmental Management (Pri Sci Nat))

## REPORT DISTRIBUTION LIST

<b>Name</b>	<b>Institution</b>
Ms. Mbulaheni, M.	Department of Co-operative Governance, Human Settlement and Traditional Affairs (COGHSTA)
Mr. T. Pieterse	Pieterse du Toit and Associates Town and Regional Planners
Ms. T.P. Malungani	LEDET
Mr. Donald Mabada	DWA (Letter of availability)
Mr. L. Mahlatji	Department of Agriculture – National (NDA) – Letter of availability
Ms. O. Radipabe	Lephalale Local Municipality (Letter of availability)
Ward Councillor	Lephalale Local Municipality (Letter of availability)
Mr. P. Siebe	Waterberg District Municipality (Letter of availability)

## DOCUMENT HISTORY

<b>Report no</b>	<b>Date</b>	<b>Version</b>	<b>Status</b>
AGES: L 13 020 E LEDET: 12/1/9/2-W41	17 June 2013	1.0	Draft
AGES: L 13 020 E LEDET: 12/1/9/2-W41	5 August 2013	2.0	Final

Although AGES (Pty) Ltd exercises due care and diligence in rendering services and preparing documents, AGES (Pty) Ltd accepts no liability, and the client, by receiving this document, indemnifies AGES (Pty) Ltd and its directors, managers, agents and employees against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by AGES (Pty) Ltd and by the use of the information contained in this document.



This document contains confidential and proprietary information of AGES (Pty) Ltd and is protected by copyright in favour of AGES (Pty) Ltd and may not be reproduced, or used without the written consent of AGES (Pty) Ltd, which has been obtained beforehand. This document is prepared exclusively **for Pieterse, du Toit and Associates Town & Regional Planners on behalf of Limpopo Department of Co-operative Governance, Human Settlement and Traditional Affairs (COGHSTA)** and is subject to all confidentiality, copyright and trade secrets, rules, intellectual property law and practices of South Africa.

## Table of contents

---

<b>1. GENERAL INFORMATION .....</b>	<b>5</b>
1.1. PROJECT OBJECTIVE .....	5
<b>2. PROJECT DESCRIPTION .....</b>	<b>6</b>
2.1. NATURE OF ACTIVITY .....	6
<b>3. CONSIDERATION OF ALTERNATIVES .....</b>	<b>6</b>
3.1. LOCATION ALTERNATIVE .....	6
3.2. PROCESS ALTERNATIVE.....	6
3.3. NO GO ALTERNATIVE.....	7
<b>4. DESCRIPTION OF PROPERTY .....</b>	<b>7</b>
4.1. PROJECT LOCALITY.....	7
<b>5. DESCRIPTION OF THE AFFECTED ENVIRONMENT .....</b>	<b>8</b>
5.1. DESIRABILITY .....	8
5.2. LAND USE .....	9
5.3. VISUAL ENVIRONMENT AND NOISE .....	9
5.4. AIR QUALITY.....	9
5.5. PROVISION OF WATER.....	9
5.6. SOLID WASTE MANAGEMENT.....	9
5.7. SEWAGE.....	9
5.8. ROADS AND STORM WATER.....	9
5.9. ARCHAEOLOGICAL AND HISTORICAL ATTRIBUTES .....	9
<b>6. LEGAL AND POLICY REQUIREMENTS .....</b>	<b>10</b>
<b>7. KEY ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS.....</b>	<b>12</b>
<b>8. PUBLIC PARTICIPATION PROCESS .....</b>	<b>15</b>
8.1. PROCESS FOLLOWED.....	15
8.1.1. NEWSPAPER ADVERTISEMENT .....	15
8.1.2. SITE NOTICE .....	15
8.1.3. BACKGROUND INFORMATION NOTICES.....	15
8.1.4. PUBLIC MEETING.....	15
8.1.5. DRAFT SCOPING REPORT AND PLAN OF STUDY FOR EIA.....	16
<b>9. NEED AND DESIRABILITY .....</b>	<b>16</b>
<b>10. ADVANTAGES AND DISADVANTAGES OF ALTERNATIVES.....</b>	<b>18</b>
10.1. LOCATION ALTERNATIVE .....	18
10.2. PROCESS ALTERNATIVE.....	18
10.2.1. ADVANTAGES .....	18

10.2.2. DISADVANTAGES ..... 18

10.3. NO GO ALTERNATIVE..... 18

11. PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT ..... 19

11.1. SITE LOCATION ..... 19

11.2. RESIDENTIAL DEVELOPMENT SPECIFICATIONS ..... 19

11.3. TASKS TO BE UNDERTAKEN ..... 19

11.3.1. IMPACTS TO BE EVALUATED ..... 21

11.3.2. TIME-TABLE OF TASKS ..... 23

11.4. CONSULTATION WITH THE COMPETENT AUTHORITY ..... 23

12. ENVIRONMENTAL IMPACT DETERMINATION AND EVALUATION ..... 24

12.1. METHODOLOGY TO ASSESS THE IMPACTS ..... 24

12.2. DESCRIPTION OF THE PARAMETERS USED IN THE MATRIXES ..... 25

13. PUBLIC PARTICIPATION PROCESS..... 27

14. CONCLUSIONS AND RECOMMENDATIONS ..... 27

15. BIBLIOGRAPHY ..... 28

**LIST OF APPENDIXES:**

**LOCALITY MAP .....APPENDIX 1**

**LAYOUT PLAN .....APPENDIX 2**

**PROOF OF PUBLIC PARTICIPATION PROCESS .....APPENDIX 3**

## 1. GENERAL INFORMATION

AGES (Pty) Ltd was appointed by **Pieterse, du Toit and Associates** on behalf of **Limpopo Department of Co-operative Governance, Human Settlement and Traditional Affairs (COGHSTA)** to conduct an Environmental Impact Assessment in order to obtain the necessary environmental authorisation for the proposed Thabo Mbeki Township development on the remainder of the farm Richards Lager 124 LR, situated in the Lephalale Local Municipal area of jurisdiction, Waterberg District Municipality.

**Applications has been made in terms of the Environmental Legislation :Regulation 545 of 18 June 2010 of the National Environmental Management Act – Activity 15 “*The physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more*”, Regulation 544 of 18 June 2010 - Activity 11“*The construction of bridges where such construction occurs within a watercourse or within 32 metres of a watercourse, excluding where such construction will occur behind the development setback line*”, Regulation 544 of 18 June 2010 – Activity 18(i) “*The infilling or depositing of any material of more than 5 cubic meters, into, or the dredging, excavation, removal or moving of soil, sand, pebbles or rock from a watercourse* “and Regulation 546 of 18 June 2010 - Activity 14(i) “*The clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.***

### 1.1. Project Objective

This Scoping Report was done with the objective to supply the Limpopo Department of Economic Development, Environment and Tourism (LEDET) with the necessary environmental information to make a decision regarding the approval of the Scoping Report and the Plan of Study for environmental impact assessment.

This Scoping Report was done to comply with the requirements of the environmental regulations promulgated on 18 June 2010.

These regulations are promulgated in terms of Chapter 5 of the National Environmental Management Act 107 of 1998.

The following listed activities will be applied for under Regulation 545 of 18 June 2010 of the National Environmental Management Act:

**Regulation 544:**

**Activity 18(i) “*The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, pebbles or rock from a watercourse*”**

**Regulation 544:**

**Activity (11) *The construction of bridges where such construction occurs within a watercourse or within 32 metres of a watercourse, excluding where such construction will occur behind the development setback line*”,**

**Regulation 545:**

**Activity 15: “*Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more*”**



**Regulation 546:**

**Activity 14(i) “The clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation”**

These listed activities requires a scoping phase and EIA to be conducted and authorization from the Limpopo Department of Economic Development, Environment and Tourism (LEDET).

## **2. PROJECT DESCRIPTION**

### **2.1. Nature of Activity**

The proposed project will entail the development of a township of approximately 4 700 stands on the remainder of the farm Richards Lager 124 LR. The township development will consist of:

- Residential (±4640 erven)
- Business (±10 erven)
- Educational (±22 erven)
- Municipal uses / Community Centre(±1 hectare)
- Filling Station (1 erf)
- Industrial (±3 hectares)
- CBD (±1 hectare)
- Recreational facilities (±11 hectares)
- Churches (±23 erven)

The total area will be approximately 364.17 ha. A draft layout plan is included in Appendix 2.

## **3. CONSIDERATION OF ALTERNATIVES**

In the EIA process, the consideration of alternatives is always important, should the proposed site not fit into the parameters of the EIA framework. The alternatives can be categorised as follows.

- Location alternatives
- Process alternatives
- No-Go alternative

### **3.1. Location alternative**

The farm Richards Lager 124 LR is owned by the State and not held in trust for any traditional community. The ownership of the farm is also in process to be transferred to the Lephalale Municipality. It is the only property available to the State for township establishment purposes.

### **3.2. Process Alternative**

- The layout of the area will be adapted to fit in with the ecological sensitivity (an **ecological**

**assessment** will be carried out). The best location will be selected for the different elements of the proposed development.

- A **heritage impact assessment** will be conducted to determine if any heritage components are present.
- A **geo-technical study** will determine the positioning of certain parts of the development based on the soil conditions.
- A **water use license will have to be obtained for drainage crossings.**
- **Should the removal of protected trees be necessary a permit will need to be obtained from DAFF (Department of Agriculture, Fisheries and Forestry).**

Process alternatives will be assessed to ensure that the best option for services like water supply and sanitation to minimise pollution will be selected.

The best alternatives regarding all processes and services will be considered. This will be investigated and discussed in the EIAR.

### **3.3. No go alternative**

This option would come into effect if the abovementioned assessments reveal fatal flaws in the process.

## **4. DESCRIPTION OF PROPERTY**

The remainder of the farm Richards Lager 124 LR is situated within the Lephalale Local Municipal area of jurisdiction in the Waterberg District Municipality.

The project area, approximately 364.17 ha in size, is defined as a roughly rectangular parcel of land.

### **4.1. Project Locality**

The site for the proposed development is on the remainder of the farm Richards Lager 124 LR which is approximately 58 kilometres northeast of the town Lephalale. The site is approximately 2 kilometres east of the Lephalala River and approximately 1.3 kilometres east of the of Thabo Mbeki township.

The centre of the study area is located roughly at the following coordinates:

**Latitude: S23°20'23.01"**

**Longitude: E28°01 '37. 09 "**

(See locality map as attached in **Appendix 1**)

## 5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

### Vegetation

The site is approximately 2 kilometers east of the Lephalala River and approximately 1.3 kilometers east of the of Thabo Mbeki township.

The most recent classification of the area by Murine & Rutherford shows that the site is classified as Roodeberg Bushveld. The conservation status of this vegetation type is classified as being least threatened with almost 6% statutorily conserved, mainly in the Wonderkop and Blouberg (Malebocho) nature reserves. An additional 3% is conserved in other reserves. About 18% is transformed, mainly by cultivation, with very little urban and built up areas (Mucina & Rutherford, 2006).

The vegetation of the proposed site is characterized by open low *Acacia* shrubveld with a taller and more dense *Acacia* thornveld component.

### Topography and Rainfall

The site is characterized by plains with low hills.

The mean monthly maximum and minimum temperatures for Marnitz is 37°C and 0, 2°C respectively. Frost occurs fairly frequently.

### Geology and Soils

The Roodeberg vegetation type is characterized mainly by sandstone, conglomerates, siltstone and shale from the Kransberg and Matlabas Subgroups (Mokolian Waterberg Group). A variety of soils occur, but mostly sandy soils.

### Drainage

The site for the proposed development falls within the A50H quaternary drainage area. The proposed site is traversed by drainage lines

#### 5.1. Desirability

Due to the MGP's central location, current facilities including availability of engineering services this cluster is proposed to serve the rural settlements in the eastern parts of the study area at a higher level than merely local service points as previously provided.

The proposed development site falls outside the Lephalale/Phalala river flood areas. Furthermore the secondary 1:100 flood line areas have been determined for the development site to ensure that no development is planned within these flood areas.

The demarcation of erven with individual title and household services could also result in existing occupants on traditional land with PTO rights, to move to the newly demarcated and serviced erven, such as Thabo Mbeki extensions **(Also refer to section 9 below)**.

## **5.2. Land use**

The current land use is agriculture and the area is used for grazing by the adjacent Ga-Seleka Community.

## **5.3. Visual environment and noise**

All structures and lights will cause a visual impact.

During the construction and operational phases of the proposed development, noise and dust may be a factor. These impacts and mitigation measures will be addressed in the EIAR and EMPr.

## **5.4. Air quality**

During the construction and especially when clearing the site, dust particles will be dispersed into the atmosphere which will have an impact to the air quality in the area, similar to other activities in the area. These impacts and mitigation measures will be addressed in the EIAR and EMPr.

## **5.5. Provision of water**

Bulk water supply will be addressed in the engineering services report that will be included in the EIAR.

## **5.6. Solid Waste Management**

The best solution for the disposal of solid waste will be investigated together with Lephalale Municipality and results included in the EIAR.

## **5.7. Sewage**

A water borne sewerage treatment system (Calcamite sewer package plants) is proposed Details will be included in the services report that will form part of the EIAR.

## **5.8. Roads and storm water**

Details of the roads network and storm water system will be included in the services report that will form part of the EIAR.

## **5.9 Electrical Reticulation**

Details of the electrical supply and reticulation will be included in the electrical report that will form part of the EIAR.

## **5.9. Archaeological and historical attributes**

A Phase 1 Archaeological Impact Assessment will be conducted to evaluate the archaeological sensitivity of the study area. This report will be included in the EIAR.

## **6. LEGAL AND POLICY REQUIREMENTS**

The following is a broad overview of the relevant policy and legal requirements, but not limited to, applicable to the proposed project.

### **Constitution of South Africa (Act 108 of 1996)**

Section 24 of this Act recognises not only that everyone has a right to an environment that is not harmful to our health or wellbeing, but it also recognises the notion of sustainable development and its supporting principles.

### **National Environmental Management Act (Act no 107 of 1989)**

This Act defines the concept of sustainability, to ensure that any social or economic development will take place in such a way as to preserve the Environment for present and future generations. This Act also takes into account the pollution principles.

### **National Water Act (Act no 36 of 1998)**

Section 19 of the National Water Act, Act 36 of 1998 requires that all reasonable measures be taken to prevent any water pollution from occurring, continuing or recurring. The Act further describes a number of water uses and requires that a water use License have to be obtained for the specified water uses.

### **National Biodiversity Act (Act 10 of 2004)**

The National Environmental Management Biodiversity Act (Act No. 10 of 2004), aims to provide for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bio prospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith.

### **National Heritage Resources Act (Act 25 of 1999)**

The Act makes provision for the undertaking of heritage resources impact assessments for various categories of development as determined by Section 38. It also provides for the grading of heritage resources and the implementation of a three-tier level of responsibilities and functions for heritage resources to be undertaken by the State, Provincial authorities and Local authorities, depending on the grade of the Heritage resources. The Act defines cultural significance, archaeological and paleontological sites and material (Section 35), historical sites and structures (Section 34), graves and burial sites (Section 36) that falls under its jurisdiction. Archaeological sites and material are generally those resources older than a hundred years, while Section 34 also protects structures and cultural landscapes older than 60 years, including gravestones. Procedures for managing grave and burial grounds are clearly set out in Section 36 of the NHRA. Graves older than 100 years are legislated as archaeological sites and must be dealt with accordingly.

Section 38 of the NHRA makes provision for developers to apply for a permit before any heritage resource may be damaged or destroyed.

**National Veld and Forest Fires Act, 1998 (Act 101 of 1998)**

This act provides for the control of veld fires. The regulations in terms of this act set certain conditions for the owner of a property for emergency preparedness for the control of veld fires. It also describes the compulsory making of firebreaks to control veldt fires that originates on the owner's property as well as on adjacent properties.

**Limpopo Environmental Management Act (Act 7 of 2003)**

This act provides for the management and protection of the environment including flora and fauna in Limpopo Province.

**National Environmental Management: Waste Act (Act 59 of 2008)**

This act has at its core the objective to regulate waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development.

This act also provides national norms and standards for regulation and management of waste by all spheres of government and specific waste management measures. It also provides for the licensing and control of waste management activities and also a national waste information system, compliance and enforcement.

Some listed activities under the EIA regulations of 2006 have been repealed and have been included in this act. These include activities entailing any waste activities including sewage systems.

**Conservation of Agricultural Resources Act (Act 43 of 1983)**

This act provide for the control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants.

**Subdivision of Agricultural Land Act (Act 70 of 1970)**

This act provides for the control over the subdivision of agricultural land for uses other than agriculture.

**Minerals and Petroleum Resources Development Act (Act 28 of 2002)**

This act provides for the regulation and management of minerals and also the petroleum industry in the RSA and the Department of Minerals and Energy is the Lead Agent for applying this legislation.

## 7. KEY ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS

The following possible environmental impacts were identified:

ENVIRONMENTAL ISSUES	POSSIBLE CAUSE	POTENTIAL IMPACTS
<b>Air Pollution and noise</b>		
Smoke	<ul style="list-style-type: none"> <li>• Vehicle emissions and fires</li> </ul>	<ul style="list-style-type: none"> <li>• Health problems</li> <li>• Air pollution</li> <li>• Public nuisance</li> </ul>
Dust	<ul style="list-style-type: none"> <li>• During construction and vehicle operation on roads</li> </ul>	
Fumes	<ul style="list-style-type: none"> <li>• Fumes from vehicles and machinery</li> </ul>	
Noise	<ul style="list-style-type: none"> <li>• Construction &amp; operation noise</li> </ul>	
<b>Water quality</b>		
Pollution of water sources	<ul style="list-style-type: none"> <li>• Spillage of fuel &amp; oil from vehicles</li> <li>• Migration of contaminants off the site</li> <li>• Solid waste in storm water</li> </ul>	<ul style="list-style-type: none"> <li>• Pollution of surface and groundwater</li> <li>• Health risk</li> <li>• Lower water quality</li> <li>• Soil degradation</li> <li>• Siltation of aquatic system</li> </ul>
Silt deposition in surface water drainage lines	<ul style="list-style-type: none"> <li>• Erosion risk due to increased run-off from built up area</li> <li>• Erosion from cleared areas during construction</li> </ul>	
Pollution from sanitation system and waste water treatment works	<ul style="list-style-type: none"> <li>• Leakages of system and incorrect management of sanitation system</li> <li>• inadequate measures to prevent spillages</li> <li>• Overflow of sewage to groundwater</li> </ul>	
<b>Water quantity</b>		
Impact on amount of water resources available	Over-utilisation of available water	<ul style="list-style-type: none"> <li>• Loss of a scarce resource</li> <li>• Increased pressure on ground water supply sources</li> </ul>
<b>Land/Soil degradation</b>		
Soil contamination and degradation	<ul style="list-style-type: none"> <li>• Spillages of oil, chemicals from machinery and vehicles.</li> <li>• Sewerage spillage</li> <li>• Erosion due to increased runoff from built-up areas</li> <li>• Site clearing during construction</li> </ul>	<ul style="list-style-type: none"> <li>• Pollution of soil</li> <li>• Soil degradation</li> <li>• Loss of topsoil</li> </ul>
<b>Biodiversity</b>		
Decline in fauna and flora diversity	<ul style="list-style-type: none"> <li>• Cleaning of site for construction</li> <li>• Physical establishment of development</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of biodiversity</li> <li>• Loss of habitat</li> <li>• Negative impact on biodiversity</li> <li>• Negative impact on rare / endangered/ endemic species and habitats</li> </ul>

ENVIRONMENTAL ISSUES	POSSIBLE CAUSE	POTENTIAL IMPACTS
<b>Cultural/Heritage</b>		
Possible loss of heritage sites	<ul style="list-style-type: none"> <li>• Damage during construction</li> <li>• Damage during operation</li> </ul>	<ul style="list-style-type: none"> <li>• Possible loss of cultural heritage</li> </ul>
<b>Visual impact</b>		
Visual impact	<ul style="list-style-type: none"> <li>• Construction site, buildings,</li> <li>• Lights at night</li> <li>• Physical presence of new developments</li> </ul>	<ul style="list-style-type: none"> <li>• Obstruction</li> <li>• Visual intrusion</li> <li>• Public nuisance</li> </ul>
Impact of the proposed development of sense of place.	<ul style="list-style-type: none"> <li>• The physical existence of the development</li> </ul>	<ul style="list-style-type: none"> <li>• Negative impact on landscape quality character</li> <li>• Negative impact on sense of place.</li> </ul>
<b>Socio-economic impacts</b>		
Impact on archaeological /cultural / social features	<ul style="list-style-type: none"> <li>• The development of structures and infrastructure services for residential and other sites</li> <li>• Clearing of construction sites</li> <li>• construction of access roads</li> <li>• Excavation of trenches for the installation of underground pipelines and cables.</li> </ul>	<ul style="list-style-type: none"> <li>• Negative impact on cultural or heritage resources</li> </ul>
Impact of the residential and other development on adjacent landowners	<ul style="list-style-type: none"> <li>• noise from blasting and digging during construction,</li> <li>• dust generated by construction vehicles and from site preparation,</li> <li>• the visual impact of lights used for night-time construction activities</li> <li>• The visual impact of residential and other units (business, institutional etc.) located against the skyline.</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance and disruption</li> <li>• Noise pollution</li> <li>• Air pollution</li> <li>• Negative visual impact</li> </ul>
Impacts related to the establishment of a construction camp with accommodation	<ul style="list-style-type: none"> <li>• Location of construction camp.</li> <li>• Environmental impacts of construction activities e.g. spillage of hazardous liquids such as oil and fuel onto the soil surface.</li> <li>• Accommodation of construction teams on site</li> <li>• Littering, collecting of firewood and poaching.</li> <li>• Undesirable visitors to the area.</li> </ul>	<ul style="list-style-type: none"> <li>• Adverse impact on the environment,</li> <li>• Resentment from neighbouring residents.</li> </ul>
Impact ground and water pollution from littering and waste disposal during construction and operational phases	<ul style="list-style-type: none"> <li>• The presence of a large work force and equipment and machinery during construction causing littering and dumping refuse and builder's rubble on site.</li> </ul>	<ul style="list-style-type: none"> <li>• Ground and water pollution</li> </ul>



ENVIRONMENTAL ISSUES	POSSIBLE CAUSE	POTENTIAL IMPACTS
	<ul style="list-style-type: none"> <li>Construction activities from heavy vehicles and machinery.</li> </ul>	<ul style="list-style-type: none"> <li>increase of traffic in the area</li> </ul>
	<ul style="list-style-type: none"> <li>The construction of structures such as open trenches and earth heaps might also hold safety risks for people.</li> </ul>	<ul style="list-style-type: none"> <li>safety risks for motorists, passengers, pedestrians and residents of the area</li> </ul>
	<ul style="list-style-type: none"> <li>A lack of proper ablution facilities for temporary workers during construction</li> </ul>	<ul style="list-style-type: none"> <li>unhygienic conditions</li> <li>health risk.</li> </ul>
Impact from the provision of structures and infrastructure services	The development, construction and provision of infrastructure services	<ul style="list-style-type: none"> <li>pollution from sanitation systems,</li> <li>pollution of water resources,</li> <li>negative visual impact of overhead power lines and electricity supply, waste removal</li> <li>Soil erosion as a result of the construction of internal roads and water reticulation networks.</li> </ul>
Safety and Security	Influx of people to area including construction workers and others after completion.	<ul style="list-style-type: none"> <li>Loss of safe and secure environment</li> </ul>

**These key areas of impacts will be further explored and described in the environmental impact assessment report to detail the impacts, the impact ratings and mitigation measures.**

The following specialist investigations must be conducted and used in assessing the environmental impacts of the different activities that form part of the development:

- Ecological Assessment and sensitivity map.
- Phase 1 Heritage Impact Assessment by Cultural Resource Consultants
- A Geo-technical Investigation.
- A 1:100 year flood line determination.
- Engineering Services (roads, storm water, electricity, sewage).
- Any other specialist reports identified in the planning phase.

Cumulative impacts will be reported on in the Environmental Impact Assessment Report.

## 8. PUBLIC PARTICIPATION PROCESS

### 8.1. PROCESS FOLLOWED

#### 8.1.1. Newspaper Advertisement

The proposed project was advertised in the local newspaper namely “The Kwêvoël” on the 31<sup>st</sup> of May 2013 to inform people about the project and request them to identify environmental issues of concern. It also contained an invitation to respond to environmental issues and concerns of the proposed development. **An example of this advert is attached in Appendix 3.**

#### 8.1.2. Site Notice

Site advertisements in English and Sepedi were put up at strategic places along the proposed development site as well as at local shops within the Thabo Mbeki Village. An example of this notice as well as photos of the notices is attached in Appendix 3.

#### 8.1.3. Background Information Notices.

Background information documents were provided at meetings which was held on the 18<sup>th</sup> and 19<sup>th</sup> of May 2013. These meetings were held with the Traditional Authority of Seleka on the 18<sup>th</sup> and afterwards on the 19<sup>th</sup> with the community at Thabo Mbeki Village Community Hall.

**Background Information Documents were also provided to:**

- Department of Water Affairs
- Department of Rural Development and Land Reform
- The Ward Councilor – Lephhalale Local Municipality
- The Municipal Manager of Lephhalale Local Municipality
- Waterberg District Municipality
- National Department of Agriculture

An example of the background information document is included in Appendix 3.

Proof of the distribution of the Background Information Document to the various Interested and Affected parties is also attached in Appendix 3.

#### 8.1.4. Public Meeting

Meetings were held on the 18<sup>th</sup> and 19<sup>th</sup> of May 2013. The meeting on the 18<sup>th</sup> of May was held at the Seleka Traditional Office while the meeting on the 19<sup>th</sup> of May was held at the Thabo Mbeki Community Hall. **The meeting which was held on the 18<sup>th</sup> of May included the following:**

- Welcome and introduction of traditional leaders, consultants and departmental representatives
- Purpose of meeting
- Introduction to the EIA process
- Presentation of draft layout plan

- Questions raised regarding the layout plan, provision of services and way forward

**Meeting held on the 19<sup>th</sup> of May 2013:**

- Welcome and introduction of Mayor as well as consultant and departmental representatives
- Explanation of EIA process
- Explanation of need of development by Mayor
- Questions and answers

**8.1.5. Draft Scoping Report and Plan of Study for EIA**

- This draft scoping report and plan of study for EIA was made available for comments to all registered I&AP's from the 20<sup>th</sup> of June 2013 up and until the 30<sup>th</sup> of July 2013. No comments were received within this given time frame.
- The environmental impact assessment process will be based on the actions and findings of the scoping phase as well as the comments and reviews by authorities and from interested and affected parties. The draft Environmental Impact Assessment Report will be made available for comments to the Interested and Affected parties. It will include proof of all the new public participation processes as well as copies of all the specialist reports.
- Comments from I&AP's on the draft EIA Report will be included in the final Environmental Impact Assessment Report that will be submitted to the competent Authorities for Review and Record of Decision.

All documentation lists and proof of the Public Participation process is included in Appendix 3 of this report.

**9. NEED and DESIRABILITY**

The Lephalale Municipality was recently identified as national point of interest in the new National Development Plan, 2030 due to the rapid and anticipated growth as a result of mining and other associated industries.

Thabo Mbeki has been identified in both the Lephalale IDP as well as Spatial Development Framework (SDF), 2012 as a Municipal Growth Point and the cluster consists of Thabo Mbeki and Witpoort towns. Lephalale is the only Provincial growth point (1st Order node) in the Municipal area with Thabo Mbeki as the only other first order node, being a Municipal growth point. There is expected to be an increase in the future population in this growth point.

The Lephalale SDF stipulates that nodal points or growth points represent human settlement areas where the largest spectrum of specialized land uses should be focused, being:

- The Provincial Growth Point (PGP); and
- The Municipal Growth point (MGP).

Due to the MGP's central location, current facilities including availability of engineering services this cluster is proposed to serve the rural settlements in the eastern parts of the study area at a higher level than merely local service points as previously provided. Furthermore, on a hierarchic approach, there should be one node in the rural areas which stand above the others in order to make provision in case it requires the establishment/location of a higher level of services and activities.

It lies central to these rural settlements and already contains some services of higher function. It is therefore most suitable to escalate this node to a higher level and make provision for establishment of a higher level of services, including a proper Secondary Activity Node which may contain a shopping center.

The proposed extension to Thabo Mbeki is also primarily required for new and alternative/replacement housing. Many of the houses within the flood areas in towns and villages along the Lephhalale/Phalala River are frequently affected by floods and/or bad soil conditions and need to be relocated or rebuild in Thabo Mbeki Extension 2 (new township). During the floods in 2008 water reached the 1:100 year flood line level and 300 houses was destroyed in Thabo Mbeki extension and the hospital was evacuated. It is therefore evident that the existing Thabo Mbeki town and the hospital amongst other are affected by flooding as they are located within the 1:100 year flood line. Ga- Seleka and other villages such as Olifantsdrift, Martinique, Abbotspoort, Ga-Monyeki and Setateng are also but to a lesser degree affected by flooding.

In view of the status of Thabo Mbeki as a MGP and specifically the flooding problems the MEC for Co-operative Governance, Human Settlement and Traditional Affairs decided to make the proposed Thabo Mbeki extension residential development for 4 700 erven on a portion of the Remainder of the farm Richards Larger 124 L.R. a priority project. The proposed development site falls outside the Lephhalale/Phalala river flood areas. Furthermore the secondary 1:100 flood line areas have been determined for the development site to ensure that no development is planned within these flood areas.

There is also a need for the provision of additional residential erven in the growth point due to a natural increase in the population. Children that grew up in the community and intend to stay in Thabo Mbeki and start with their own families are in need for residential erven to build their own houses. A need also exists to accommodate people that are currently forced to stay with family or friends due to the lack of available residential erven.

The demarcation of erven with individual title and household services could also result in existing occupants on traditional land with PTO rights, to move to the newly demarcated and serviced erven, such as Thabo Mbeki extensions.

## 10. ADVANTAGES AND DISADVANTAGES OF ALTERNATIVES

In the EIA process, the consideration of alternatives is always important, should the proposed site not fit into the parameters of the EIA framework. The alternatives can be categorised as follows.

- Location alternatives
- Process alternatives
- No-Go alternative

### 10.1. Location alternative

The farm Richards Lager 124 LR. is owned by the State and not held in trust for any traditional community. The ownership of the farm is also in process to be transferred to the Lephalale Municipality. It is the only property available to the State for township establishment purposes.

### 10.2. Process Alternative

#### 10.2.1. Advantages

- By conducting an ecological assessment, prior to development, the best location will be selected for the different elements of the proposed development. If necessary, the layout of the area will be adapted to fit in with the sensitivity analysis of the area.
- By carrying out a geo-technical study prior to development, the positioning of certain parts of the development can be based on the ideal or most suitable soil conditions.
- By conducting a heritage impact study possible heritage remains can be detected which can require certain management and mitigation measures. The site layout plan can also be influenced by the location of possible findings
- By obtaining a water use license for the placement of infrastructure across drainages, the requirements of the national water act in terms of 21c and 21 I listed water uses will be met.
- Process alternatives will be assessed to ensure that the best option for services like water supply and sanitation to minimise pollution will be selected.

#### 10.2.2. Disadvantages

- Loss of heritage components.
- Damage to drainage sections – road crossings
- Loss of indigenous flora and fauna
- Soil loss (erosion)

All negative and positive impacts will be evaluated and reported on in the EIAR.

### 10.3. No go alternative

This option would come into effect if the above mentioned assessments reveal fatal flaws in the location and processes that have been followed.

## 11. PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT

The environmental impact assessment process will be based on the actions and findings of the scoping phase.

### 11.1. Site Location

The site for the proposed development is on the remainder of the farm Richards Lager 124 LR which is approximately 58 kilometres northeast of the town Lephalale. The site is approximately 2 kilometres east of the Lephalala River and approximately 1.3 kilometres east of the of Thabo Mbeki township.

**The centre of the study area is located roughly at the following coordinates:**

**Latitude: S 23°20'23.01"                      Longitude: E28°01 '37. 09"**

(See locality map as attached in Appendix 1)

### 11.2. Residential Development Specifications

The proposed activity and all associated infrastructures will be located on the remainder of the farm Richards Lager 124 LR The area to be used for the proposed development is approximately 364.17Ha

#### Water:

Bulk water supply will be addressed in the engineering services report that will be included in the EIAR.

#### Sewage:

A water borne sewerage treatment system (Calcamite sewer package plants) are proposed Details will be included in the services report that will form part of the EIAR.

#### Access and storm water:

Details of the roads network and storm water system will be included in the services report that will form part of the EIAR.

### 11.3. Tasks to be undertaken

The physical, biological, social, economic and cultural aspects that were identified in the scoping process will be addressed in detail in the Environmental Impact Assessment Report. The following specialist investigations will be conducted to aid in the description of the environment as well the identification and rating of impacts:

- A Phase 1 Heritage Impact Assessment by Cultural Resource Consultants. (Has been undertaken).
- A Geotechnical Assessment (Has been undertaken).
- An Ecological Assessment (vegetation, invertebrates, herpetofauna, birds, mammals and ecological sensitive map) which have been undertaken.
- Engineering Services Report (water supply and reticulation, storm water management, sanitation, and roads) which are available.

- Flood Line Report.

A detailed rating of impacts will be undertaken according to the methodology described in section 12.1. Mitigation measures for all identified impacts will also be specified in the EIAR and EMPr.

A Draft Environmental Impact Assessment Report will be completed and made available for a 40 day comments period to the Interested and Affected parties. This will include proof of all the public participation processes as well as copies of all the specialist reports.

Comments from I&AP's will be included in the final Environmental Impact Assessment Report that will be submitted to the competent Authorities for Review and Environmental Authorisation.

## 11.3.1. Impacts to be evaluated

IMPACT	ASSESSMENT	REFERENCE
<b>AIR POLLUTION AND NOISE</b>		
Smoke	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Dust	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Fumes	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Noise	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
<b>WATER QUALITY</b>		
Pollution of water sources	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Silt deposition in surface water drainage line	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Pollution from sanitation system (chemical toilets)	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Pollution from diesel and oil spillages	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
<b>WATER QUANTITY</b>		
Impact on amount of water resources available	Impacts will be assessed with the aid of a Geo-Hydrological Assessment	EMPr and EIAR
<b>LAND/SOIL DEGRADATION</b>		
Soil contamination and degradation	Impacts will be assessed with the aid of : <ul style="list-style-type: none"> <li>• engineering reports,</li> <li>• geo-hydrological report</li> <li>• geotechnical report</li> <li>• ecological assessments</li> </ul>	EMPr and EIAR
<b>BIODIVERSITY Impacts</b>		
Impact on Biodiversity (Vegetation and Wildlife)	Ecological / Vegetation assessment will be conducted	EMPr and EIAR



<b>CULTURAL/HERITAGE</b>		
Impact on Archaeological / cultural / social features	A phase I Heritage Impact Assessment will be conducted by a qualified archaeologist	EMPr and EIAR
<b>VISUAL IMPACT</b>		
Visual impact	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Impact of the proposed development of sense of place.	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
<b>SOCIO-ECONOMIC IMPACTS</b>		
Impact on archaeological /cultural / social features	A phase I Heritage Impact Assessment will be conducted by a qualified archaeologist	EMPr and EIAR
Impact of the proposed development on adjacent landowners	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Impacts related to the establishment of a construction camp with accommodation	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Impact ground and water pollution from littering and waste disposal during construction and operational phases	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR
Impact on Safety and Security	Impacts will be evaluated and mitigation measures provided	EMPr and EIAR

All available information along with the specialist studies conducted will be collected and an environmental impact report (EIAR) will be compiled.

In this report all the identified issues will be dealt with. All mitigation measures will be tabled in the Environmental Management Programme (EMPr) This report (EIAR) will then be submitted to Environmental Affairs.

### 11.3.2. Time-Table of Tasks

Preparation of the Draft Scoping report and the Plan of Study for Scoping for EIA	June 2013 and submit report to registered interested and affected parties for comments (40 days)
Comments on Draft Scoping report and the Plan of Study for Scoping for EIA	July 2013
Submission of Final scoping report and the Plan of Study for Scoping for EIA to Environmental Affairs	End of July 2013
Discussion of the project with Environmental Affairs of the Limpopo Province	Continuously
Site visit with all relevant Departments	To be arranged (Site visit with LEDET has been undertaken) during July 2013
Ecological Report	June 2013 (completed)
A Heritage Impact Assessment by an approved archaeologist / cultural resources consultant	June 2013 (completed)
Geo-Technical Study	April 2013 (completed)
Public meetings	2 meetings held already – May 2013

### 11.4. Consultation with the competent authority

The competent authority has been consulted at the following stages of this part of the proposed development:

- Submission of application – 26 February 2013
- Acknowledgement of application received – 5 March 2013
- Background Information Document sent – May 2013

**The competent authority will also be consulted at the following stages:**

- Submission of draft Scoping report and plan of study for EIA.
- Submission of Final Scoping report and plan of study for EIA.
- Submission of Draft EIAR.
- Submission of Final EIAR.
- Continuously throughout the process.

## 12. 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.

### 12.1. Methodology to assess the impacts

To assess the impacts on the environment, the process will be divided into two main phases namely the Construction phase and the Operational phase. The activities, products and services present in these two phases will be 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 will be done by using where ever possible, legal and scientific standards which are applicable.

The significance of the aspects/impacts of the process will be 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. It must be said however that in the end, a subjective judging of an impact can still be done, but the reasons for doing so must be qualified.

**Table 1: Significance ratings (Plomp 2004)**

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 Lephalale Local Municipal area of jurisdiction
Medium-high	Waterberg District Municipality area
High	Regional, National and International

### Frequency:

Low	Once/more a year or once/more during operation
Low-medium	Once/more in 6 months

Medium                      Once/more a month

Medium-high                Once/more 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. PUBLIC PARTICIPATION PROCESS

Any comments or inputs received during the public participation process will be included in the Final Scoping Report and/or the draft Environmental Impact Assessment Report that will be made available at a central facility for review. No comments have been received from registered interested and affected parties on the draft scoping report within the given 40 day perusal period.

All the registered Interested and Affected Parties will receive a notice of the draft EIA and which will be requested to review the report.

All the comments and submissions must reach the Environmental Consultant before a specific date for reaction and inclusion in the final Environmental Impact Assessment report.

### 14. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report is to provide the interested and affected parties and other relevant authorities with sufficient information regarding the potential impacts of the development to make an informed decision regarding the approval of the Plan of Study for Environmental Impact Assessment.

Other potential impacts that may be identified during consultation with the Interested and Affected Parties will be included in the Environmental Impact Report.

The Department (LEDET) is therefore respectfully requested to evaluate and comment on this final scoping report of which the comments will be included in the **Environmental Impact Assessment Report** for approval, as part of an application that has been lodged in terms of Regulation R 545 of 18 June 2010 of the National Environmental Management Act, 1998 (Act 107 of 1998).

## 15. BIBLIOGRAPHY

DEAT, 2006. *Guideline 1 - 6: General Guide to the Environmental Impact Assessment Regulations, 2006*. Integrated Environmental Management Guideline Series, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

DEAT, 1999. *Environmental Management Framework for the Northern Province*. University of Pretoria, Pretoria.

DEAT, 2002. *Impact Significance, Integrated Environmental Management, Information Series 5*. Department of Environmental Affairs and Tourism, Pretoria

DUINKER, P.N. and BEANLANDS, G.E. 1986. *The significance of environmental impacts: and exploration of the concept*. Journal of Environmental Management, 10(1), 1-10 in DEAT, (2002).

MIDGLEY, D.C. PITMAN, W.V. AND MIDDLETON, B.J.1994. First Edition *Surface water resources of South Africa 1990, Volume VI, Drainage regions U, V, W, X, Eastern Escarpment*. WRC Report No 298/6.2/94, Pretoria.

MUCINA L., RUTHERFORD M.C. & POWRIE L.W. (eds) (2005). *Vegetation Map of South Africa, Lesotho and Swaziland, 1:1000000 scale sheet maps*.

PLOMP, H. 2004. *A process for assessing and evaluating environmental management risk and significance in a gold mining company*. Conference Papers-Annual National Conference of the International Association for Impact Assessment: South African Affiliate.

THOMPSON, M.A., 1988. *The determination of Impact Significance in Environmental Impact Assessment*, Unpublished Master of Science Thesis, University of Manchester, UK.

THOMPSON, M.A., 1990. *Determining Impact significance in EIA: a review of 24 methodologies*. Journal of Environmental Management, 30, 235-250.