

**DRAFT ENVIRONMENTAL MANAGEMENT
PROGRAMME**

FOR

**JAN KEMPDORP INFILL DEVELOPMENT, PHOKWANE
LOCAL MUNICIPALITY**

DENC REF. NO.: NC/BA/25/FB/PHO/JAN1/2019

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LIST OF ABBREVIATIONS

EA	Environmental Authorisation
CARA	Conservation of Agricultural Resources Act, 1983
CLO	Community Liaison Officer
DEO	Designated Environmental Officer
DENC	Department of Environment and Nature Conservation
ECO	Environmental Control Officer
RE	Resident Engineer
SAHRA	South African Heritage Resources Agency
PLM	Phokwane Local Municipality
PSC	Project Steering Committee

1. INTRODUCTION

Phokwane Local Municipality appointed *NSVT Consultants* as independent environmental assessment practitioners to undertake the Basic Assessment process for a new middle-income residential development on Portion 42 of farm Geldunskat No 36 in Jan Kempdorp, Northern Cape Province, which is an infill development. The proposed development with entail 37 residential units, 2 transport units and 2 open spaces. The Layout Map for the infill development is attached hereto as **Appendix A**.

1.1 DETAILS OF PROPONENT

PROJECT PROPONENT	Phokwane Local Municipality
POSTAL ADDRESS	Private Bag X3 Hartswater 8570
PHYSICAL ADDRESS	Private Bag X3 Hartswater 8570
CONTACT PERSON	Zithulele Nikani
PHONE	053 474 9700
FACSIMILE	053 474 9725
CELL	082 385 5238
EMAIL	nikani@phokwane.gov.za
FARM NAME	Portion 42 of the Farm Geldunskat No. 36, Jan Kempdorp
LANDOWNER	Phokwane Local Municipality

1.2 DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

The curriculum vitae of the EAP is attached hereto as **Appendix B**.

EAP	NSVT Consultants		
CONTACT PERSON	Lorato Tigedi <i>Pr. Sci. Nat.</i>		
POSTAL ADDRESS	P. O. Box 42452, Heuwelsig, Bloemfontein 9332		
TELEPHONE	(051) 430 1041/2	FACSIMILE	086 239 9133
E-MAIL	lorato@nsvt.co.za	CELL	082 784 8259
QUALIFICATIONS	B. Sc. (Natural Science) B. Sc. Hons (Wildlife)	EXPERIENCE	16 years in the environmental

EXPERTISE/ TRAINING	<p>Resources & Sustainability, Physical & Biological Environment and Informatics</p> <p>Project Management for Environmental Management</p> <p>Social & Economic Sustainability</p> <p>Use of Matrices in EIA</p> <p>Public Participation Training</p> <p>Introduction to Social Impact Assessment</p> <p>Integrating HIV/Aids and Gender-related issues into EIA Process</p> <p>Integrated Water Resources Management, Water Use Authorisation and Water Use License Application</p> <p>One Environmental System</p> <p>Introduction to environmental Law</p>		<p>management field as an EAP. She has completed environmental impact assessment, basic assessment, drafting of EMPRs and environmental compliance monitoring for various development within the Free State., North West, Northern Cape and Eastern Cape Provinces.</p>
		PROFESSIONAL AFFILIATE	<p>South African Council for Natural Scientific Professions-4000161/09</p> <p>Member of International Association for Public Participation Southern Africa Affiliate-2010/ZA/FS/000 1)</p> <p>Member of International Association for Impact Assessment SA-2191</p>

2 DEFINITIONS

Environmental Management Programme (“EMPr”): An environmental action plan or tool used to ensure that undue or reasonably avoidable adverse impacts of a development are prevented, and that positive impacts are enhanced. It thus addresses the how, when, who, where and what of integrating environmental mitigation and monitoring measures through the project development activities.

Alien Vegetation: An undesirable plant growth which shall include, but not be limited to all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (“CARA”), 1983 regulations. Other vegetation deemed to be alien shall be those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable.

Construction Activity: Any action taken by Phokwane Local Municipality (“PLM”), its contractors and sub-contractors, suppliers or personnel during the construction process.

Environment: environment means the surroundings within which humans exist and that could be made up of the following:

- the land, water and atmosphere of the earth;
- micro-organisms, plant and animal life;
- any part or combination of (i) and (ii) and the interrelationships among and between them; and
- the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Environmental Aspect: an environmental aspect is any component of Phokwane Local Municipality, its contractors and sub-contractor’s construction activity that is likely to interact with the environment.

Environmental Impact: an impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

Environmental Authorization: A written decision from the Department of Environment and Nature Conservation (“DENC”) that records its approval for undertaking the planned infill development and the conditions of approval which may include mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

3. PROJECT DESCRIPTION

3.1. BACKGROUND INFORMATION

The site identified for the infill is located on Portion 42 of Farm Guldenskat in Jan Kemp Dorp within the jurisdiction of Phokwane Local Municipality. It is located to the edge of the farm, on the South western side from the Central Business District and it is accessible from Grens Street. The development area is within the urban edge.

3.2 SENSITIVITY OF THE PROPOSED SITE

The site is, on which the construction activities will be undertaken on a vacant and undeveloped land with areas that are sensitive and must be avoided. This was informed by the findings of the investigation and assessment done by the Ecologist and Archaeologist. Therefore, prior to commencement of the construction activities, there are 4 significant *Vachellia erioloba* tree species, which were incorporated in the layout must be marked to ensure they are not damage, or accidentally removed during vegetation clearance and an unearthed block of calcrete, which contained an embedded Earlier Stone Age (Acheulean) biface must be removed and taken to McGregor Museum in Kimberley within the jurisdiction of Sol Plaatje Local Municipality in the Northern Cape Province. **There are areas which must not be affected by construction activities and they are identified as public open spaces, this includes the 40m ecological corridor to the north of the development area, in the layout.**

The co-ordinates of the significant trees and the calcrete block are shown below:

Vachellia erioloba 1:

27°55'48.06"S
24°49'52.24"E

Vachellia erioloba 2

27°55'47.08"S
24°49'52.47"E

Vachellia erioloba 3

27°55'45.13"S
24°49'54.90"E

Vachellia erioloba 6:

27°55'39.66"S
24°50'0.92"E

Calcrete Block: 27°55'45.1" S 24°49'56.4" E

The Sensitivity Map indicating the areas to be avoided is shown in *Figure 1* below.

The Sensitivity Map is shown in *Figure 1* below:

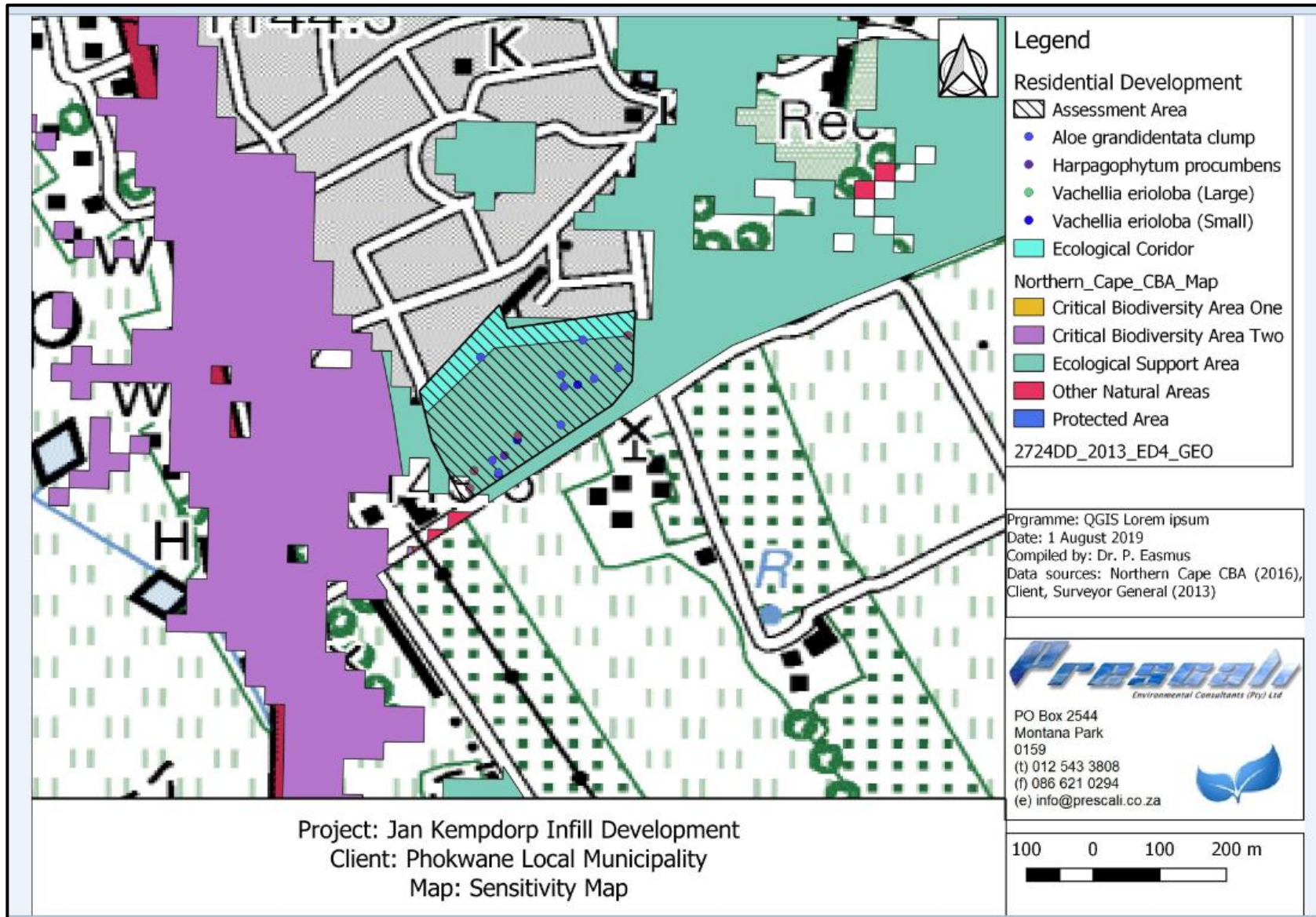


Figure 1: Sensitivity Map for the Proposed Site

4 CHECKLIST FOR THE PROPOSED PROJECT

1. Give a detailed description of the development:

Phokwane Local Municipality intends to develop 45 middle income residential area with units of an average size of 900m² to 1000m² on Portion 42 of farm Geldunskat No 36 in Jan Kempdorp, which is approximately 6.30 hectares. The proposed site is located on the south-western direction of the town. The proposed development is an infill development because it is a vacant and undeveloped land that is currently zoned as an open space; therefore, the land use will have change to a residential area as a result of the proposed activity.

2. Give a brief description of the surrounding area:

The development area is bordered by Voortrekker Street to the west, formalised settlement to the north, undeveloped area to the east and gravel road, which divides the proposed site and North West Province boundary and further south is a homestead and plantation.

3. Is the project significantly different from the surrounding land use?

No, it is an infill development.

4. Are any of the following located on the site chosen for the development?

- i. River, stream, dam, wetland – No
- ii. Open space area – Yes
- iii. Residential (formal or informal settlement) – Yes, formal settlement
- iv. Area of cultural importance, e.g. graveyards, old houses, museum, etc. – No

5. Will the project be considered a noisy intrusion to the neighbors?

No, as the only increased noise levels will be during vegetation clearance and construction process thereafter, it will be general noise levels of a residential area. Therefore, the intrusion is short-term.

6. Would it be necessary to construct roads to access the proposed site?

No, but the existing roads will have to be upgraded.

5 ENVIRONMENTAL MANAGEMENT PROGRAMME

5.1. INTRODUCTION

The EMPr has been divided into four different phases associated with the proposed development namely the pre-construction planning phase, the construction phase and operational phase. It will be implemented by Phokwane Local Municipality on approval by DENC, the competent authority. It must be read in conjunction with the contract documentation to ensure that the municipality works in an environmentally sensitive manner, thus ensuring the impacts on the environment and neighbouring residents of the development area are kept to a minimum and no-go areas are not affected by the construction activities.

5.2 OBJECTIVES OF THE EMPR

The aim of the EMPr is to ensure that impact on the environment due to the proposed development is limited. To achieve this, the EMPr has the following objectives:

- ❑ To identify possible environmental impacts of the proposed activity on the environment and mitigation thereof.
- ❑ To provide information on construction activities associated with the identified environmental issues.
- ❑ To provide guidelines for the management of the identified environmental issues.
- ❑ To provide guidelines to the responsible persons from PLM to follow appropriate contingency plans in the case of various possible impacts.

5.3 RESPONSIBLE PERSON (S)

The implementation of this EMPr requires the involvement of various role players, each with specific responsibilities to ensure that the development is completed in an environmentally sensitive manner.

The Developer: Phokwane Local Municipality

Responsibility: To implement the final EMPr after approval by DENC before the commencement of the construction phase and ensure the proposed development complies with the National Environmental Management Act (Act 107 of 1998) requirements and the Environmental Authorisation (“EA”).

Consulting Engineers/Developer/Site Manager: To be appointed

Responsibility: To undertake the detailed design for the proposed development and to ensure that necessary permits have been obtained prior to construction.

The Environmental Control Officer: To be appointed

Responsibility:

- ❑ To ensure that PLM implements the EMPr for the duration of the project from pre-construction to post-construction (decommissioning).
- ❑ To review the method statements with the resident engineer.
- ❑ To maintain a direct open line between the residents and the municipality.
- ❑ To audit the implementation of the EMPr and compliance to the EA once a month until project completion.

The Contractor: To be appointed

Responsibility:

- ❑ To implement the EMPr and keep a copy on-site for the duration of the construction phase, as the obligations imposed by the document are legally binding.
- ❑ To comply with the EA and undertake construction activities in an environmentally sensitive manner and rehabilitation of the proposed site post-development
- ❑ To undertake good housekeeping practices during the duration of the project.
- ❑ To ensure that adequate environmental awareness training takes place in the language of the Employees.

Designated Environmental Officer: To be appointed

Responsibility:

- ❑ To implement the Environmental Management Programme.
- ❑ To maintain records of environmental queries for the duration of the construction.
- ❑ To resolve environmental issues during the construction phase of the project.

The Project Steering Committee (“PSC”) (Environmental Forum): A committee that comprises of representatives of the PLM representative, Engineers, Developer, Ward Councillor, Local Community and Contractor.

Responsibility:

- ❑ To monitor the implementation of the EMPr.
- ❑ To assist in the sourcing of general workers from the local community and surrounding farms.
- ❑ To help ensure participation of local contractors during construction.
- ❑ To assist in resolving social or environmental issues that may arise during construction.

5.4 METHOD STATEMENT

A method statement outlines construction activities to be undertaken with mitigation measures. The contractor must give a written statement to PLM at least two weeks before the activity so that any irregularities can be handled before construction commences and communicated to the workforce. The format of the method statement must clearly indicate the following:

1. Construction and Operational Procedures
2. Materials and Equipment used
3. How and where materials will be stored
4. When actions will be undertaken

Based on the EMPr specifications, the following method statements are required as a minimum:

- Site layout and establishment
- Handling of accidental spillages of hazardous substances
- Cement mixing
- Waste management procedures
- Wastewater management procedures
- Stormwater Management
- Erosion Remediation
- Traffic accommodation
- Fire control and emergency procedures

5.5 ENVIRONMENTAL AWARENESS TRAINING

Phokwane Local Municipality, workforce of the contractors and sub-contractors involved with the work in the construction phase are to be briefed on their obligation towards environmental protection and methodologies in terms of the EMPr prior to work commencing. The briefing must be done by the Designated Environmental Officer prior to construction in the form of an on-site talk (toolbox talks). There should be records for the said presentation, which should be done in a language that will be easily understood by all. This should be done prior to commencement of construction activities and for new sub-contractors and general workers if construction has commenced.

The environmental training should, as a minimum, include the following:

- The importance of conformance with all environmental policies
- The environmental impacts, actual or potential, of their work activities;
- The environmental benefits of improved personal performance;
- Their roles and responsibilities in achieving conformance with the environmental policy and procedures and EMPr;
- The potential consequences of departure from specified operating procedures;
- The mitigation measures required to be implemented when carrying out their work activities.

The basic rules of conduct in addition to the awareness training, which must be considered for the duration of the project, are tabulated below.

Table 1: Basic conduct rules during construction

Do	Do Not
Use of toilet facilities provided.	Make open fires for cooking, dedicated areas must be provided.
Clear your work areas of litter and building rubbish at the end of each day	Allow any cement bags or litter to be blown around
Report all petroleum leakages and/or spillages	Access the neighboring properties without the owners' consent
Confine work and storage of equipment and comply with all safety procedures	Dispose of cigarettes and burning matches randomly
Provide easily accessible fire extinguisher and in good working condition	Do not leave food lying around
Use areas designated for food preparation	Dump any waste substance into the donga
Only emergency repairs of construction vehicles are allowed on the construction site	
Use all safety equipment and comply with all safety procedures	
Prevent excessive dust and noise	

5.6 RECORD KEEPING

There must be an up to date filing system at the site office for the duration of the project whereby EA, EMPr, method statements, environmental incidents report, training records, audit reports and public complaints register are kept. It is advised that photographs of the site must be taken pre-, during and post-construction as a visual reference. These records must be kept for a minimum of 2 years after completion of the project.

5.7 PENALTIES

In cases of transgressions and non-compliance regarding the EMPr by the contractor, they must be liable to a penalty fine. Transgressions should be recorded in a dedicated register and be kept at the site office for the duration of the project.

The resident engineer will issue the penalties in terms of the severity of the environment; however, *Table 2* below may be used as a guideline.

Table 2: Penalties for Transgressions

TRANSGRESSION	PENALTY
Littering and defecation in the surrounding areas	R1000
Concrete mixing on the ground	R2000
Spillages	R1000-R10 000 depending on the magnitude)
Soil erosion	R2000
Veld fires	R5000

The penalty could be donated to an environmental charity in the area or any need for environmental protection. The EMPr is outlined in *Table 3* below and Adherence to this plan during construction will ensure that the environmental impacts associated with the proposed development will be mitigated, thus promoting sustainable development. The commitment and co-operation of the identified responsible person (s) will ensure effective implementation of the EMPr during pre-construction and post-construction. It is therefore imperative that there be a file dedicated for Environmental Documentation.

5.8. COMPLIANCE WITH ENVIRONMENTAL LEGISLATION

The compliance to the applicable Environmental Legislation must be undertaken before commencement of construction activities as shown in *Table 3* below.

Table 3: Applicable Environmental Legislation

LEGISLATION	APPLICABLE			OBTAINED	
	YES	NO	N/A	YES	NO
Environmental Authorisation in terms of Section 24 of National Environmental Management Act (Act 107 of 1998)	X				
Water Use License in terms of Section 21(c) and (i) of the National Water Act (Act 36 of 1998)		X			
Permit in terms of National Environmental Management Act: Biodiversity Act (Act 10 of 2004)	X				X
Section 38 of National Heritage Resources Act (Act 25 of 1999)		X			
Mineral Resources Development Act (Act 29 of 2002)			X		
Waste Management License in terms of National Environmental Management: Waste Management Act (Act 59 of 2008)			X		

Table 4: Environmental Management Programme

ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON (S)	OBJECTIVES	FREQUENCY
1. PRE-CONSTRUCTION PHASE					
Project Contract and Programme	Adherence to the EMPr	<ul style="list-style-type: none"> ◇ The environmental responsibilities must be formalized, and environmental awareness must be taught to the labourers in their preferred language as part of the toolbox talks. 	RE/DEVELOPER/SITE MANAGER & CONTRACTOR	Ensure that EMPr is adhered to	Frequency Prior to Construction Activities
Location of Camp and Depot	Environmental damage	<ul style="list-style-type: none"> ◇ The camp depot must be in an area where the neighbouring residents will not be inconvenienced. ◇ The contractor must provide the RE/Developer with the layout plan of the camp depot for approval before commencement of the construction phase. The plan must include site offices, temporary fencing boundary, sanitation facilities, waste, stockpiling areas, etc. The parking of vehicles, storage of equipment and materials must strictly be confined to designated areas. ◇ The surrounding undeveloped areas, the area must not be used to establish camp depot/site office. 	RE/DEVELOPER/SITE MANAGER & CONTRACTOR	Prevent environmental damage and disturbance of neighboring land users	Frequency Once off
MANAGEMENT ACTION		A camp depot must be approved by the Resident Engineer (“RE”) or Developer or Site Manager. Agreement should be in place between contractor and the landowner prior to commencement of construction phase. Photographs of the approved area prior to establishment and after completion of rehabilitation.			

ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON (S)	OBJECTIVES	FREQUENCY
Flora	Potential destruction of Nationally and Provincially protected species	<ul style="list-style-type: none"> ◇ The 40 m wide ecological corridor and other open spaces must be excluded from construction activities, <i>i.e.</i>, marked as no-go areas prior to commencement of construction. ◇ The significantly sized individuals of the nationally protected species <i>Vachellia erioloba</i> must be marked by an Ecologist so that they are damaged or removed accidentally during construction. ◇ An adequate Plan Relocation Management Plan must be compiled by a suitably qualified and experienced ecologist. ◇ A Nationally Protected License must be obtained from the Department of Agriculture, Forestry and Fisheries for the removal/destruction of the small individuals of <i>Vachellia erioloba</i>. ◇ A minimum of 5 clumps of the species <i>Aloe grandidentata</i> must be removed prior to commencement of any vegetation clearance or construction activities and adequately relocated to a suitable and similar area as to where they were removed, and this must be done by an adequately experienced and qualified Ecologist. ◇ Provincial Flora Permit must be obtained from DENC for the relocation and the 	RE/DEVELOPER/SITE MANAGER & PLM	<p>To protect identified (no-go areas) sensitive areas within the layout.</p> <p>To comply with legislation applicable to removal or destruction protected species</p> <p>To ensure successful relocation of protected species.</p>	Once-Off

		removal/destruction of all the other provincially protected species individuals.			
MANAGEMENT ACTION		Appointment Letter of an Ecologist, Nationally Protected License and Provincial Flora Permit in the Environmental File			
Archaeological	Potential destruction or damage of the unearthed block of calcrete, which contained an embedded Earlier Stone Age (Acheulean) biface.	◇ The calcrete block must be removed prior to commencement of construction activities and taken to the McGregor Museum in Kimberley within the jurisdiction of Sol Plaatje Local Municipality in the Northern Cape. An Archaeologist must be appointed to facilitate and oversee the process.	RE/DEVELOPER/SITE MANAGER & PLM	To protect the Archaeological Artefact so that it may be kept for safekeeping.	<u>Once Off</u>
MANAGEMENT ACTION		Appointment Letter of an Archaeologist			
Water Supply	Source of water during the construction phase.	◇ Potable water must be available at the camp depot, office site and construction site.	RE/DEVELOPER/SITE MANAGER, CONTRACTOR & PLM OR WATER SUPPLIER	To provide clean the workforce with clean and reliable potable water.	<u>Frequency</u> Duration of the project
MANAGEMENT ACTION		A written agreement between the contractor and water supplier must be in place.			
Access Control	Hazards to livestock and stealing of construction materials	◇ A Fenced or suitably secure main site office and material storage area must be established. ◇ Unauthorized entry must be prohibited.	RE/DEVELOPER/SITE MANAGER & CONTRACTOR	Keep the site secure from trespassing or theft and keep the livestock out.	<u>Frequency</u> Duration of the project
MANAGEMENT ACTION		Site access register and complaints book must be in place.			
Access route	Erosion and dilapidation of the access route	◇ Proper maintenance of the existing access route must be done to ensure the quality of the road is not deteriorated.	RE/DEVELOPER/SITE MANAGER, CONTRACTOR, & ECO	Prevention of dilapidation of the existing access routes	<u>Frequency</u> Duration of the Project Implementation
MANAGEMENT ACTION		Environment Control Officer ("ECO") Audit checklist, Photographs depicting road condition pre- and post-construction			

ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON (S)	OBJECTIVES	FREQUENCY
Power Supply	Safety Impacts	<ul style="list-style-type: none"> ◇ A Safety Officer must be appointed to undertake safety audits. 	RE/DEVELOPER/ SITE MANAGER & CONTRACTOR	Implement safety measures	Frequency Duration of the Project Implementation
MANAGEMENT ACTION		Appointment Letter of a Safety Officer			
Solid Waste	Littering/ Pollution of environment with waste materials	<ul style="list-style-type: none"> ◇ Refuse bins with lids must be provided for different waste streams. ◇ System for regular waste removal must be set up. ◇ A Serviced Provider with the necessary accreditation to transport and dispose hazardous waste must be appointed. 	RE/DEVELOPER/ SITE MANAGER & CONTRACTOR	Implement proper handling of different streams of waste.	Frequency Once Off
MANAGEMENT ACTION		Method Statement for storing, handling, and disposal of waste and Record keeping of all records. Letter of Agreement for Handling of Hazardous Waste between Contractor and Service Provider.			
Sewage	Pollution of environment by waste materials	<ul style="list-style-type: none"> ◇ Provide adequate sanitation facilities ◇ Letter of consent from a registered waste facility to allow the contractor to empty the toilets in their sewer system must be in the environmental document. 	RE/DEVELOPER/ SITE MANAGER & CONTRACTOR	Prevent environmental pollution	Frequency Duration of the project
MANAGEMENT ACTION		Record keeping copies for emptying of chemical toilets. Written agreement between contractor and facility.			
Social & Socio-Economic Aspects	Dissatisfaction	<ul style="list-style-type: none"> ◇ A PSC, which comprises of the municipality, Engineers, contractor, Beneficiaries and community representatives must be convened and details of the project discussed. ◇ Community Liaison Officer (“CLO”) appointed and PSC appointed 	PLM	Ensure satisfaction of workers and neighbouring land users	Frequency Monthly
MANAGEMENT ACTION		CLO appointed and PSC in place prior to commencement of construction activities.			

ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON	OBJECTIVES	FREQUENCY
Health & Safety	Danger to the workforce, Jan Kemp Dorp Residents, neighboring Farm Geldunskat, especially children and other landusers	<ul style="list-style-type: none"> ◇ A Safety Officer must be appointed. 	PLM	To avoid endangering of the people who works on site or live in the vicinity of the construction site.	<u>Frequency</u> Duration of the project
MANAGEMENT ACTION		Appointment letter of a Safety officer included in the Environmental File.			
2. CONSTRUCTION PHASE					
Flora	Loss of vegetation	<ul style="list-style-type: none"> ◇ Adequately cordon off the development footprint to ensure construction activities must be confined to the development footprint. ◇ No construction activities including storage of construction materials must be allowed on the neighbouring undeveloped areas in the vicinity of the development area. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Prevent destruction of areas not included in the development footprint.	<u>Frequency</u> Once off
Fauna	Disturbance to fauna in the area	<ul style="list-style-type: none"> ◇ No hunting, snaring, shooting, nest raiding or egg collection by the construction staff must be allowed. ◇ Toolbox talks must include handling of animals. 	CONTRACTOR, ENGINEER AND ENVIRONMENTAL COMPLIANCE OFFICER.	Prevent killings of animals and	<u>Frequency</u> Duration of the contract

ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON	OBJECTIVES	FREQUENCY
Areas of Paleontological, Cultural and/or Historical Importance	Disturbance of important scientific artefacts	<ul style="list-style-type: none"> ◇ Should fossil remains be discovered during any phase of construction, either on the surface or exposed by fresh excavations, the Chace Finds Protocol outlined in Appendix C must be followed. The discoveries ought to be protected (if possible, in situ) and ECO must report to South African Heritage Resources Agency (“SAHRA”) and the correct mitigation (e.g. recording and collection) must be carried out by an Archaeologist. However, before there could be a collection of fossil material, the Palaeontologist would need to apply for a collection permit from SAHRA. ◇ Should any human skeletal remains, precolonial burials; ostrich eggshell container cache; or localised Stone Age sites with stone tools, pottery, ash midden with bone/pottery; military remains be found during excavations; work must stop in the area. The findings must be reported immediately to Ms. N. Higgins-021 462 4502 from SAHRA and Mr. Andrew Timothy-079 036 9294 from Northern Cape Heritage Resources Authority (“NCHRA”) by the ECO. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Prevent disturbance of scientific heritage and/or cultural artefacts.	<u>Frequency</u> Duration of the Contract

Sewerage	Pollution of the receiving environment.	<ul style="list-style-type: none"> ◇ Adequate sanitation facilities <i>i.e.</i>, 15 employees per facility must be provided within 50m from construction site. ◇ They must always be kept clean and hygienic. ◇ Effluent must not be discharged into the natural environment and defecating in the bush/surrounding area is prohibited. 	RE/DEVELOPER, CONTRACTOR, DEO, & ECO	Provide facilities for adequate and accessible sanitation facilities, Prevent soil pollution.	
Water Supply	Source of potable water during the construction phase.	<ul style="list-style-type: none"> ◇ Potable water must be made available at the camp site and construction site in clearly marked containers. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	To provide the workforce with clean water.	<u>Frequency</u> Daily
Safety	Danger to the workforce and surrounding landusers and owners	<ul style="list-style-type: none"> ◇ The Contactor must provide employees with suitable equipment to protect them from hazards being presented and that will allow them to work without risk to the health in a hazardous environment, e.g. hard hats, gloves, boots, etc. ◇ An emergency preparedness plan should be compiled and approved by the resident engineer and ECO before construction commences. A list of all emergency telephone numbers, i.e. fire, ambulance, ECO, engineers, etc. should be available all the time at various construction sites. ◇ A medical first aid kit should be available on site for duration of the project. ◇ Construction methods must adhere to the Occupational Health and Safety Act (Act 85 of 1993). 			

Health & Safety	Increase chances of HIV/Aids transmission	<ul style="list-style-type: none"> ◇ HIV/Awareness Training must be provided for the workforce by an accredited service provider. 	RE/DEVELOPER, CONTRACTOR, SAFETY OFFICER	To decrease the risk of HIV/Aids transmission	<u>Frequency</u> Once-off
Power Supply	Safety Impacts	<ul style="list-style-type: none"> ◇ Limit the power supply cables & ensure the safety of the workers. ◇ No illegal electricity connections must be allowed. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Avoid safety impacts	<u>Frequency</u> Daily
Energy Efficiency	Conserving of fossil fuels	<ul style="list-style-type: none"> ◇ Manual labour must be used as much as is feasible in order to conserve fossil fuels. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Conserving fossil fuels by using manual labour.	<u>Frequency</u> Daily
Solid Waste	Littering/ Pollution	<ul style="list-style-type: none"> ◇ Toolbox talks must include a component of waste management. ◇ All waste must be appropriately separated, contained and disposed of and be removed from the site to the landfill site in Jan Kempdorp. ◇ Reduction, reuse and recycling of waste must be introduced. ◇ Illegal dumping must be forbidden. ◇ No dumping of builders' rubble or other materials within the surrounding areas including the drainage lines and plans. ◇ Good housekeeping must always be practiced. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Prevent littering and visual impact. Safeguard a healthy working environment.	<u>Frequency</u> Weekly
Traffic Impact	Safety/ Traffic Impacts	<ul style="list-style-type: none"> ◇ Vehicle speed on the site must be limited speed to 40km/h. ◇ Only drivers with valid licenses must be allowed to drive on the site. ◇ In the event of abnormal vehicles, a permit must be obtained from the local Department of Traffic. 	RE/DEVELOPER, CONTRACTOR, DEO, ECO & SAFETY OFFICER	Minimize the disruption to road users	<u>Frequency</u> Duration of the project

ASPECT	POSSIBLE IMPACT	◇ MITIGATION PLAN	RESPONSIBLE PERSON	OBJECTIVES	FREQUENCY
Topsoil	Loss of Topsoil	<ul style="list-style-type: none"> ◇ Exposure of bare ground will be minimized. ◇ Topsoil stripping must be limited to the development footprint. ◇ It must be stored separately from the subsoil, i.e. no mixing of soils. ◇ In situ material must be removed to an average depth of 1000mm. ◇ Cleared and grubbed topsoil must be stockpiled as a top layer of at least 150mm thickness for the backfilling of monopole holes and rehabilitation purposes. ◇ Soil conservation measures such as berms, gabions and mats must be used on-site to help reduce erosion. ◇ No stockpiling of topsoil in the drainage line and pan nearby. ◇ No topsoil stripping must be done on open space ervens. ◇ Topsoil stockpiles must be kept free of weeds and litter free. ◇ Topsoil stockpiles must not inconvenience the residents from accessing their properties without informing them prior if necessary. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Conserve and protect topsoil from erosion and deterioration	<u>Frequency</u> Weekly

ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON	OBJECTIVES	FREQUENCY
Topography	Disturbing the natural topography	<ul style="list-style-type: none"> ◇ Minimize the amount of excavation and earthworks needed by fitting the building or landscape design to the site topography rather than flatten the site to fit the building or landscape. ◇ Restrict construction vehicle traffic to designated accesses to reduce damage to soils and vegetation. 	RE/DEVELOPER, DEO & ECO	Minimize the disturbance of topography	<u>Frequency</u> Duration of the project
Cement mixing	Pollution of soils, surface and groundwater	<ul style="list-style-type: none"> ◇ Mixing of cement must be done on mortar boards or similar structures to contain surface run-off. ◇ Cleaning of cement mixing equipment must be done on proper cleaning trays. ◇ No cement or cement containers must be left lying around. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Avoid polluting the topsoil soil and water bodies around the designated servitude.	<u>Frequency</u> Duration of project
Storm water	Contamination of drainage system	<ul style="list-style-type: none"> ◇ Storm water must be diverted away from the construction works. ◇ Storm water control works must be constructed, operated and maintained in a sustainable manner throughout the project. ◇ Storm water leaving the construction site must not be contaminated by any substance produced, stored, dumped or spilt on site. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Avoid contamination of stormwater	<u>Frequency</u> Duration of project
Air Quality	Nuisance and reduction in visibility	<ul style="list-style-type: none"> ◇ Occasional wetting of the access routes and construction site must be done by means of a water tanker to keep the dust levels low and vehicles must be driven at 40km/h maximum speed. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	To minimize the generation of dust from excavation work.	<u>Frequency</u> Twice a day or when required

ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON	OBJECTIVES	FREQUENCY
Noise	Nuisance	<ul style="list-style-type: none"> ◇ Construction must be limited to normal contractors' working days and working hours. ◇ Ensure that employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours. ◇ Limit working hours of noisy equipment to daylight hours, ◇ Fit silencers to the noisier construction equipment. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	To avoid excessive noise generation from site operations	<u>Frequency</u> Duration of Construction
Soil erosion	Erosion	<ul style="list-style-type: none"> ◇ Exposure of bare ground must be minimized, and topsoil stripping limited to the development footprint, excluding open spaces and they must be cordoned off. ◇ Vehicular activities to be confined to the development footprint and access roads. 	RE/DEVELOPER, CONTRACTOR, DEO AND ECO	Prevent Soil Erosion	<u>Frequency</u> Weekly

ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON (S)	OBJECTIVES	FREQUENCY
Alien Invasive Species	Prevent the spreading of alien invasive species	<ul style="list-style-type: none"> ◇ Implement an adequate Alien Invasive Species Establishment Management and Prevention Plan compiled by a suitably qualified and experienced ecologist must be implemented. ◇ A designated person must be appointed to keep the construction site weed-free. ◇ All Category 1b and 2 alien invasive species individuals currently within the project area, must be actively eradicated and adequately disposed of in accordance with the National Environmental Management: Biodiversity Act (Act 10 of 2004); Alien and Invasive Species Regulations, 2014. ◇ Construction vehicles must be cleaned before entering the construction site. 	RE/DEVELOPER, CONTRACTOR, DEO & DEO	Prevent unnecessary dissemination of alien invasive species	<u>Frequency</u> Duration of the Project
Fire Hazard	Risk of veld fires	<ul style="list-style-type: none"> ◇ No open fires are permitted on the construction site, except under strictly controlled conditions subject to the National Veld and Forest Act, (Act No. 101 of 1998). ◇ The workforce must be informed and advised on the associated risks, dangers and damage of property caused by accidental fires and how to prevent them. ◇ Fire extinguishers must be made available at the construction site, 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Prevent veld fires.	<u>Frequency</u> Daily

		<p>and the laborers must be informed of their location and trained to use them.</p> <ul style="list-style-type: none"> ◇ Restrict smoking activities to demarcated smoking activities. 				
Vehicle Servicing Areas	Pollution	<ul style="list-style-type: none"> ◇ Vehicle servicing must be done at the identified camp depot on impermeable surfaces to minimize the likelihood of petrochemical spills on the soil. In the case of accidents, polluted soil must be appropriately treated or taken away to an appropriate disposal site. ◇ Used spares must be collected and disposed of in the correct manner. Oils must be drained into a suitable container, transferred to a larger storage container, and then supplied to oil recycling companies. ◇ Oil must under no circumstances be disposed off into the drainage lines or the ground. 	RE/DEVELOPER, CONTRACTOR, DEO & ECO	Prevent pollution	Soil	<u>Frequency</u> Daily
MANAGEMENT ACTION		<p>Ongoing Monitoring Role Careful planning of construction activities Implementation of the outlined mitigation measures Photographic History Environmental Compliance Monitoring Reports</p>				

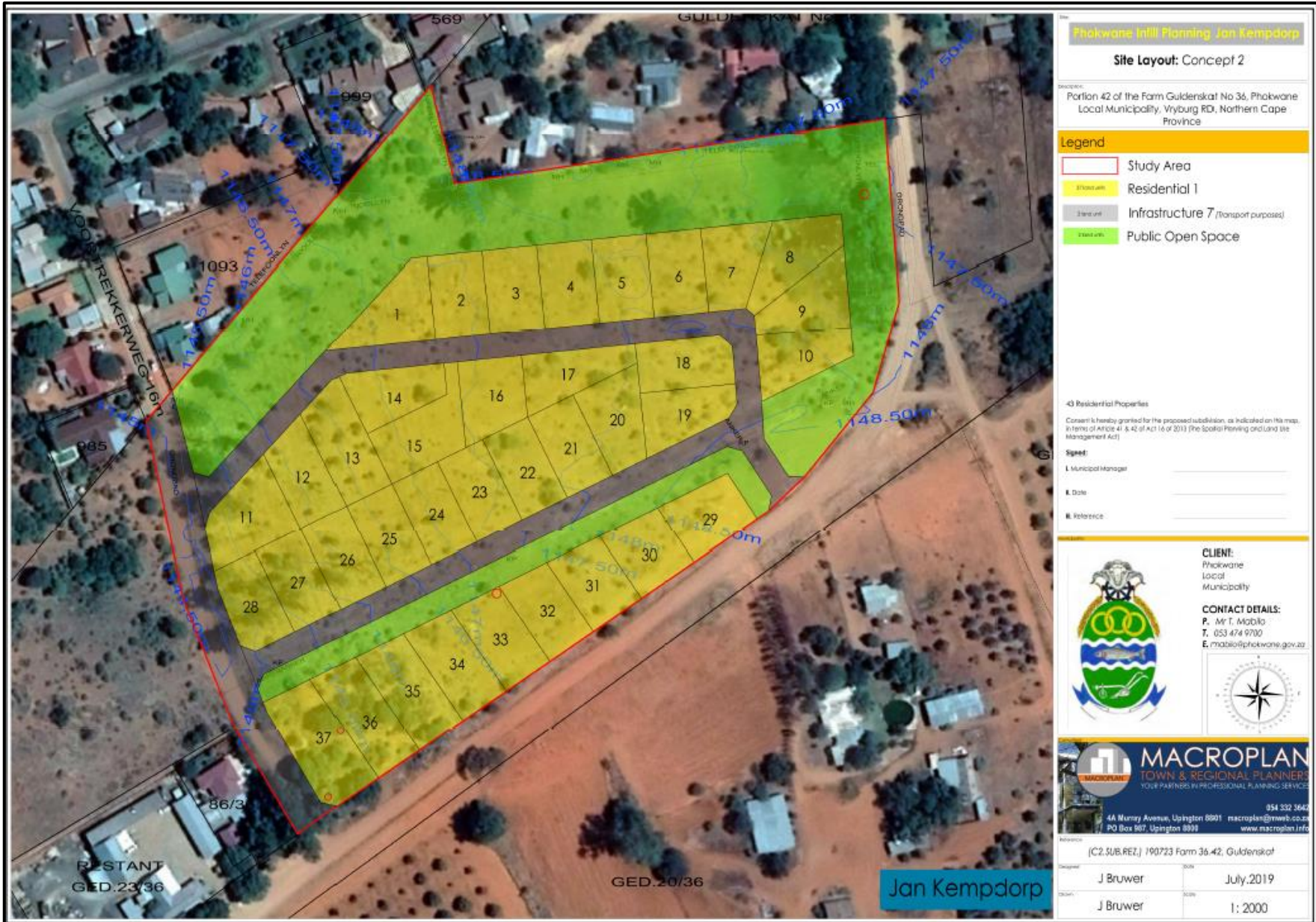
ASPECT	POSSIBLE IMPACT	MITIGATION PLAN	RESPONSIBLE PERSON	OBJECTIVES	MONITORING ACTIONS AND FREQUENCY
3. POST CONSTRUCTION PHASE					
Aesthetic view of the area	Aesthetic pollution	<ul style="list-style-type: none"> ◇ The site must be rehabilitated on completion of construction activities; therefore, a detailed rehabilitation plan must be provided by the contractor. ◇ The site must be kept clear of litter and all waste must be removed and disposed of at the registered landfill site. ◇ All stockpiles must be handled as directed by the engineers. ◇ Soil heaps must be flattened to match the adjacent ground and to help prevent soil erosion and encourage natural revegetation. ◇ All excavations must be backfilled, levelled and compacted. ◇ All surfaces hardened due to construction must be ripped and material imported thereto removed. ◇ The original site topography must be restored as much as possible. ◇ A final audit must be completed before the contractor may leave the site to determine 	RE/DEVELOPER, CONTRACTOR, DEO, ECO AND PLM	Prevent pollution Restore pre-construction conditions to a greater extent.	<u>Frequency</u> Once-Off

		<p>whether all requirements were met.</p> <ul style="list-style-type: none"> ◇ A meeting must be held between the PSC and various stakeholders to ensure that the site has been restored to a satisfactory condition. 			
4. OPERATION PHASE					
Environmental Degradation	Impact on the environment	<ul style="list-style-type: none"> ◇ The municipality will provide basic services to the area, i.e. power supply, water provision, electricity and refuse removal. ◇ Prevent establishment of illegal dumping site. ◇ Monitoring and routine maintenance of proper stormwater drainage system should be in place. ◇ Routine maintenance of access and internal roads should be in place. ◇ Implement alien control measures. 	PLM	<p>Maintenance of Bulk Infrastructure</p> <p>Prevent environmental degradation and pollution</p>	<u>Frequency</u> Infinite

6 AUDIT AND MONITORING

Compliance monitoring provides useful information for gauging environmental performance throughout the duration of the project. The information obtained can be used to gauge how effective the mitigation plans in the EMPr are and determine whether the corrective actions undertaken are adequate and whether some modifications are required. The resident engineer (project manager) must monitor the overall aspects of the project, e.g. labor issues and complaints raised by the local community, so they can be addressed in conjunction with the PSC. A DEO must be on site for the duration of the project to ensure that the conditions of the Environmental Authorization and EMPr are adhered to. The ECO must monitor construction activities at least once a month and the monthly reports must be compiled and presented to the PSC for discussion if needs be. On completion of the construction phase, post-rehabilitation, an environmental audit must be conducted by an experienced and qualified auditor to identify the gaps in the compliance to Environmental Legislation and Regulations and adherence to the EMPr and provide correlative action.

APPENDIX A
LAYOUT OF THE PROPOSED DEVELOPMENT



APPENDIX B
CURRICULUM VITAE OF EAP

NAME: Lorato Tigedi Pr. Sci. Nat. (400161/09)

Name of Firm: NSVT Consultants

**Present Position: Director/ Environmental Assessment Practitioner
1041/2**

Phone: 051 430

**Years with the Firm: 8 Years
8259**

Cell: 082 784

**Mailing Address: 1 Fourth Street, Office 1A, Arboretum, 9301
lorato@nsvt.co.za**

E-mail:

Date of Birth.: 1980-09-25

Nationality: South African

Education:

Name of Institution	Degree Obtained	Dates Attended
University of the Free State	BSc. Natural Science (Zoology)	1999-2002
	BSc. Hons in Wildlife	2003-2004
	Masters in Environmental Management (Mini-thesis Outstanding)	

Professional Membership:

MEMBERSHIP	MEMBERSHIP No.
South Africa Council for Natural Scientific Professions (SACNASP)	Environmental Scientist (400161/09)
International Association for Impact Assessment South Africa Affiliate (IAIAsa)	Member (2191)
International Association for Public Participation Southern Africa Affiliate	Member (2010/ZA/FS0001)

Key Experience: Lorato Tigedi joined Geo Pollution Technologies (Free State) in 2003 and partnered with a Geohydrologist to set up Bokamoso Consultants as an environmental consultant, trading as NSVT Consultants. From 2004-2005 after completion of BSc Hons (Wildlife) she continued to study Master's in Environmental Management in 2006 but only completed the modules work and still have Mini-Dissertation. In 2011, she set up NSVT Consultants CC as a sole member. She has approximately 16 years in environmental consulting and have completed basic assessment, environmental impact assessment, waste management license and water use license applications for Free State, Northern Cape, North West and Eastern Cape Provinces. She therefore has extensive knowledge regarding the competencies required to ensure implementation and alignment of environmental policy instruments such as EIA. For Continuous Professional Development, she has completed short courses in Planning for Effective Public Participation, Social Impact Assessment and Conflict Management, Introduction to Environmental Law, Introduction and Implementation of OHSAS 17001 and EMS 14001-2016 amongst other courses. Therefore, she possesses the technical expertise and scientific knowledge for conducting thorough environmental assessments. She has considerable public participation experience through her work in EIA and understand that an effective public participation process provides an opportunity for identifying problems during the EIA process and identifying

opportunities that could be used in the decision-making process. Through her involvement in various projects, she has acquired analytical, problem-solving and excellent research skills

Current Employment:

Duration: March 2011 to date **Organization:** NSVT Consultants-Environmental and Social Scientists

Project: Environmental Compliance Monitoring for the Upgrading of 31km of widening and rehabilitation of N9 Sec 7 between Wolwefontein and Colesberg as well as the construction of a new access interchange at Colesberg which required the utilization of 10 borrow pits.

Client: South African National Resources Agency SOC Limited Eastern Region

Project: Environmental authorisation applications for a new landfill sites in Mantsopa Local Municipality.

Client: Bigen Africa

Project: Environmental Authorisation application and Environmental Compliance Monitoring for a new interchange, overhead and pedestrian bridge.

Client: UWP Consulting Engineers

Project: Waste management license applications for development of new treatment plant.

Client: ISA & Partners

Project: Application for rectification for upgrading the treatment works without obtaining an Environmental Authorisation in Vredefort

Client: Sobek Engineering

Project: Environmental Authorisation application for development of new residential areas including associated infrastructure in Phumelela Local Municipality, Dihlabeng Local Municipality, Tswelopele Local Municipality.

Client: Phethogo Consulting Engineers

Project: Environmental Authorisation application for development of new residential area including associated infrastructure in Metsimaholo Local Municipality and Maluti-a-Phofung Local Municipality.

Client: YB Mashalaba & Associates

Project: Basic Assessment, Water use License and Environmental Compliance Monitoring, for the Ficksburg Pipeline from Meulspruit Dam to the water treatment plant.

Client: Flagg Consulting Engineers

Project: Environmental Impact Assessment for the proposed residential area in Mafube Local Municipality

Client: Pula Strategic Resource Management

Project: Environmental Compliance Monitoring for the Construction of a feeder pipeline to connect reservoir 8 with the existing water supply network, Section F, Botshabelo, Mangaung Metropolitan Municipality, Free State Province

Client: Flagg Consulting Engineers

Project: Basic Assessment for a new 132kV powerline from Rouxville substation to Melkspruit substation in Aliwal North

Client: Eskom Free State Operating Unit

Position: Director and Environmental Specialists/Scientist

Responsibilities: Business Operations, Marketing, Project Management, Community Facilitation, Internal EIA Evaluation and associated administration work including Determine whether the Basic Assessment or Environmental Impact

Assessment is required, Initial assessment of site to identify potential environmental constraints, Initial screening (considering sensitivity/environmental flaws) of borrow pits and selection of suitable ones, Team co-ordination, Collate project information, i.e. civil reports and review, Consult with the Competent Authority to ensure the project is compliant with applicable national requirements and social legal requirements and policies, Consult with relevant Stakeholders per requirements of the National Environment Act of 1998, Undertake Site Investigation, Review of the Draft Environmental Management Plan and amendments following the confirmations of the route selection and alignment, Compilation of Progress Reports (Weekly or Monthly as required), Undertake public participation process, Compilation of construction EMP since no Basic Assessment/Environmental Impact Assessment was required, Compilation of EMPR as part of mining permit application for borrow pits, Approval of EMPRs and obtaining mining permit applications, Internal Review of Environmental Reports, Mentoring of Environmental Management Undergraduate Students

Previous Employment:

Duration: March 2004 to February 2011 **Organization:** Bokamoso Consultants-
Environmental Scientists and Geohydrologist

Project: Environmental Impact Assessment for the upgrading of the wastewater treatment works in Dewetsdorp

Client: Ninham Shand Consulting Engineers

Project: Application for exemption from conducting EIA process for the upgrading of the treatment works in Marquard

Application for exemption from conducting EIA process for the upgrading of the treatment works in Senekal

Client: ISA & Partners Consulting Engineers

Project: Environmental Impact Assessment for a new access road in Mount Arthur

Client: Thuso Development Consultants

Project: Environmental Impact Assessment for the upgrading of D313 road from Morokweng to Vorstershoop

Client: Babereki Consulting Engineers

Project: Environmental Impact Assessment for the upgrading of the wastewater treatment plant in Jan Kempdorp

Client: Phokwane Local Municipality

Project: Environmental Impact Assessment for the upgrading of wastewater treatment works in Jagersfontein

Client: Phethogo Consulting Engineers

Project: Community facilitation and public participation process for the resettlement planning and environmental authorisation application for Khuis Community

Client: regional Land Claims Commission Northern Cape

Position: Environmental Consultant

Responsibilities: Site visits, undertake public participation process and compile public participation report and/or comments and responses report, compilation of basic assessment and scoping report, compilation of environmental management plan, liaison with stakeholders and competent authorities, Water use License Applications, Waste Management License Applications, Environmental Compliance Monitoring,

Duration: March 2003 to February 2004

**Organization: Geo Pollution Technologies
(Bloemfontein)**

**Project: Application for rezoning and closure of the landfill site in Thaba Nchu and Botshabelo
Client: Mangaung Local Municipality**

**Project: Environmental Impact Assessment for the wastewater treatment works in Ladybrand
Client: Kwezi V3 Consulting Engineers**

**Project: Environmental Impact Assessment for the new reservoir in Ladybrand
Client: Trubuild Consulting Engineers**

Position: Junior Environmental Consultant

Responsibilities: Site visits, undertake public participation process and compile public participation report and/or comments and responses report, compilation of basic assessment and scoping report, compilation of environmental management plan, liaison with stakeholders and competent authorities.

Reference:

CONTACT NAME	ORGANISATION	TELEPHONE NUMBERS
Mamofolo Matebele	Babereki Consulting Engineers	051 522 4865
Solomon Munthali	TS Consulting Engineers	071 875 8952
Piet De Bie	Phethogo Consulting	051 448 6006

Consent:

I confirm that the above CV is an accurate description of my qualifications and experience in environmental management, waste management license applications, which included basic assessment and environmental impact assessment processes, water use license and mining permit and rights applications, and environmental compliance monitoring, and public participation, stakeholder engagements and social facilitation.

Signature

Date

APPENDIX C
CHANCE FINDS PROTOCOL

CHANCE FINDS PROTOCOL

A following procedure will only be followed in the event that fossils are uncovered during excavation.

1.1 LEGISLATION

Cultural Heritage in South Africa (includes all heritage resources) is protected by the **National Heritage Resources Act (Act 25 of 1999) (NHRA)**. According to Section 3 of the Act, all Heritage resources include “**all objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens**”.

Palaeontological heritage is unique and non-renewable and is protected by the NHRA and are the property of the State. It is thus the responsibility of the State to manage and conserve fossils on behalf of the citizens of South Africa. Palaeontological resources may not be excavated, broken, moved, or destroyed by any development without prior assessment and without a permit from the relevant heritage resources authority as per section 35 of the NHRA.

1.2 BACKGROUND

A fossil is the naturally preserved remains (or traces) of plants or animals embedded in rock. These plants and animals lived in the geologic past millions of years ago. Fossils are extremely rare and irreplaceable. By studying fossils, it is possible to determine the environmental conditions that existed in a specific geographical area millions of years ago.

1.3 INTRODUCTION

This informational document is intended for workmen and foremen on construction sites. It describes the actions to be taken when mining or construction activities accidentally uncovers fossil material.

It is the responsibility of the Environmental Control Officer (ECO) of the project to train the workmen and foremen in the procedure to follow when a fossil is accidentally uncovered. In the absence of the ECO, a member of the staff must be appointed to be responsible for the proper implementation of the chance find protocol as not to compromise the conservation of fossil material.

1.4 CHANCE FIND PROCEDURE

If a chance find is made:

- The person responsible for the find must immediately **stop working** and all work must cease in the immediate vicinity of the find.
- The person who made the find must immediately **report** the find to his/her direct supervisor which in turn must report the find to his/her manager and the ECO or site manager. The ECO must report the find to the relevant Heritage Agency (South African Heritage Research Agency, SAHRA). (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Tel: 021 462 4502. Fax:

+27 (0)21 462 4509. Web: www.sahra.org.za. The information to the Heritage Agency must include photographs of the find, from various angles, as well as the GPS co-ordinates.

- A preliminary report must be submitted to the Heritage Agency within **24 hours** of the find and must include the following: 1) date of the find; 2) a description of the discovery and a 3) description of the fossil and its context (depth and position of the fossil), GPS co-ordinates.
- Photographs (the more the better) of the discovery must be of high quality, in focus, accompanied by a scale. It is also important to have photographs of the vertical section (side) where the fossil was found.

Upon receipt of the preliminary report, the Heritage Agency will inform the ECO (site manager) whether a rescue excavation or rescue collection by a palaeontologist is necessary.

- The site must be secured to protect it from any further damage. **No attempt** should be made to remove material from their environment. The exposed finds must be stabilized and covered by a plastic sheet or sand bags. The Heritage agency will also be able to advise on the most suitable method of protection of the find.
- In the event that the fossil cannot be stabilized the fossil may be collected with extreme care by the ECO (site manager). Fossils finds must be stored in tissue paper and in an appropriate box while due care must be taken to remove all fossil material from the rescue site.

Once Heritage Agency has issued the written authorization, the developer may continue with the development.