



# **DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME**

FOR

**PROPOSED HOSPITAL EXTENSION – DIE WILGERS EXT 83**

**REF: GAUT 002/18-19/E2268**

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## ABBREVIATIONS

CTMM	City of Tshwane Metropolitan Municipality
ECO	Environmental Control Officer
EMPr	Environmental Management Programme
GDARD	Gauteng Department of Agriculture and Rural Development
NEMA	National Environmental Management Act
OHSA	Occupational Health and Safety Act
PPE	Personal Protective Equipment
PHRA-G	Provincial Heritage Resources Agency Gauteng
SAHRA	South African Heritage Resources Agency
SAPS	South African Police Service
SCC	Species of Conservation Concern

# INFORMATION SHEET

## 1 Details of the Environmental Assessment Practitioner (EAP)

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# ENVIRONMENTAL MANAGEMENT PROGRAMME

## 2 Introduction

Plan Associates Town and Regional Planners Inc. appointed Lokisa Environmental Consulting CC to obtain authorisation from the Gauteng Department of Agriculture and Rural Development (GDARD) for the proposed expansion of the existing Life Wilgers Hospital.

The Basic Assessment (BA) procedure will apply to this application. The process is done in terms of Government Notice Regulations (GNR) No. 982 and 985 of the EIA Regulations of 2014 (as amended 2017). The EIA Regulations were promulgated in terms of the National Environmental Management Act ('NEMA', Act No. 107 of 1998, as amended).

### Project description

The project entails the proposed expansion of the existing Life Wilgers Hospital. The project site measures approximately 1.7ha in extent.

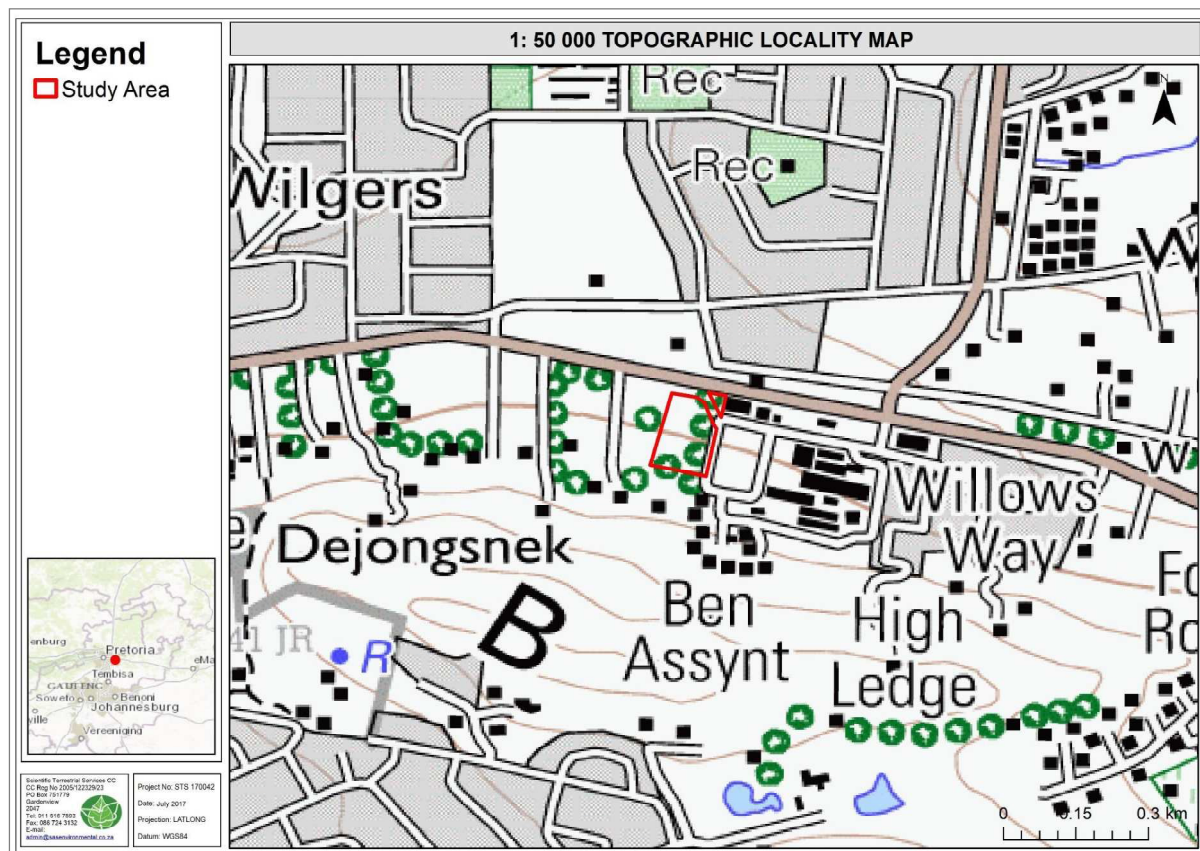
The site is to be developed in two portions being Site A (to be known as Erf 1374 of Die Wilgers x 83) and Site B (to be known as Erf 1375 of Die Wilgers x 83).

Site A /Erf 1374 is to be developed with a Hospital and related and subservient uses, medical consulting rooms, parking, helipad, a cafeteria, a florist, a kiosk and a dispensing chemist with a height of 3 storeys.

Site B /Erf 1375 is to be used for parking purposes.

The south western portion of Erf 1374 has been excluded from the development and a servitude is to be registered for the Natural Conservation: Juliana's Golden Mole.

The site is situated approximately 4.79km east of Lynnwood, 2.11km north of Faerie Glen, 1.94km west of Equestria and directly south of the M6 Road, also known as Lynnwood Road.



**Figure 1: Locality Map**

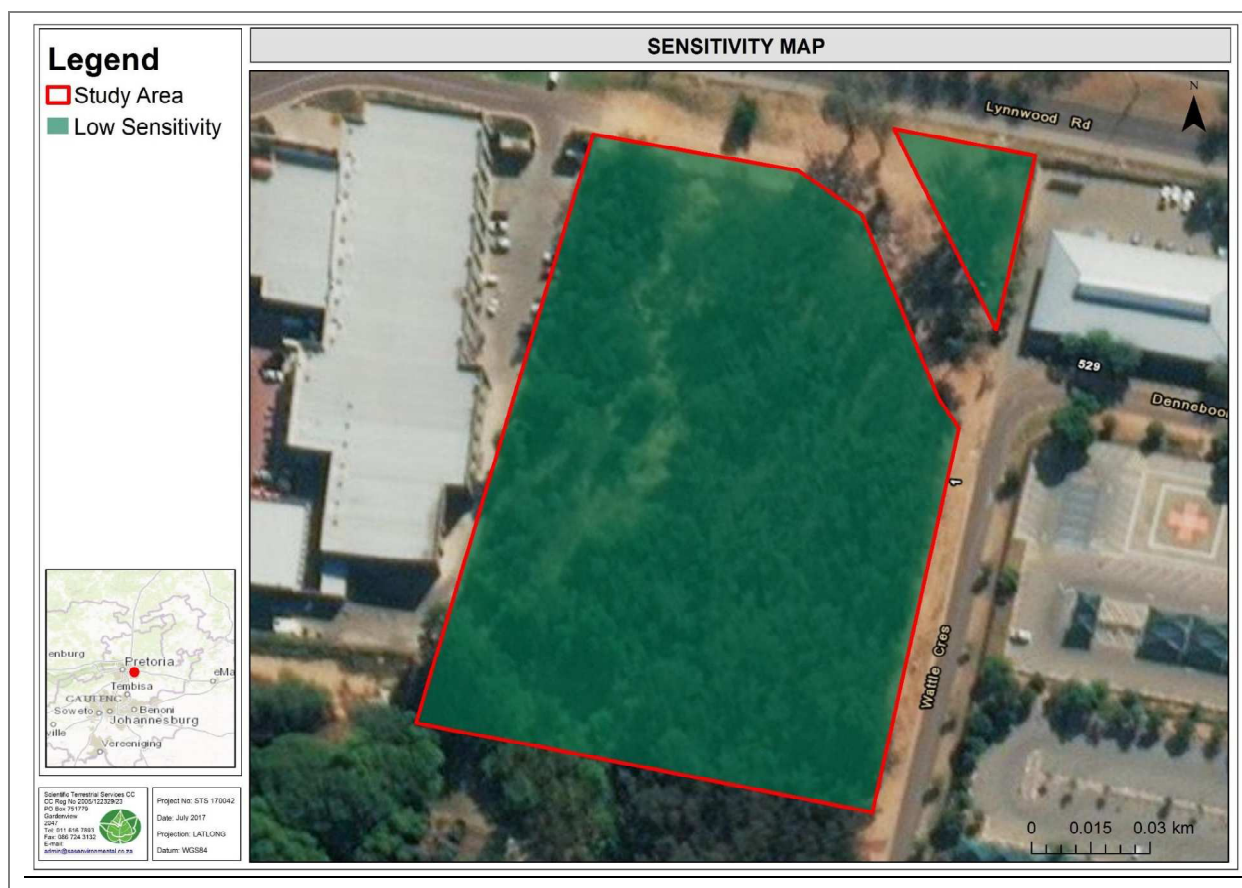
### Sensitivity Mapping

The table below presents the sensitivity of each identified habitat unit along with an associated conservation objective and implications for development.

**Table 1: A summary of sensitivity of each habitat unit and implications for development**

Habitat Unit	Sensitivity	Conservation Objective	Development Implications
Transformed Habitat Unit	Low	Optimise development potential.	The floral composition of the study area is considered to be highly transformed as a result of alien and invasive plant proliferation, this results in a low ecological importance and sensitivity for the habitat unit. Continuity to other larger natural areas in the region is limited. Historic and ongoing anthropogenic activities have resulted in severe degradation and transformation of habitat associated with the study area, and it is therefore highly unlikely to support any faunal or floral SCC. Development related activities would therefore have a low impact on this habitat unit, as the habitat integrity is historically disturbed and located within an urban setting. Thus, no significant impact is anticipated should the development proceed.

The figure below conceptually illustrates the ecological sensitivity associated with the study area. The areas are depicted according to their sensitivity in terms of the presence or potential for floral and faunal SCC, habitat integrity and levels of disturbance, threat status of the habitat type, the presence of unique landscapes and overall levels of diversity.



**Figure 2: Sensitivity map of the study area**

#### Sensitivity according to the C-Plan

The entire study area is situated within a CBA. The CBA is considered an irreplaceable area, for red listed plant and mammal habitat and for primary vegetation. A CBA is an area considered important for the survival of threatened species and includes valuable ecosystems such as wetlands, untransformed vegetation and ridges.

The closest ESA to the study area is approximately 90m west. An ESA provides connectivity and important ecological processes between CBAs and is therefore important in terms of habitat conservation.





**Figure 3: C-Plan**

This Environmental Management Programme (EMPr) serves the purpose to ensure that the facility is operated in an environmentally responsible manner and that potential impacts identified and associated with this activity are adequately mitigated during the construction and operational phases of the project.

### 3 Objective of the EMPr

As per As per Section (1) of Appendix 4 of Regulation 982 an EMPr must comply with Section 24N of the Act and include –

**Table 2: Requirements according to Appendix 4 of GNR 982**

Requirements according to Appendix 4 of GNR 982	Section in report
a) Details of the EAP who prepared the EMPr and the expertise of that EAP to prepare the EMPr, including curriculum vitae.	Section 1 Annexure A
b) A detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description.	Section 2
c) A map at an appropriate scale which superimposes the proposed activity, its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers.	Section 2
d) A description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including – <ul style="list-style-type: none"> <li>• Planning and design;</li> <li>• Pre-construction activities;</li> <li>• Construction activities;</li> <li>• Rehabilitation of the environment after construction and where applicable post closure;</li> <li>• Where relevant, operation activities.</li> </ul>	Section 4 Section 12
f) A description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must where applicable, include actions to – <ul style="list-style-type: none"> <li>• Avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;</li> <li>• Comply with any prescribed environmental management standards or practices;</li> <li>• Comply with any applicable provisions of the Act regarding closure where applicable;</li> <li>• Comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable;</li> </ul>	Section 5 Section 12
g) The method of monitoring the implementation of the impact management actions as mentioned in the above paragraph (f);	Section 7
h) The frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 7  Section 12
i) An indication of the persons who will be responsible for the implementation of the impact management actions;	Section 6 Section 12
j) The time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	Section 12
k) The mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Section 6
l) A program for reporting on compliance, taking into account the	Section 7

requirements as prescribed by the Regulations;	
m) An environmental awareness plan describing the manner in which - <ul style="list-style-type: none"> <li>The applicant intends to inform his or her employees of any environmental risk which may result from their work; and</li> <li>Risks must be dealt with in order to avoid pollution or the degradation of the environment; and</li> </ul>	Section 8
n) Any specific information that may be required by the competent authority.	Section 9 & 10

#### 4 A description of the Impact Management Outcomes

The purpose of the EMPr is to act as an instrument to be used by the Applicant to ensure sound environmental practices are incorporated during the construction and operational phase of the development.

The EMPr is a detailed programme for the implementation of the mitigation measures to minimise negative environmental impacts during the life-cycle of a project. The EMPr contributes to the preparation of the contract documentation by developing clauses to which the contractor must adhere for the protection of the environment. The EMPr specifies how the construction of the project is to be carried out and includes the actions required for the Post-Construction Phase to ensure that all the environmental impacts are managed for the duration of the project's life-cycle.

The EMPr is to be implemented in a co-operative spirit with all parties (project proponent, contractor, affected parties) involved in the setting of environmental objectives and practices.

The table below provides a summary of the identified impacts and their pre-mitigation and post-mitigation impact significance rating scores as per the environmental impact assessment process for the following phases of the proposed development –

- Construction phase; and
- Operational phase.

**Table 3: Identified impacts and their pre-mitigation and post-mitigation impact significance rating scores**

Potential Impacts	Signifi-cance rating of impacts	Signifi-cance rating of impacts after mitigation
<b>CONSTRUCTION PHASE</b>		
<b>1.1 Dust /Air pollution</b> The generation of dust associated with construction activities & earthworks	Low	Very Low
<b>2.1 Visual Impacts and light pollution</b>	Very Low	Very Low
<b>2.2 Bulk earthworks</b>	Very Low	Very Low

3.1 Soil erosion, loss of topsoil, deterioration of soil quality	Low	Low
3.2 Soil Pollution	Low	Very Low
3.3 Disturbance of surface geology for development foundations	Low	Very Low
4.1 Degradation, destruction of habitats/ ecosystem and loss of natural vegetation	Low	Very low
4.2 Impact on Floral and Faunal Species of Conservation Concern	Low	Very Low
5.1 Storm water flow and drainage	Medium	Low
6.1 Noise/ vibration	Very Low	Very Low
6.2 Impact on the privacy of adjacent land owners	Low	Low
7.1 Safety and Security	Medium	Low
7.2 Economic opportunities	Positive - Medium	Positive Medium -
7.3 Hygiene	Very Low	Very Low
8.1 Destruction of cultural / heritage sites	Insignifi-cant	Insignifi-cant
9.1 Waste	Very Low	Very Low
9.2 Pressure on existing infrastructure and services	Very Low	Very Low
<b>OPERATIONAL PHASE</b>		
1.1 Alien invasion	Low	Very Low
1.2 Impact on Floral and Faunal Species of Conservation Concern	Low	Very Low
2.1 Noise	Medium	Low
3.1 Job opportunities	High (Positive)	High (Positive)
4.1 Storm water flow and drainage	Medium	Low
5.1 Traffic –vehicles from the residential development.	Medium	Low
6.1 Waste	Medium	Low
6.2 Pressure on existing infrastructure and services	Medium	Low
7.1 Site layout to include servitude to be registered for the Natural Conservation: Juliana's Golden Mole	Medium (Positive)	Medium (Positive)

## 5 A description of the proposed impact management actions

The specifications outlined in the EMPr are applicable to all activities undertaken by all persons involved in the execution of the works, including sub-contractors, the workforce and suppliers for the duration of activities for the proposed project.

In order to attain the impact management outcomes as outlined in Section 4 the EMPr is to address issues in the following manner:

The objective of the EMPr is to address the following issues:

1. Environmental Management considerations are implemented from the start;
2. Precautions against damage are taken timely, and
3. Impacts of the development on the environment are minimised.

## **6 Implementation of the EMPr**

### **6.1 The Applicant**

- 6.1.1. The overall responsibility for ensuring compliance lies with the Applicant.
- 6.1.2. The Applicant shall comply with the conditions set in the Environmental Authorisation by the GDARD.
- 6.1.3. The Applicant shall ensure that the Contractor and all staff members, sub-contractors and suppliers understand and adhere to the EMPr.
- 6.1.4. The Applicant shall ensure that all sub-contractors and suppliers are contractually bound to adhere to the EMPr and Environmental Code of Conduct.

### **6.2 Environmental Control Officer**

- 6.2.1. The Applicant shall appoint a suitably qualified Environmental Control Officer (ECO) to supervise the implementation of the EMPr.
- 6.2.2. The Contractor must be notified of this appointment and furnished with the contact details of the ECO.
- 6.2.3. The ECO shall be responsible for:
  - Day to day implementation of the EMPr and coordination of all environmental matters on site.
  - Ensuring that all staff members are adequately trained and aware of the EMPr and its Environmental Code of Conduct.
  - Fortnightly environmental inspections (according to the criteria specified in the EMPr).
  - Liaison with the project manager, client and public.

### **6.3 Contractor**

- 6.3.1. The Contractor, including all sub-contractors, shall comply with the specifications in the EMPr.
- 6.3.2. A representative of each sub-contractor will receive a copy of the EMPr.
- 6.3.3. A representative of each sub-contractor will be required to sign the Environmental Code of Conduct to give assurance that they understand the EMPr and that they undertake to comply with conditions therein.

## **7 Environmental Reporting Procedures**

An Environmental Incidents Register and an Environmental Complaints Register will be in place and will be maintained by the ECO. Upon occurrence of non-compliance or a complaint of an environmental nature the incident will be recorded in the relevant register.

The registers must be made available to the ECO upon every fortnightly site visit. EMPr related issues would be discussed at all construction site meetings. A copy of the relevant sections of the minutes of these site meetings must be made available to the ECO.

## **8 Environmental Awareness Plan**

The ECO will be responsible for putting in place an Environmental Awareness Training Programme for all staff members. Before commencing with any work, all staff members shall be briefed about the Environmental Code of Conduct. The training programme has to be approved by the ECO. After being briefed about the contents of the Environmental Code of Conduct, staff members shall sign an Environmental Training register as proof of their training.

The training must include, but are not limited to:

- Identification of protected species, both fauna and flora
- Identification of potential heritage resources
- Identification and avoidance of demarcated no-go areas
- Site access and security
- Safety measures

## **9 Environmental Control Measures**

The EMPr outlines measures to be implemented in order to minimise any potential environmental degradation associated with the construction activities. It should serve as a guide for the Contractor and the construction workforce on their roles and responsibilities concerning environmental management on the construction site and provide a framework for environmental monitoring throughout the construction period.

Measures to control potential environmental impacts during the construction phase are specified. Except where otherwise stated, all these control measures will apply throughout the construction period and, as part of the project contract, the Contractor shall adhere to these measures at all times.

## **10 Contract**

The Contractor/s shall be handed a copy of all relevant documentation regarding the project and shall, before any work is conducted, meet with the ECO in order that the contractor shall familiarise himself with the environmental issues concerning the site.

A commitment from the Contractor is required on the following issues:

- To take into consideration the landowners in the surrounding area;
- Always behave professionally on and off site;
- To ensure quality of work done, technical and environmental;
- To resolve problems and claims arising from damage immediately to ensure a smooth flow of operations (take relevant steps to ensure no further damage or disturbance and resolve environmental problems adequately with the use of risk management and emergency response procedures);
- To use this EMPr for the benefit of all involved;
- To preserve the natural environment by limiting destructive actions on site;
- To have an eco-friendly approach; and
- Not to litter.

An agreement is to be signed by the contractor that:

- He knows and understands the content of the EMPr; and
- He is able and shall comply with all legislation pertaining to the nature of the work to be done and all things incidental thereto.

## **11 Statutory, Legal and other requirements**

The following sources of South African Law have been identified and will form the basis of the EMPr:

- 9.1 Constitution of the Republic of South Africa, Act No. 108 of 1996
- 9.2 National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA)
- 9.3 NEMA EIA Regulations, 2014 (Government Notice Regulations Nos. 982, 983, 984, 985)
- 9.4 National Water Act, 1998 (Act No. 36 of 1998)
- 9.5 National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
- 9.7 National Road Traffic Act, (Act No. 93 of 1996)
- 9.8 Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)
- 9.9 National Environment Management: Air Quality Act, 2004 (Act No. 39 of 2004)
- 9.10 Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)
- 9.11 National Heritage Resources Act 1999 (Act No. 25 of 1999) (NHRA)
- 9.12 National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)
- 9.13 Gauteng Agriculture Potential Atlas
- 9.14 GDARD Requirements for Biodiversity Assessments (Version 3)
- 9.15 Red Data Plant Policy
- 9.16 Gauteng Conservation Plan (C-Plan Version 3.3)
- 9.17 South African Guidelines for Sustainable Drainage Systems
- 9.18 Gauteng Environmental Management Framework

## **12 Environmental Management Programme**

The following tables form the core of this EMPr for the construction and operational phases of this project. These tables should be used as a checklist on site, especially during the construction phase.



**Table 4: Planning, Design and Pre-construction Phase**

<b>IMPACT</b>	<b>OUTCOME/ OBJECTIVE</b>	<b>MITIGATION MEASURES/ACTIONS</b>	<b>RESPONSIBILITY</b>	<b>MONITORING FREQUENCY</b>
<b>DESIGN</b>  Negative impacts on environment during construction	<ul style="list-style-type: none"> <li>• Ensure proper initiation of project</li> </ul>	<ul style="list-style-type: none"> <li>• Compile tender documentation and Specifications</li> <li>• All the aspects listed under Construction and Closure</li> <li>• Ensure acceptable management of environmental issues during construction.</li> <li>• Ensure that relevant environmental management specifications as per the EMPr are incorporated in the Tender and Contract documentation.</li> <li>• Appoint an ECO who must monitor the contractor's compliance with the EMPr.</li> <li>• Develop appropriate rehabilitation plan in consultation with ECO and specialists.</li> </ul>	<ul style="list-style-type: none"> <li>• Engineering Design Consultant</li> <li>• Applicant</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
<b>FUNCTIONAL DESIGN OF INFRASTRUCTURE</b>	<ul style="list-style-type: none"> <li>• Ensure functional design of infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Adherence to cogent, well-conceived and ecologically sensitive designs and construction methods, and the mitigation measures provided as well as general good construction practice, is essential.</li> </ul>	<ul style="list-style-type: none"> <li>• Engineering Design Consultant</li> <li>• Applicant</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
<b>ENVIRONMENTAL EDUCATION AND TRAINING</b>	<ul style="list-style-type: none"> <li>• Ensure proper and sufficient environmental training and education for all construction personnel</li> </ul>	<ul style="list-style-type: none"> <li>• The ECO will be responsible for putting in place an Environmental Awareness Training Programme for all staff members.</li> <li>• Before commencing with any work, all staff members shall be briefed about the Environmental Code of Conduct.</li> <li>• The training programme has to be approved by the ECO.</li> <li>• After being briefed about the contents of the Environmental Code of Conduct, staff members shall sign an Environmental Training register as proof of their training.</li> </ul>	<ul style="list-style-type: none"> <li>• ECO</li> <li>• Contractor</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing</li> </ul>
<b>FAUNA AND FLORA</b>  Site clearing and the removal of vegetation	<ul style="list-style-type: none"> <li>• Selective removal of vegetation during site clearing</li> </ul>	<ul style="list-style-type: none"> <li>• The boundaries of the development footprint areas are to remain as small as possible, be clearly defined and it should be ensured that all activities remain within defined footprint areas.</li> <li>• It must be ensured that storm water is managed on site in a suitable manner.</li> </ul>	<ul style="list-style-type: none"> <li>• ECO</li> <li>• Contractor</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing</li> </ul>

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
		<ul style="list-style-type: none"> <li>• Disturbance to birds, animals and reptiles and their habitats should be prevented at all times.</li> <li>• All rescue and relocation plans should be overseen by a suitably qualified specialist.</li> </ul>		

**Table 5: Construction Phase**

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
<b>AIR QUALITY AND DUST</b>  The generation of dust associated with construction activities & earthworks	<ul style="list-style-type: none"> <li>Limitation of dust during the construction phase</li> </ul>	<ul style="list-style-type: none"> <li>Dust generation should be kept to a minimum.</li> <li>Dust must be suppressed at construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent.</li> <li>Speed limits must be implemented in all areas, including public roads and private property to limit the levels of dust pollution.</li> <li>It is recommended that the clearing of vegetation from the site should be selective and done just before construction so as to minimise erosion and dust.</li> <li>Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided.</li> <li>All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials.</li> <li>No burning of refuse or vegetation is permitted.</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>
<b>TOPOGRAPHY</b>  Visual Impacts  Bulk Earthworks	<ul style="list-style-type: none"> <li>Limitation of site development to footprint area.</li> </ul>	<ul style="list-style-type: none"> <li>Site development to be limited to footprint area.</li> <li>The construction camp must be located as far from residential properties as possible.</li> <li>Light pollution should be minimised.</li> <li>Construction / management activities must be limited to the daylight hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays.</li> <li>Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, disturb wildlife, or interfere with road traffic.</li> <li>In this situation low flux and frequency lighting shall be utilised.</li> <li>Avoid development on excessively steep slopes.</li> <li>Avoid cutting steep embankments</li> <li>Provide the necessary erosion protection measures.</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
		<ul style="list-style-type: none"> <li>Disturbed surface areas in the construction phase to be rehabilitated. No open trenches to be left. No mounds of soils created during construction to be left.</li> <li>All construction material, equipment and any foreign objects brought into the area by contractors to be removed immediately after completion of the construction phase.</li> </ul>		
<b>GEOLOGY AND SOILS</b>  Soil erosion, loss of topsoil, deterioration of soil quality  Soil Pollution	<ul style="list-style-type: none"> <li>Prevent/limit soil erosion, loss of topsoil, deterioration of soil quality and soil pollution</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate erosion and storm water management structures must be installed around the construction site.</li> <li>All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks.</li> <li>Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area.</li> <li>Drip trays are to be utilised during daily greasing and re-fuelling of machinery and to catch incidental spills and pollutants</li> <li>Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow.</li> <li>Ensure appropriate handling of hazardous substances.</li> <li>Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes.</li> <li>Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and bunded.</li> <li>Once earthworks are complete, disturbed area are to be stabilised with an appropriate approved method.</li> <li>Disturbed surfaces to be rehabilitated with locally indigenous grass species. No open trenches to be left.</li> <li>No mounds of soils created during construction to be left. Soils around erected poles to be leveled and sculptured to the original contours of the surrounding soils.</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
		<ul style="list-style-type: none"> <li>• Ensure correct position of construction caps, equipment yards, refueling depots, concrete batching plant etc. to avoid areas susceptible to soil and water pollution.</li> <li>• Ensure appropriate handling of hazardous substances</li> <li>• Remediate polluted soil.</li> <li>• All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks.</li> <li>• Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area.</li> </ul>		
<b>FLORA AND FAUNA</b>  Degradation, destruction of habitats/ ecosystem and loss of natural vegetation  Impacts on faunal and floral species of conservation concern  Increase in Invasive species	<ul style="list-style-type: none"> <li>• Protection of existing indigenous flora and fauna against degradation, destruction of habitats/ ecosystem</li> <li>• Prevention of impacts on existing fauna and flora</li> <li>• Eradication of invasive species</li> </ul>	<ul style="list-style-type: none"> <li>• It is recommended that site clearing take place in a phased manner (where possible) to allow for any faunal species present to move away from the study area to the surrounding area;</li> <li>• Upon completion of construction activities, it must be ensured that no bare areas remain and that indigenous grassland species are reintroduced.</li> <li>• As far as possible, indigenous grassland species, including grasses, should be used as part of the landscaping of the project and it is recommended that <i>Cynodon dactylon</i> be used instead of <i>Pennisetum clandestinum</i> (Kikuyu) for any lawned areas;</li> <li>• Edge effects of activities need to be actively managed to minimise further impacts to the receiving environment, with specific consideration to erosion control, including alien and invasive species management;</li> <li>• Informal fires by construction personnel within the study area should be prohibited;</li> <li>• No dumping of waste should take place. If any spills occur, they should be immediately cleaned up;</li> <li>• In the event of a breakdown, maintenance of vehicles must take place with care and the recollection of spillage should be practiced preventing the ingress of hydrocarbons into the topsoil</li> <li>• Should any floral or faunal SCC be encountered during</li> </ul>	<ul style="list-style-type: none"> <li>• ECO</li> <li>• Contractor</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing by Contractor</li> <li>• Twice a month by ECO</li> <li>• Monthly report</li> </ul>

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
		<p>the site preparation or construction phase, the following measures are to be carried out:</p> <ul style="list-style-type: none"> <li>○ Where feasible, effective relocation of individuals to suitable similar habitat in the vicinity of the proposed site.</li> <li>○ All rescue and relocation plans should be overseen by a suitably qualified specialist</li> <li>• No trapping or hunting of any faunal species are to take place during the construction phase within the study area or within the surrounding area.</li> <li>• Alien vegetation must be removed from the study area during both the construction and operational phases of the development, with specific mention of Category 1b species in line with the NEMBA Alien and Invasive Species Regulations (2014).</li> </ul>		
<b>STORM WATER MANAGEMENT</b>  Stormwater flow and drainage	• Manage storm water flow and drainage	• The proposed development's storm water to be adequately managed. • It is important to ensure vegetation cover as widely as possible, to improve the potential water quality emanating from the site.	• ECO • Contractor	• Ongoing by Contractor • Twice a month by ECO • After heavy rains • Monthly report
<b>DEVELOPMENT FOOTPRINT, CONSTRUCTION CAMP AND RELATED ACTIVITIES</b>  Location of construction site office and related buildings  Access control  Ablution facilities	• Location of construction site office and related buildings must not be detrimental to the environment  • Proper access control must be implemented  • Adequate provision and control of ablution facilities	• It must be ensured that, as far as possible, all proposed infrastructure is placed outside of sensitive habitat areas. • An environmental awareness training programme for all staff members must be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMPr and relevant occupational health and safety issues. • No temporary accommodation or temporary storage sites to be erected within 100m of any river, stream, drainage line, wetland or farm dam. • All construction material, equipment and any foreign objects brought into the area by contractors and staff to be removed immediately after completion of construction.	• ECO • Contractor • Project Manager	• Ongoing by Contractor • Twice a month by ECO • Monthly report

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
		<ul style="list-style-type: none"> <li>• The boundaries of footprint areas, including contractor laydown areas, are to be clearly defined and it should be ensured that all activities remain within defined footprint areas. Edge effects will need to be extremely carefully controlled.</li> <li>• Planning of temporary roads and access routes should avoid freshwater areas and be restricted to existing roads where possible.</li> <li>• Appropriate sanitary facilities must be provided for the life of the construction phase and all waste removed to an appropriate waste facility.</li> <li>• All hazardous chemicals as well as stockpiles should be stored on bunded surfaces and have facilities constructed to control runoff from these areas.</li> <li>• It must be ensured that all hazardous storage containers and storage areas comply with the relevant SABS standards to prevent leakage;</li> <li>• No fires should be permitted in or near the construction area.</li> <li>• Ensuring that an adequate number of waste and “spill” bins are provided will also prevent litter and ensure the proper disposal of waste and spills.</li> <li>• Construction related traffic to and from site to be minimised.</li> <li>• Access to construction site to be controlled.</li> <li>• Vehicles should be restricted to travelling only on designated roadways to limit the ecological footprint of the proposed development activities.</li> <li>• The Contractor shall make available safe drinking water fit for human consumption at the construction camp and all other working areas.</li> <li>• No water for drinking, cooking or other purposes should be taken out of farm dams without prior consent of the landowners.</li> <li>• Washing and toilet facilities shall be provided on site and in the construction camp.</li> <li>• Toilet paper must be provided and must be available at</li> </ul>		

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
		<p>all times.</p> <ul style="list-style-type: none"> <li>Only certified portable toilets to be used. These are not to be situated within 100m of any watercourses or artificial impoundments (farm dams). These portable toilets to be administered and serviced by a certified, registered company only.</li> </ul>		
<p><b>NOISE</b></p> <p>Noise as a result of construction activities</p>	<ul style="list-style-type: none"> <li>Reduce noise from construction activities impacting on neighbours and on the fauna residing on the site</li> </ul>	<ul style="list-style-type: none"> <li>Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise.</li> <li>No sound amplification equipment such as sirens, loud hailer or hooters are to be used on site except in emergencies and no amplified music is permitted on site.</li> <li>Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays.</li> <li>Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance.</li> <li>Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>
<p><b>PRIVACY OF ADJACENT LAND OWNERS</b></p>	<ul style="list-style-type: none"> <li>Avoid nuisance to adjacent land owners</li> </ul>	<ul style="list-style-type: none"> <li>The construction camp must be located as far from residential properties as possible.</li> <li>No access to neighbouring holdings should be allowed.</li> <li>Construction crew to respect adjacent landowners.</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>
<p><b>SAFETY AND SECURITY</b></p> <p>Impacts on social well-being of general public and construction</p>	<ul style="list-style-type: none"> <li>Ensure social well-being of general public and construction personnel</li> </ul>	<ul style="list-style-type: none"> <li>Signs should be erected on all entrance gates to the site camp indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime.</li> <li>The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>



IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
personnel		<p>Regulations</p> <ul style="list-style-type: none"> <li>• All structures that are vulnerable to high winds must be secured (including toilets).</li> <li>• Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times.</li> <li>• The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are undertaken on or near public roads.</li> <li>• Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.).</li> <li>• All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA).</li> <li>• An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues.</li> <li>• All construction workers shall be issued with ID badges and clearly identifiable uniforms.</li> <li>• Access to fuel and other equipment stores is to be strictly controlled.</li> <li>• Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided.</li> <li>• Adequate emergency facilities must be provided for the treatment of any emergency on the site.</li> <li>• The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to</li> </ul>		

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
		<p>handle. Emergency contact numbers are to be displayed conspicuously at prominent locations around the construction site and the construction crew camps at all times.</p> <ul style="list-style-type: none"> <li>• The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses.</li> <li>• The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site.</li> </ul>		
<b>ECONOMIC OPPORTUNITIES</b>  Employment opportunities for local community	<ul style="list-style-type: none"> <li>• Make provision for local employment where possible.</li> </ul>	<ul style="list-style-type: none"> <li>• Make use of local labour</li> <li>• Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations.</li> <li>• Provide skills training for construction workers.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing by Contractor</li> </ul>
<b>HYGIENE</b>	<ul style="list-style-type: none"> <li>• Avoid unhealthy working conditions on project site</li> </ul>	<ul style="list-style-type: none"> <li>• The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas.</li> <li>• Washing and toilet facilities shall be provided on site and in the Contractors camp.</li> <li>• Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided.</li> <li>• The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately.</li> <li>• The chemical toilets must be emptied on a regular basis.</li> <li>• HIV AIDS awareness and education should be undertaken by all Contractor staff.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing by Contractor</li> </ul>
<b>PRESSURE ON EXISTING INFRASTRUCTURE</b>	<ul style="list-style-type: none"> <li>• Minimise pressure on existing</li> </ul>	<ul style="list-style-type: none"> <li>• Integrity of existing services to be ensured.</li> </ul>	<ul style="list-style-type: none"> <li>• ECO</li> <li>• Contractor</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing by Contractor</li> <li>• Twice a month</li> </ul>

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
<b>AND SERVICES</b>	infrastructure and services			by ECO • Monthly report
<b>SOLID WASTE MANAGEMENT</b>  Refuse and waste produced during the construction phase  Dumping of building material, rubble and any material used during construction or rehabilitation.  Stockpiled material	<ul style="list-style-type: none"> <li>Ensure wastes are appropriately stored, handled and safely disposed of at a licensed waste facility</li> <li>Ensure separation at source and recycling</li> <li>Control of dumping of building material, rubble and any material used during construction or rehabilitation</li> <li>Manage stockpiled material</li> </ul>	<ul style="list-style-type: none"> <li>It must be ensured that construction related waste or spillage and effluent do not affect the immediate and surrounding habitat boundaries.</li> <li>Proper rubbish/waste bins to be provided. These to be emptied weekly and the waste to be removed to an official waste disposal site.</li> <li>Domestic waste generated on site should be separated at source and recycled.</li> <li>Recycling of building material.</li> <li>Stripping and storage of topsoil for rehabilitation.</li> <li>Waste must not remain on site for more than 2 weeks.</li> <li>No dumping of building material and rubble shall take place other than where it is required to be used as fill.</li> <li>All stockpiled material shall be controlled and shall be removed on the completion of construction.</li> <li>Methodology of storing topsoil to be approved by ECO.</li> <li>To avoid compaction of soil and material left in heaps.</li> <li>Trucks removing excavated material should use existing roads.</li> <li>No waste may be placed in any excavations on site.</li> <li>Spoil should be disposed of at a licensed Landfill site.</li> <li>Waste disposal certificates must be obtained for any waste that is disposed of.</li> <li>No burning of waste.</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>
<b>CONCRETE AND CEMENT PREPARATION AND HANDLING</b>  The use and preparation of concrete on site has the potential to impact negatively on the	<ul style="list-style-type: none"> <li>Concrete spills must be contained on site and mitigated.</li> </ul>	<ul style="list-style-type: none"> <li>No mixed concrete may be deposited outside of the designated construction footprint;</li> <li>A batter / dagga board mixing trays and impermeable sumps should be provided, onto which any mixed concrete can be deposited whilst it awaits placing.</li> <li>Concrete spilled outside of the demarcated area must be promptly removed and taken to a suitably licensed waste disposal site.</li> <li>Waste disposal certificates must be obtained for any waste that is disposed of.</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
environment				
<b>POLLUTION</b>  Soil, surface- and groundwater pollution	<ul style="list-style-type: none"> <li>Minimise soil, surface- and groundwater pollution</li> </ul>	<ul style="list-style-type: none"> <li>All hazardous materials such as but not limited to paint, turpentine and thinners must be stored appropriately to prevent these contaminants from entering the environment.</li> <li>Provide containment areas for potential pollutants at construction camps.</li> <li>Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed, bunded and lined.</li> <li>Any residue from spillages shall be removed from site by appropriate contractors. Handling, storage and disposal of excess or containers of potentially hazardous materials shall be in accordance with the requirements of the adjudicating authority or any other relevant department.</li> <li>All vehicles must be regularly inspected for leaks. Re-fuelling must take place on a sealed surface area to prevent ingress of hydrocarbons into the topsoil.</li> <li>In the event of a vehicle breakdown, maintenance of vehicles must take place with care and the recollection of spillage should be practiced near the surface area to prevent ingress of hydrocarbons into topsoil and subsequent habitat loss.</li> <li>All spills should they occur, should be immediately cleaned up and treated accordingly.</li> <li>Drip trays are to be utilised during daily greasing and re-fuelling of machinery and to catch incidental spills and pollutants</li> <li>Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow.</li> <li>The Contractor must have a basic spill control kit available at the construction camp site and around the construction site.</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> <li>Contractor</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by Contractor</li> <li>Twice a month by ECO</li> <li>Monthly report</li> </ul>
<b>TRAFFIC</b>	<ul style="list-style-type: none"> <li>Prevent</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor is to ensure traffic safety at all times, and</li> </ul>	<ul style="list-style-type: none"> <li>ECO</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing by</li> </ul>

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
Disturbance caused by construction traffic	construction vehicles from disturbing the general public and environment	<p>shall implement road safety precautions for this purpose when works are undertaken on or near public roads.</p> <ul style="list-style-type: none"> <li>• Construction vehicles to use public roads outside peak hours.</li> <li>• No construction vehicles exceeding defined speed limits.</li> <li>• Appropriate traffic safety signage will be provided to warn the public of construction traffic and flagmen should be on duty where traffic merges with normal road traffic.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor</li> </ul>	<p>Contractor</p> <ul style="list-style-type: none"> <li>• Twice a month by ECO</li> <li>• Monthly report</li> </ul>
<p><b>GRAVES, ARCHAEOLOGICAL AND OTHER HERITAGE SITES</b></p> <p>Destruction of cultural/heritage sites</p>	<ul style="list-style-type: none"> <li>• Protection of cultural and heritage sites</li> <li>• Protection of graves</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of the study area by a professional palaeontologist.</li> <li>• Implementation of a chance find procedure as outlined in the Heritage Impact Assessment Report, should any sites be identified during the construction phase.</li> </ul>	<ul style="list-style-type: none"> <li>• ECO</li> <li>• Contractor</li> <li>• PHRA-G</li> <li>• SAHRA</li> <li>• SAPS</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing by Contractor</li> <li>• Twice a month by ECO</li> <li>• Monthly report</li> </ul>
<p><b>CLOSURE AND REHABILITATION</b></p> <p>Reduction in the potential of land if construction and construction camp sites are not rehabilitated</p>	<ul style="list-style-type: none"> <li>• Ensure that the rehabilitation of the construction area take place and the impact of these activities are limited.</li> </ul>	<ul style="list-style-type: none"> <li>• Construction rubble must be collected and disposed of at a suitable landfill site.</li> <li>• Incorporate adequate erosion management measures in order to prevent erosion and the associated sedimentation of the watercourse areas.</li> </ul>	<ul style="list-style-type: none"> <li>• ECO</li> <li>• Contractor</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing by Contractor</li> <li>• Twice a month by ECO</li> <li>• Monthly report</li> </ul>

**Table 6: Operational Phase**

IMPACT	OUTCOME/ OBJECTIVE	MITIGATION MEASURES/ACTIONS	RESPONSIBILITY	MONITORING FREQUENCY
<b>FLORA AND FAUNA</b>  Alien infestation  Loss of Biodiversity	<ul style="list-style-type: none"> <li>Protection of existing indigenous flora and fauna</li> </ul>	<ul style="list-style-type: none"> <li>Alien vegetation must be removed from the study area during both the construction and operational phases of the development, with specific mention of Category 1b species in line with the NEMBA Alien and Invasive Species Regulations (2014).</li> </ul>	<ul style="list-style-type: none"> <li>Applicant</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>
<b>NOISE</b>	<ul style="list-style-type: none"> <li>Avoid an increase in the ambient noise levels of the area</li> </ul>	<ul style="list-style-type: none"> <li>Ensure acceptable noise levels</li> </ul>	<ul style="list-style-type: none"> <li>Applicant</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>
<b>JOB OPPORTUNITIES</b>	<ul style="list-style-type: none"> <li>Avoid a large influx of uncontrolled numbers of people seeking employment opportunities. This might also pose a security risk.</li> </ul>	<ul style="list-style-type: none"> <li>Implement local labour.</li> <li>Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations.</li> </ul>	<ul style="list-style-type: none"> <li>Applicant</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>
<b>STORM WATER MANAGEMENT</b>  Stormwater flow and drainage	<ul style="list-style-type: none"> <li>Manage storm water flow and drainage</li> </ul>	<ul style="list-style-type: none"> <li>The proposed development's storm water to be adequately managed.</li> <li>It is important to ensure vegetation cover as widely as possible.</li> </ul>	<ul style="list-style-type: none"> <li>Applicant</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>
<b>TRAFFIC</b>	<ul style="list-style-type: none"> <li>Manage increased traffic</li> </ul>	<ul style="list-style-type: none"> <li>Compliance to Traffic and Municipal By-Laws</li> </ul>	<ul style="list-style-type: none"> <li>Applicant</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>
<b>WASTE</b>	<ul style="list-style-type: none"> <li>Ensure proper waste management</li> </ul>	<ul style="list-style-type: none"> <li>Sorting of waste</li> <li>Waste yard to be kept clean and neat</li> <li>Regular cleaning of waste yard so that it does not become a nuisance and source of odour and vermin</li> </ul>	<ul style="list-style-type: none"> <li>Applicant</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>
<b>PRESSURE ON EXISTING INFRASTRUCTURE AND SERVICES</b>	<ul style="list-style-type: none"> <li>Minimise pressure on existing infrastructure and services</li> </ul>	<ul style="list-style-type: none"> <li>Integrity of existing services in the area to be ensured.</li> </ul>	<ul style="list-style-type: none"> <li>Applicant</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>

## **13 Site documentation, monitoring and reporting**

### **13.1 What needs to be monitored**

- Site clearance
- On-site sanitary facilities
- Excavation
- Community relations
- Removal of rubble
- Disposal of Material
- Construction activities
- Protection of buildings and structures
- Construction of structures
- Progress in terms of construction programme
- Rehabilitation
- Re-vegetation

### **13.2 How, what procedures**

- Site inspections by the ECO
- Site inspections by the Contractor
- Reporting to by the Project Manager

### **13.3 Recording of Information/Data**

The standard site documentation shall be used to keep records on site. All documents shall be kept on site and be made available for monitoring purposes. The documentation shall be signed by all parties to ensure that such documents are legal.

The following documentation shall be kept on site:

- Environmental Authorisation
- Copy of the Environmental Management Programme
- Environmental Complaints register
- Environmental Incidents register
- Environmental Training register

### **13.4 Reporting**

Who should be reported to?

- Applicant
- GDARD
- CTMM
- SAHRA
- PHRA-G

## **14 Post Construction Audit**

A post construction environmental audit is to be conducted by the ECO in order to ensure that all conditions of the EMPr have been adhered to.

## **15 Amendments to the EMPr**

The EMPr is to be submitted to the GDARD for approval prior to implementation. Any changes to the EMPr are to be indicated in the form of addendums.



## **ANNEXURE A**

### **CURRICULUM VITAE OF EAP**

## **ANNEXURE B**

### **ENVIRONMENTAL CODE OF CONDUCT**

The applicant is committed to ensuring that the construction of the development is done according to the highest environmental standards so that the ecological footprint of the development is minimised where possible.

The applicant requires that all construction personnel involved in the construction process accept their responsibilities towards the EMPr and the environment. This includes all permanent, contract or temporary workers as well as any other person involved with the project or visiting the site. Ignorance, negligence, recklessness or a general lack of commitment will not be tolerated.

If you do not understand the rules you must seek assistance to ensure compliance. The following people can assist you in ensuring compliance with the EMPr.

Your Supervisor: .....

Environmental Control Officer: .....

Project Manager: .....

## ANNEXURE C

### ENVIRONMENTAL COMPLAINTS REGISTER

Environmental Complaints Register					
Name of Complainant	Contact Details	Nature of Complaint	Responsible Person	Date Action Taken	Details of Action Taken

## ANNEXURE D

## ENVIRONMENTAL INCIDENTS REGISTER

[illegible]

## ANNEXURE E

### ENVIRONMENTAL TRAINING REGISTER

Company	Employee	Employee signature	Supervisor	Supervisor Signature	Date