DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

FOR THE PROPOSED EXPANSION OF A CHICKEN LAYER FACILITY AND ASSOCIATED INFRASTRUCTURE ON PORTION 65 OF THE FARM GROOTVLEI 272 JR, ROOIWAL IN PRETORIA WITHIN THE JURISDICTION OF THE CITY OF TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG PROVINCE

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Date Issued: July 2025
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DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

Contents Page

INFORMATION REQUIRED BY THE COMPETENT AUTHORITY 1

1. DETAILS OF THE EAP 3

1.1 Expertise of the EAP 3
1.1.1 EAPASA Registered EAP 3

2. INTRODUCTION 5

3. PROPOSED ACTIVITY 5

3.1 Project Background 5
3.2 Project location 6
3.3 The Principal Contractor's Environmental Liaison Officer (PC ELO) 8

4. PLANNING AND DESIGN 9

4.1 Contractor Requirements 9
4.2 The Environmental Control Officer (ECO) 9
4.3 Waste Management 10
4.4 Sensitive Areas 11
4.5 Complaints Registers 11
4.6 Provision of Services 11
4.7 Staff and Environmental Awareness Plan 11
4.8 Induction Training 12
4.9 Environmental Training 12
4.10 Meetings 13

5. LAYOUT OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME 13

6. SUMMARY OF IMPACTS ASSOCIATED WITH THE PROPOSED ACTIVITY 13

7. MITIGATION GUIDELINES 15

7.1 Environmental Management Programme 15

8. REPORTING 43

8.1 Administration 43
8.2 Auditing 43
8.3 Good Housekeeping 44
8.4 Record Keeping 44
8.5 Document Control 45

9. CONCLUSION 45

9.1 Pre-Construction Phase 46
9.2 Construction Phase 46
9.3 Operational Phase 46

List of Figures

Figure 1: Locality Map for the Proposed Poultry Farm 7

List of Tables:

Table 1: Details of EAP 3
Table 2: Project Location Details 6
Table 3: Responsibilities 8
Table 4: Environmental Management Programme and Mitigation Measures 16

SELAHLE CONSULTANCY & PROJECTS	**DOCUMENT CONTROL SHEET**			
Revision 01	**NAME OF REPORT** **DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)** DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE PROPOSED EXPANSION OF A CHICKEN LAYER FACILITY AND ASSOCIATED INFRASTRUCTURE ON PORTION 65 OF THE FARM GROOTVLEI 272 JR, ROOIWAL IN PRETORIA WITHIN THE JURISDICTION OF THE CITY OF TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG PROVINCE.			
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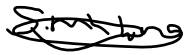
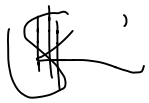
	Ms Sinnah Mhlongo	Environmental Consultant		July 2025
REVIEWED BY	Mrs. Shonisani Selahle	Environmental Assessment Practitioner		July 2025
APPROVED BY	Mrs. Tshifhiwa Mercy Tsatsawane	Client		July 2025

Abbreviations:

C	Contractor
DEO	Designated Environmental Officer
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ESS	Environmental Scoping Phase
I&APs	Interested and/or Affected Parties
PC ELO	Environmental Liaison Officer
MSDS	Material Safety Data Sheets
PC	Principal Contractor
PM	Project Manager
SAHRA	South African Heritage Resource Agency
SM	Site Manager
SO	Safety Officer
WULA	Water Use License Application

INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

The Environmental Impact Assessment (EIA) Regulations, promulgated in terms of the National Environmental Management Act (Act no. 107 of 1998 as amended) dated 8th of December 2014. In terms of Appendix 4(1) of the EIA Regulations 2014 as amended, an Environmental Management Programme (EMPr) must contain the information that is necessary for the competent authority to consider and come to a decision on the application and must include –

Content of Environmental Management Programme (EMPr)	
(1) An EMPr must comply with section 24N of the Act and include- (a) details of- (i) the EAP who prepared the EMPr; and (ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae.	Chapter 1
(b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Chapters 2 & 3
(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;	Chapter 3
(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- (i) planning and design; (ii) pre-construction activities; (iii) construction activities; (iv) rehabilitation of the environment after construction and in the case of a closure activity, closure; and (v) where relevant, operation activities;	Chapter 7
(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- (i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; (ii) comply with any prescribed environmental management standards or practices; and (iii) comply with any applicable provisions of the Act regarding closure, in the case of a closure activity;	Chapter 7
(g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Chapter 7
(h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Chapter 7
(i) an indication of the persons who will be responsible for the implementation of the impact management actions;	Chapter 7

Content of Environmental Management Programme (EMPr)	
(j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	Chapter 7
(k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Chapter 7
(l) a program for reporting on compliance, taking into account the requirements as prescribed by the regulations;	Chapter 7
(m) an environmental awareness plan describing the manner in which- (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and	Chapter 4
(n) any specific information that may be required by the competent authority.	Not applicable

1. DETAILS OF THE EAP

Table 1: Details of EAP

Name of the Environmental Assessment Practitioner	Shonisani Selahle
Tel No:	011 026 2560
Fax No:	086 685 9567
Email:	shonie@scprojects.co.za / admin@scprojects.co.za

1.1 Expertise of the EAP

1.1.1 EAPASA Registered EAP (2020/2646)

Qualifications

- Tshwane University of Technology, N. Diploma Geology – 2010
- University of South Africa, BSc Honours, Environmental Management - 2025
- NOSA, Implementation of ISO 45001:2018 & ISO 14001:2015

Summary of the EAP's experience

Shonisani Selahle is an Environmental Consultant with more than 15 years of experience in applying the principles of Integrated Environmental Management and Environmental Legislation to several development projects and initiatives in Southern Africa. She has coordinated and managed several diverse projects and programs related to the Environment and Waste within both the public and private sectors for national and international companies. She has a great understanding of relevant legislation about environment management (NEMA, ECA, NWA, MPRDA, etc)

Curriculum Vitae Shonisani Selahle

- Ability to carry out international environmental legislation research to interpret and incorporate it in proposals/EIAs/BAs
- Understanding and implementation of World Bank Guidelines and Equator Principles into EIA reports
- Technicalities of EIA Guidelines (Pre-consultation; Exemption of Environmental Authorisation, Environmental Screening Studies, Feasibility Studies, Fatal Flaw Studies, Basic Assessment, EIA, Scoping, EIA Public Participation and Appeals)
- Ability to undertake Environmental Authorisation Amendments (Minor and Substantive) Application
- Ability to carry out Occupational Health and Safety Compliance Monitoring and Audits in terms of the Occupational Health and Safety Act and Construction Regulations
- Ability to do EIA Reports independently and incorporate specialist input into reports.
- Ability to compile Environmental Management Plans
- Ability to coordinate Public Participation from call to register to compile issues and response Reports.

- Ability to undertake EIA's/BAs for Renewable energy projects.
- Ability to carry out Environmental Control Officer (ECO) duties (site inspection and site/client auditing) and work independently.
- Ability to liaise with clients and authorities.
- Ability to undertake site rehabilitation using Bio-remediation methods for contaminated sites,
- Ability to carry out Occupational Health and Safety Audits,
- Ability to apply Construction Health and Safety Permits with swift responses from the Department of Employment and Labour
- Ability to implement ISO 45001:2018 and ISO 18001:2015 standards per project description for companies.

2. INTRODUCTION

Selahle Consultancy and Projects (Pty) Ltd (SCP) as an independent environmental consultant was appointed, to undertake the Environmental Impact Assessment process for Viomec Farm (Pty) Ltd (applicant) for the Proposed Expansion of a Chicken Layer Facility and associated Infrastructure on Portion 65 of the Farm Grootvlei 272 JR at Rooiwal town, located in Pretoria, Gauteng Province of South Africa. Projects of this nature trigger Listed Activities in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and the EIA Regulations, 2014 (amended). This document is compiled in accordance with the Integrated Environmental Management (IEM) philosophy which aims to achieve a desirable balance between conservation and development (DEAT, 1992).

Integrated Environmental Management (IEM) is a key instrument of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended [NEMA]. NEMA promotes the Integrated Environmental Management of activities that may have a significant effect on the environment, while IEM prescribes a methodology for ensuring that environmental management principles are fully integrated into all stages of the development process. It advocates the use of several environmental management tools that are appropriate for the various levels of decision-making. One such tool is an EMPr.

The EMPr is a detailed plan for the implementation of the mitigation measures to minimise the negative environmental impacts. The EMPr for this project includes a construction environmental monitoring plan specifying how the construction of the project is to be carried out. The EMPr also includes the actions required for the Post-Construction Phase (Operation and Maintenance Phase) to ensure that all potential environmental impacts are managed for the duration of the project's life cycle and will ensure environmental good practice.

The provisions of this EMPr are binding on the contractor during the life of the contract. They are to be read in conjunction with all the documents that comprise the suite of documents for this contract. If any conflict occurs between the terms of the EMPr and the project specifications or Environmental Approval, the terms herein shall be subordinate.

3. PROPOSED ACTIVITY

3.1 Project Background

Viomec Farm (Pty) Ltd (applicant) proposes to expand their Chicken Layer Facility and associated Infrastructure in Rooiwal town, located in Pretoria. The proposed development will be carried out under the Environmental Impact Assessment Regulations 2014, as amended under the National Environmental Management Act (Act 107 of 1998) as amended. The proposed expansion is intended to accommodate approximately ±100 000 chickens on a site measuring approximately 8.5 hectares in extent. The proposed development footprint is approximately 1.5 hectares. The proposal will include the following infrastructure:

- 2 x chicken layer houses
- 1 x Borehole

The current operations of the chicken layer facility have existing infrastructure that accommodates approximately 4300 chickens to date. The existing infrastructures are as follows:

- 2 x accommodation Houses
- 1 x Chicken Rearing House
- 1 x Chicken egg-laying Facility
- Staff Changing Rooms
- 2 x Toilets
- 1 x Eggs Packing Facility
- 1 x Borehole
- 1 x Septic Tank
- 1 x Reservoir
- Workshop house for small machines
- 1 x Pig House
- 1 x Goat House
- 6 x Gates

Furthermore, the proposed construction activities will include taking water from a water resource (borehole) and Waste Discharge from the septic tank. As a result, this will trigger Section 21 (a) and (g) of the National Water Act (Act 36 of 1998, which constitutes the need for a Water Use License permit. Therefore, a Water Use License Application (WULA) will be submitted to the Department of Water and Sanitation (DWS).

3.2 Project location

The study area is located 12 km North of Hammanskraal on Portion 65 of the Farm Grootvlei 272 JR, Rooiwal in Pretoria, within the Jurisdiction of the City of Tshwane Metropolitan Municipality. The study area covers an extent of approximately 8.5 hectares and the proposed study area can be accessed through Kremetart Street and unnamed gravel road in Rooiwal Town. The coordinates for the site are 25°30'37.39"S 28°16'59.28"E, (refer to Figure 1 for the site locality).

Table 2: Project Location Details

Summary of the Project Location	
Project Location	Portion 65 of The Farm Grootvlei 272 JR, City of Tshwane Metropolitan Municipality.
Coordinates	Latitude: 25°30'37.39"S Longitude: 28°16'59.28"E
SG Digit Code (s)	T0JR00000000027200065

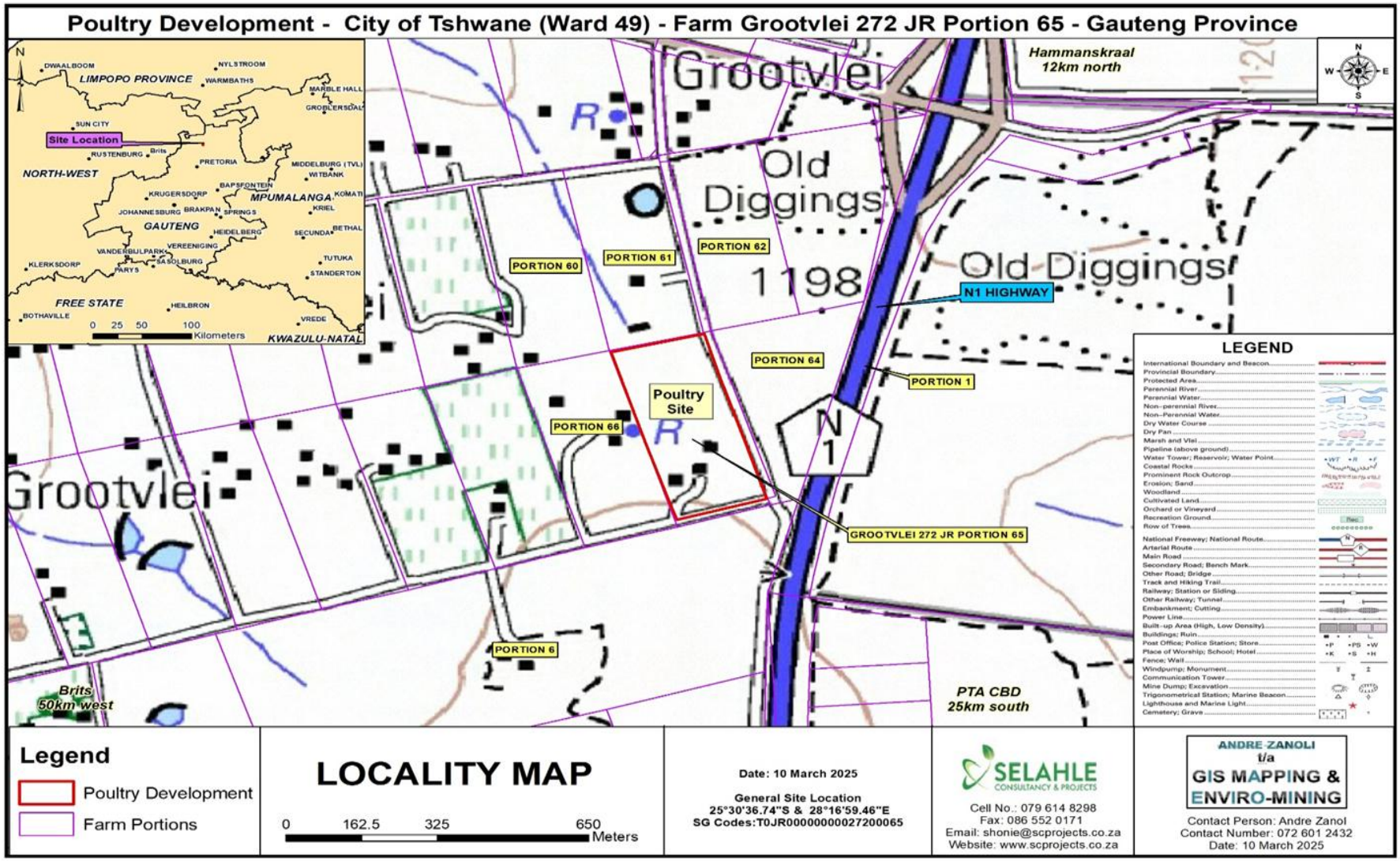


Figure 1: Locality Map for the Proposed Poultry Far

3.3 The Principal Contractor's Environmental Liaison Officer (PC ELO)

The PC ELO will be appointed by the Contractor to implement the EMPr and monitor activities on site daily. The PC ELO will be the ECO's representative on the site and will report back on all audit trips. The PC ELO must report any major incidents immediately to the ECO.

Table 3: Responsibilities

Responsibility	Function
▪ Overall management of the project and EMPr implementation	Project Manager (PM)
▪ Oversee site works, liaison with Contractor (PC ELO), PM and ECO	Senior Site Supervisor/ Contract Manager (CM)
▪ Implementation of EMPr and monitoring of compliance with the requirements of the EMPr. ▪ Maintains close communication with the PC ELO, and oversees the PC ELO's environmental control, remediation and rehabilitation actions (including checking that the complaints register and register of environmental incidents are being maintained by the PC ELO). ▪ Environmental awareness training of the contractor and select main construction staff. ▪ Settlement of damage claims and completion of Damage Release Forms.	Environmental Control Officer (ECO) – Appointed by the proponent
▪ Ensures the implementation and compliance with recommendations and conditions of the EMPr; Appoints a dedicated person (PC ELO) to work with ECO	Contractor (PC)
▪ Monitoring of compliance with EMPr, environmental control of site actions, adjustment of environmental quality of works performed by construction staff, remediation and rehabilitation work. ▪ Reports back to the ECO through compilation of regular site inspection reports. ▪ Ensures compliance of construction activities with relevant environmental legislation. ▪ Maintains the complaints register that is kept on-site. ▪ Keeps record of all environmental incidents and ensures that corrective action is taken. ▪ Compiles method statements from the project-specific EMPr. ▪ Environmental awareness training of all staff.	Contractor-appointed Environmental Liaison Officer (PC ELO)

Responsibility	Function
▪ Day-to-day management of landowner requirements and landowner liaison; ensures all landowner special conditions are met.	

4. PLANNING AND DESIGN

4.1 Contractor Requirements

The Contractor must be made aware of the potential issues and impacts associated with the proposed expansion of the Poultry Farm. A copy of the Environmental Management Programme (EMPr) must be provided to the Contractor and must be kept on-site throughout the construction phase. The EMPr is a legally binding document for all contractors operating on-site and must be incorporated into the contractual clauses. The main contractor(s) are obligated to comply with the EMPr and are responsible for ensuring that all sub-contractors, suppliers, and personnel under their appointment also adhere to its provisions.

4.2 The Environmental Control Officer (ECO)

The Environmental Control Officer (ECO) must be an independent environmental consultant appointed by the applicant or contractor to act as the applicant or contractor representative, to monitor and review the on-site environmental management and implementation of this EMPr by the Contractor.

The ECO must form part of the project team and be involved in all aspects of project planning that can influence environmental conditions on the site. The ECO must attend relevant project meetings, conduct inspections to assess compliance with the EMPr and be responsible for providing feedback on potential environmental problems associated with the development.

The ECO's duties will include the following:

- Confirming that all the environmental authorisations and permits required in terms of the applicable legislation have been obtained prior to construction commencing.
- Monitoring and verifying that the EMPr, Environmental Authorisation and Contract are adhered to at all times and taking action if specifications are not followed.
- Monitoring and verifying that environmental impacts are kept to a minimum.
- Reviewing and approving construction method statements with input from the ESO and Engineer, where necessary, in order to ensure that the environmental specifications contained within this EMPr, and environmental authorisation are adhered to.
- Inspecting the site and surrounding areas on a regular basis regarding compliance with the EMPr, Environmental Authorisation and Contract.
- Monitoring the undertaking by the Contractor of environmental awareness training for all new personnel on site.

- Ensuring that activities on site comply with all relevant environmental legislation.
- Ordering the removal of or issuing spot fines for person/s and/or equipment not complying with the specifications of the EMPr and/or environmental authorisation.
- Undertaking a continual internal review of the EMPr and submitting any changes to GDEnv (in case of major changes) for review and approval.
- Checking the register of complaints kept on site and maintained by the ECO and ensuring that the correct actions are/were taken in response to these complaints.
- Checking that the required actions are/were undertaken to mitigate the impacts resulting from non-compliance.
- Reporting all incidents of non-compliance to PM and the Principal Contractor.
- Conducting monthly environmental audits in respect of the activities undertaken relating to the project. The ECO shall also submit compliance audit reports to GDEnv, in accordance with the requirements of the environmental authorisation. Such reports shall be reviewed by client prior to submission.
- Keeping a photographic record of progress on site from an environmental perspective. This can be conducted in conjunction with the Safety Officer (SO) as the Safety Officer will be the person that will be onsite at all times and can therefore take photographic records weekly. The ECO would need to check and ensure that the SO understands the task at hand.
- Recommending additional environmental protection measures, should this be necessary.
- Providing a report back on any environmental issues at site meetings.

The ECO must have:

- A good working knowledge of all relevant environmental policies, legislation, guidelines, and standards.
- The ability to conduct inspections and audits and to produce thorough, readable and informative reports.
- The ability to manage public communication and complaints.
- The ability to think holistically about the structure, functioning and performance of environmental systems.

The ECO should be involved in any decisions that are taken on-site. This should include the approval of the layout plan and activities that are to be undertaken during the construction phase.

4.3 Waste Management

During the construction phase, the Contractor must ensure to make provision for the appropriate removal of waste from the site to a permitted waste disposal facility. The accumulation of construction waste materials must be avoided as far as possible.

A waste Disposal Management Plan (DMP) must be complied with and produced. This plan should ensure to specify where all the different waste streams would be stored on site as well as the mode of transportation of all hazardous waste to a registered landfill site. The DMP should also indicate

as to how most waste would be recovered in means of Recycling, Reusing, and Recovering prior to it being disposed of at landfill sites.

4.4 Sensitive Areas

All identified sensitive landscapes and features must be included in the planning, management, use and rehabilitation of the area.

4.5 Complaints Registers

A complaint register must be always kept on site and all complaints, issues and concerns shall be recorded in the register. All issues, concerns and complaints should also be incorporated in the feedback report and submitted to the competent authority (GDE).

Where complaints require corrective actions and/or measures, this must be communicated urgently to the relevant parties to ensure that the complainant is satisfied. All registered and identified Interested and Affected Parties (I&APs) should be notified prior to construction commencement.

4.6 Provision of Services

Chemical toilets should be provided for construction worker prior to construction commencement of any construction activities. These must be regularly maintained and emptied as and when required, at least weekly. The toilets must be located within walking distance of the work staff and an average of one (1) toilet per five (5) workers must be provided.

4.7 Staff and Environmental Awareness Plan

Staff must be made aware of their responsibilities to ensure that impacts such as fire, safety and pollution are taken care of. This must include an induction program. The movement of construction workers must be controlled and access to adjacent properties must be prohibited.

The purpose of training is to provide an understanding of environmental management obligations and regulations for the project. This training is intended for project team members who require a higher level of knowledge and understanding of the environmental management context and implementation framework for the project. On the other hand, Environmental Awareness aims to promote general awareness among the construction workforce about sensitive environmental features and how to implement environmental best practices.

The environment awareness plan for the development incorporates both training and environmental awareness to ensure that the proposed development is implemented in compliance with the EMPr requirements and the environmental sensitivities on site are managed properly.

As part of this plan, the applicant must be committed to taking responsibility and being accountable for environmental practices on site. It is essential for both the employer and employee to be aware of the potential environmental impacts that may result from their activities and tasks, and to take necessary measures to mitigate them.

All potential incidents to the environment may be effectively minimised through effective training and awareness of the employees using any of the following methods:

- Supervisory meetings (weekly).
- Induction training (annually).
- EMP Training (annually); and
- External environmental and/or health and safety courses (when applicable).

4.8 Induction Training

All newly hired employees must complete induction training before starting work. Existing and returning employees should undergo refresher induction training at least once a year. The induction training must include environmental awareness training, covering basic topics related to the environment:

- Environmental legislation
- Constitutional right pertaining to the environment
- Waste management hierarchy
- Environmental, social and economic concerns
- Sensitive environmental features and
- Prevention of animal poaching.

4.9 Environmental Training

The ECO must be knowledgeable with all legislation pertaining to the environment applicable to this contract and must be appropriately trained in environmental management and must possess the skills necessary to communicate environmental management skills to all personnel involved in the contract.

The contractor shall ensure that adequate environmental training takes place. All employees shall have been given an induction presentation on environmental awareness. Where possible, the presentation needs to be conducted in the language of the employees. 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 with the requirement of the Agency's environmental management systems, including emergency preparedness and response requirements.
- The potential consequences of departure from specified operating procedures.
- The mitigation measures required to be implemented when carrying out their work activities

4.10 Meetings

Weekly supervisory meetings are an excellent opportunity to increase awareness of any environmental hazards that may be pertinent for the upcoming week. During these meetings, a variety of topics related to safety can be discussed and should be properly documented. All attendees are required to sign an attendance register, and these records must be kept on file at the administrative office.

5. LAYOUT OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

This EMPr addresses specific issues relating to the different phases of the project. The impact is identified, and a brief description is given. The phases of the development are then identified below

- Pre-construction
- Construction
- Operation Phase
- Rehabilitation Phase

This EMPr seeks to manage and keep to a minimum the negative impacts of a development and at the same time, enhance the positive and beneficial impacts.

6. SUMMARY OF IMPACTS ASSOCIATED WITH THE PROPOSED ACTIVITY

Impact	Before mitigation	After mitigation
Dust	Very High	Medium
Surface water	Medium	Low
Domestic waste	Low	Low
Construction waste	Medium	Low
Hazardous waste	Low	Low
Loss of topsoil	Medium	Low
Traffic	Low	Low
Traffic disruptions	Low	Low
Groundwater quality	High	Low
Stormwater runoff	Medium	Low
Soil erosion	Medium	Low

Impact	Before mitigation	After mitigation
Fauna and flora	Medium	Low
Loss of ecological function	Medium	Low
Hydrology	Low	Low
Noise pollution	Low	Low
Land degradation	Medium	Low
Employment creation	High (High Positive)	High (Positive)
Crime and safety	Low	Low
The unearthing of Paleontological and archaeological artifacts	Low	Low
Flooding and ponding	Medium	Low
Minimise vegetation clearing	Medium	Low
Protection of Species of Conservation Concern	High	Low
Promote Ecological Resilience	Medium	Low
Minimize vegetation clearing	Medium	
Surface water quality	Medium	Low
Operational Phase		
Rehabilitation	Very High	High (positive)
Biosecurity	High	Low
Waste Management	High	Low
Visual Impact	High	Low
Stormwater Flow	Medium	Low
Unearthing of Paleontological and archaeological artifacts	Low	Low
Abstraction of Groundwater	Medium	Medium (Positive)
Re-vegetation	High	High (Positive)
Odour	High	Medium

1. Vegetation removal must be as minimal as possible. All bare surface areas must be re-vegetated.
2. Ensure regular inspection of earthmoving vehicles to prevent fuel spillages.
3. Storage of construction material should comply with the required regulations for storage of construction material to prevent any infiltration of contaminated waste into the groundwater system. Any vehicle that will be found with a leak must be removed from the site immediately.
4. All bare surface areas must be re-vegetated using indigenous or non-invasive vegetation to mimic the natural hydrological Yield as much as possible.
5. Re-vegetation activities are encouraged to reduce rainfall impact, reduce surface water velocities, enhance infiltration, and trap sediments.

6. Habitat loss or destruction as a result of vegetation clearing and other preconstruction activities.
7. Increased dust and noise generation from construction vehicles and other heavy-duty equipment used during the construction phase of the proposed development and increased noise during the operational phase of the development.
8. Visual intrusion as a result of the construction activities of the development.
9. Increase in crime as a result of construction work.
10. Soil Erosion

7. MITIGATION GUIDELINES

7.1 Environmental Management Programme

Mitigation guidelines are addressed through four phases, namely the Pre-construction (Site Establishment) Phase; the Construction Phase (and associated rehabilitation of affected environment) and the Operational Phase (Post-Construction) and the Closure Phase.

A set of prescribed impact management outcomes and associated actions has been identified. Holders of Environmental Authorisations (EAs), ECOs, and Contractors are responsible for ensuring that these outcomes and actions are implemented for all projects, as a minimum requirement. This is done to mitigate the impact of any impacts identified for the proposed development.

Before starting the activity, both the contractor and the EA holder must sign and date each page of the completed template. The method statements, which are prepared and agreed to by the holder of the EA, must be appended as well. Each method statement must also be duly signed and dated on each page by the contractor and the holder of the EA.

Each phase of the development and operation of the proposed infrastructure has specific issues unique to that period. The impact is identified, and a brief description is given. The four phases of the development are then identified and addressed below.

Table 4: Environmental Management Programme and Mitigation Measures

IMPACT	MITIGATION ACTION REQUIRED	RESPONSIBLE PERSON	FREQUENCY
PRE-CONSTRUCTION PHASE			
Site Preparation Activities	▪ Appoint an Environmental Control Officer	Proponent	Once Off
	▪ The PC must draw up method statements for relevant construction activities.	PC	As required
	▪ The PM and ECO must approve all the method statements before they become operational.	PM & ECO	As required
	▪ Before construction begins, all areas to be developed must be demarcated with fencing or orange construction barriers where applicable.	PC	Throughout, monitored monthly
	▪ The PC must ensure compliance with the conditions of the EMPr.	PC	Throughout, Monitored monthly
	▪ The ECO must ensure compliance with the conditions of the EMPr.	ECO	Throughout, Monitored monthly
	▪ All no-go areas on site must be properly fenced off / demarcated and signage placed prior to the onset of construction.	PC	Throughout, Monitored monthly
	▪ Records of compliance / non-compliance with the conditions of the EMPr must be kept on-site and be available on request. A copy of these records must be made available to the provincial department on request throughout the project execution.		Throughout, Monitored monthly
	▪ All unskilled labourers must be drawn from the local market as far as possible, and use must be made of local semiskilled and skilled personnel where possible.		Throughout, Monitored monthly

Construction Site Signage	▪ Construction site signage and warning signs must be erected where necessary informing the public of the construction area. Safety signage where required must also be erected.	PC	Monitored Monthly
Site Access	▪ Use of planned access routes only.. No new access routes are to be created without the necessary approvals.	PC	Monitored Monthly
Water Supply	▪ Underground water sources only need to be used. However, the boreholes must be registered with the Department of Water and Sanitation.	PC	Monitored Monthly
Site and vegetation Clearing	▪ Areas which are not to be constructed on must not be cleared to reduce erosion risks.	PC	Monitored Monthly
	▪ The area to be cleared must be clearly demarcated and this footprint strictly maintained. The footprint of clearance should not exceed the required development footprint and working area/servitude. A designated area is required where cleared vegetation is stockpiled until removal.		Monitored Monthly
	▪ Stripped topsoil must be stockpiled for reuse where possible (i.e., for post-construction rehabilitation).		Monitored Monthly
	▪ Spoil (including excavated subsoils and topsoil) that is removed from the site must be stockpiled in a designated area and removed to an approved spoil site.		Monitored Monthly
	▪ All removed plant material (i.e., trees) must be disposed of at a suitable waste site. No burning of plant material removed from the construction site is allowed.		Monitored Monthly
	▪ Alien invasive vegetation is to be removed and controlled on the construction site.		Monitored Monthly

Dust	▪ Damping down of the unsurfaced access roads and site where required must be implemented to reduce dust and nuisance. This can be achieved through regular watering.	PC	Monitored Monthly
Soil Erosion	▪ The necessary silt fences and erosion control measures must be implemented in areas where these risks are more prevalent.	PC	Monitored Monthly
Worker Safety	▪ All the necessary Public Protective Equipment (PPE) must be provided to all workers on site (including but not limited to dust masks, dust goggles, gloves, earplugs, overalls and boots where applicable).	PC	Monitored Monthly
Sanitation and Ablution Facilities	▪ Temporary chemical sanitation facilities are to be provided to workers at a ratio of 1 toilet to 20 workers (1:20). Use of the ▪ Construction sites and nearby areas are strictly prohibited.	PC	Monitored Monthly
Vehicle and Machinery Maintenance	▪ All mechanical work, repairs or servicing will be done on-site. This must be undertaken at the relevant workshop.	PC	Monitored Monthly
	▪ Emergency oil spill kits are required to be kept on-site in the case of any spills of oils or any other hazardous fluid or substance.		
	▪ Refueling of plant equipment by means of a diesel bowser must be undertaken over a bunded or impermeable surface. Any leakages or spills must be cleaned up immediately, removed and disposed of accordingly in terms of hazardous substances.		
Storage of Hazardous or Dangerous Materials	▪ All fuel storage areas must be covered with a roof to prevent contamination of stormwater	PC	Monitored Monthly
Solid Waste Facilities	▪ Waste collection bins are to be provided.	PC	Monitored Monthly

	▪ Solid waste must be disposed of at a registered landfill with sufficient capacity to assimilate waste.		Monitored Monthly
	▪ Strictly no burning of solid waste on site.		Monitored Monthly
Excavations	▪ Excavations for water reticulation, sewer and stormwater must be clearly demarcated with danger tape for worker's safety	PC	Monitored Monthly
CONSTRUCTION PHASE			
Development of Construction and Laydown Area	▪ The choice of site for the Contractor's laydown area requires the Project Manager and ECO's permission and must take into account the location of residents and/or ecologically sensitive areas, including flood zones. A site plan must be submitted to the Project Manager for approval. The size of the Construction laydown area must be minimised	PC	Once Off
	▪ Adequate parking must be provided for site staff and visitors. The Contractor must attend to the drainage of the campsite to avoid standing water and/or sheet erosion.		Monitored Monthly
	▪ Suitable control measures over the Contractor's yard, plant and material storage to mitigate any visual impact of the construction activity must be implemented.		Monitored Monthly
	▪ All laydown areas are to be fenced off in such a manner that unlawful entry is prevented and access is controlled. Signage shall be erected at all access points in compliance with all applicable occupational health and safety requirements. All access points to the Construction laydown must be controlled by a guard or otherwise monitored to prevent unlawful access.		Monitored Monthly

	▪ The Construction laydown area must be set up in accordance with the EMPr. The ECO and Contractor must inspect this site to confirm and note any environmental sensitivity.		Once off
	▪ The construction laydown area layout plan must be provided to the ECO for approval prior to the construction of the laydown area.		Once off
	▪ Site establishment shall take place in an orderly manner and all required amenities shall be installed at the construction laydown areas before the main workforce moves onto the site.		Once off
	▪ All construction equipment must be stored within the construction laydown area.		Monitored Monthly
	▪ All associated fueling and re-fueling must take place within this camp on a bunded or sealed surface such as a concrete slab.		Monitored Monthly
	▪ An area for the storage of hazardous materials must be established that conforms to the relevant safety requirements and that provides for spillage prevention and containment.		Monitored Monthly
	▪ The Construction Camps must be provided with portable fire extinguishing equipment, in accordance with all relevant legislation and must be readily accessible.		Monitored Monthly
	▪ The Contractor must inform all site staff to make use of supplied ablution facilities and under no circumstances shall indiscriminate sanitary activities be allowed.		Monitored Monthly
	▪ All imported materials (e.g., sand) must be stockpiled within the site boundary/Construction Zone. Sand and excavated material stockpiles should be protected against wind using temporary screens, and from		Monitored Monthly

	water erosion using tarpaulins where necessary. All stockpiles are to be limited to 1-2m in height to be suitably managed.		
	▪ It is likely that most of the cement requirements are to be transported to the site as "ready mix" from an off-site batching plant. To prevent spillage onto roads, "ready mix" trucks shall rinse off the delivery shoot into a suitable sump prior to leaving the Site. Cement/concrete shall not be mixed directly on the ground. Dagga boards, mixing trays and impermeable sumps shall be used at all mixing and supply points. Unused cement bags are to be stored so as not to be affected by rain or runoff events. Used cement bags shall be stored in weatherproof containers to prevent windblown cement dust and water contamination. Used cement bags shall be disposed of on a regular basis and shall not be used for any other purpose.		Monitored Monthly
	▪ All visible remains of excess concrete shall be physically removed on completion of the plaster or concrete pour section and disposed of. Washing the remains into the ground is not acceptable as groundwater contamination could occur. All excess aggregates shall also be removed. With respect to exposed aggregate finishes, the persons undertaking construction shall collect all contaminated water and store it in sumps for disposal at an approved waste site.		Monitored Monthly
	▪ No fires will be allowed, and the Contractor must make alternative arrangements for heating. LP Gas may be used, provided that all required safety measures are in place. The Contractor shall take specific measures to prevent the spread of veld fires, caused by activities at the campsites. These measures may include appropriate instruction of employees about fire risks and the construction of firebreaks around the site perimeter.		Monitored Monthly

Storage of materials (including hazardous materials)	▪ The choice of location for storage areas must take into account prevailing winds, distances to water bodies, general onsite topography and water erosion potential of the soil. Impervious surfaces must be provided where necessary. Storage areas must be designated, demarcated, signposted and fenced if necessary.	PC	Monitored Monthly
	▪ Storage areas must be secure to minimise the risk of crime. They must also be safe from access by unauthorised persons i.e., children/animals etc.	PC	Monitored Monthly
	▪ Fire prevention facilities must be present at all storage facilities.	PC	Monitored Monthly
	▪ Proper storage facilities for the storage of oils, grease, fuels, chemicals, and any hazardous materials to be used must be provided to prevent the migration of spillage into the ground and groundwater regime around the temporary storage area(s). These pollution prevention measures for storage must include a bund wall high enough to contain at least 110% of any stored volume, and this must be sited away from drainage lines in a site with the approval of the Project Manager. The bund wall must be high enough to contain 110% of the total volume of the stored hazardous material with an additional allocation for potential stormwater events.	PC	Monitored Monthly
	▪ All necessary approvals concerning fuel storage and dispensing (if required on-site) shall be obtained from the appropriate authorities.	PC	Monitored Monthly
	▪ All fuel storage areas must be covered with a roof to prevent contamination of stormwater	PC	Monitored Monthly

	▪ Material Safety Data Sheets (MSDSs) shall be readily available on-site for all chemicals and hazardous substances to be used on-site. Where possible the available MSDSs must additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or escapes.	PC	Monitored Monthly
	▪ Staff dealing with these materials/substances must be aware of their potential impacts and follow the appropriate safety measures.	PC	Monitored Monthly
	▪ All excess cement and concrete mixes are to be contained on the construction site prior to disposal off-site.	PC	Monitored Monthly
	▪ All harmful materials must be properly stored in a dry, secure environment, with concrete or sealed flooring and a means of preventing unauthorised entry. Furthermore, it must be ensured that material storage facilities are cleaned/ maintained regularly and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil. The management of such storage facilities and means of securing them shall be agreed upon.	PC	Monitored Monthly
	▪ The ECO shall further monitor that materials storage facilities are cleaned/maintained on a regular basis and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil.	ECO	
	▪ All major spills as specified in the contractor emergency response procedure of any materials, chemicals, fuels or other potentially hazardous or pollutant substances must be cleaned immediately, and the cause of the spill investigated. Preventative measures must be identified and submitted to the ECO for information. Emergency response procedures are to be followed and implemented.	PC	Monitored Monthly

Traffic	▪ All equipment moved onto site or off-site is subject to legal requirements.	PC	Monthly Monitoring
	▪ The Contractor shall meet these safety requirements under all circumstances. All equipment transported shall be clearly labelled in terms of its potential hazards according to specifications. All the required safety labelling on the containers and trucks used shall be in place.		Monthly Monitoring
	▪ The Contractor shall ensure that all the necessary precautions against damage to the environment and injury to persons are taken in the event of an accident.		Monthly Monitoring
	▪ Construction routes and required access roads must be clearly defined.		Monthly Monitoring
	▪ Delivery of equipment must be undertaken with the minimum number of trips to reduce the carbon footprint of these activities.		Monthly Monitoring
	▪ Damping down or proper dust suppression of the un-surfaced access roads must be implemented to reduce dust and nuisance.		Monthly Monitoring
	▪ Vehicles and equipment shall be serviced regularly to avoid the contamination of soil from oil and hydraulic fluid leaks etc. The servicing of vehicles and equipment is not allowed to take place on-site. This must be undertaken off-site.		Monthly Monitoring
	▪ Servicing must be done in dedicated service areas on-site or else off-site if no such area exists.		Monthly Monitoring

	▪ Oil changes must take place on a concrete platform and over a drip tray to avoid pollution.		Monthly Monitoring
	▪ Any temporary access roads created for construction will need to follow due environmental processes and attain the necessary environmental approvals before being implemented (if required). Additionally, temporary roads are to be rehabilitated prior to contractors leaving the site.		Monthly Monitoring
Soil and Geology	▪ Rehabilitation of soil and vegetation to take place was identified by the ECO as necessary.	PC	Monthly Monitoring
	▪ Implement effective erosion control measures as identified by the ECO.		Monthly Monitoring
	▪ The full depth of topsoil must be stripped from areas affected by construction and related activities prior to the commencement of major earthworks. This must include the building footprints, working areas and storage areas.		Monthly Monitoring
	▪ Subsoil and overburden in all construction and lay-down areas must be stockpiled separately to be returned for backfilling in the correct soil horizon order.		Monthly Monitoring
	▪ Stockpiles must not exceed 2m in height unless otherwise permitted by the Engineer. Similarly, the footprint of the resultant stockpiles is to be minimised to 0.1 Ha..		Monthly Monitoring
	▪ Stockpiles must be kept clear of weeds and alien vegetation growth by regular weeding.		Monthly Monitoring

	▪ Should a batching plant be required on-site, the concrete batching plant must be contained within a bunded area.		Monthly Monitoring
	▪ If a batching plant is necessary, run-off must be managed effectively to avoid contamination of other areas of the site. Run-off from the batch plant must not be allowed to enter the stormwater system.		Monthly Monitoring
	▪ Soils compacted during construction must be deeply ripped to loosen compacted layers and regraded to even running levels. Topsoil must be re spread over landscaped areas.		Monthly Monitoring
	▪ Ensure that the mixing/decanting of all chemicals and hazardous materials should take place on a tray or impermeable surface.		Monthly Monitoring
	▪ Waste generated from these should then be disposed of at a registered landfill site.		Monthly Monitoring
	▪ Ensure all storage tanks are designed, bunded and managed to prevent pollution of drains, groundwater and soils.		Monthly Monitoring
	▪ Construct separate stormwater collection areas and interceptors at storage tanks, and other associated potential pollution activities.		Monthly Monitoring
	▪ Ensure that the use and storage of fuels and chemicals that could potentially leach into the ground are controlled. Adequate spillage containment measures shall be implemented, such as cut-off drains, etc. Fuel and chemical storage containers shall be set on a concrete plinth. The containment capacity shall be equal to the full amount of material stored, plus 10%.	PC	Monthly Monitoring

	• Appoint appropriate contractors to remove any residue from spillages from the site. Handling, storage and disposal of excess or containers of potentially hazardous materials shall be in accordance Regulation for Hazardous Chemical Agents of the OHS Act (No. 85 of 1993) with the requirements		Monthly Monitoring
	▪ Ensure that used oils/lubricants are not disposed of on/near the site and that contractors purchasing these materials understand the liability under which they must operate.		Monthly Monitoring
	▪ The Environmental Control Officer will be responsible for reporting the storage/use of any other potentially harmful materials to the relevant authority where necessary.	ECO	
	▪ Ensure that potentially harmful materials are properly stored in a dry, secure environment, with concrete or sealed flooring. The PC will ensure that materials storage facilities are cleaned/maintained regularly and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil or surface water. The management of such storage facilities and means of securing them shall be agreed upon.	PC	Monthly Monitoring
	▪ The ECO will monitor that materials storage facilities are cleaned/maintained on a regular basis and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil or surface water.	ECO	Monthly Monitoring
Erosion Control	▪ It is recommended that construction only be undertaken during agreed working times and permitted weather conditions.	PC	Monthly Monitoring
	▪ If heavy rain is expected activities should be put on hold to reduce the risk of erosion.		Monthly Monitoring

	▪ If earthworks are required, then stormwater control and wind screening should be undertaken to prevent soil loss from the site.		Monthly Monitoring
	▪ Oil traps must be installed to remove the bulk of the oil from the stormwater, which water can then be used on haul roads for dust suppression or as wash-down water in the wash bays.		Monthly Monitoring
Water Use and Pollution	▪ Silt fences must be used to prevent any soil because of stormwater run-off.	PC	Monthly Monitoring
	▪ Efficient oil and grease traps or sumps must be installed and maintained at re-fuelling facilities, workshops, fuel storage depots, and containment areas and spill kits must be available with emergency response plans.		Monthly Monitoring
	▪ The construction site/areas must be managed to prevent pollution of groundwater due to fuel oil, suspended solids and silt or chemical pollutants.		Monthly Monitoring
	▪ Promote a water-saving mindset with construction workers to ensure less water wastage.		Monthly Monitoring
	▪ Earth, stone and rubble are to be properly disposed of or utilised on site so as not to obstruct natural water pathways over the site (i.e., these materials must not be placed in stormwater channels)		Monthly Monitoring
	▪ There must be periodic checking of the site's drainage system to ensure that the water flow is unobstructed.		Monthly Monitoring
Waste	▪ Refuse bins must be placed in strategic positions to ensure that litter does not accumulate within the construction site.	PC	Monthly Monitoring

	▪ Where considerable quantities of waste are generated, this must be placed in 200-litre bins or skip containers and removed once full. Additionally, the waste generated will need to be disposed of in line with the station's waste management procedures.		Monthly Monitoring
	▪ The Contractor shall supply waste collection bins where such is not available, and all solid waste collected shall be disposed of at a registered/licensed landfill.		Monthly Monitoring
	▪ In general, any litter must be cleared immediately.		Monthly Monitoring
	▪ All waste generated on-site must be separated into glass, plastic, paper, metal, and wood and then recycled in line with the station's waste management procedures. An independent contractor can be appointed to conduct this recycling.		Monthly Monitoring
	▪ Littering by the employees of the Principal Contractor shall not be allowed under any circumstances.		Monthly Monitoring
	▪ The ECO shall monitor the neatness of the work sites as well as the Contractor's campsite.	ECO	
	▪ It is important that the contractors (and sub-contractors by implication) and workers be informed of the facilities and procedures available for the disposal of waste.	PC	Monthly Monitoring
	▪ The construction of "Long Drop" toilets is forbidden; but rather toilets connected to a sewage treatment plant, portable toilets or chemical toilets are to be used.		Monthly Monitoring
Spills and Contamination	▪ Depending on the nature and extent of the spill, contaminated soil must be either excavated or treated on-site.	PC	Monthly Monitoring

	▪ Excavation of contaminated soil must involve careful removal of soil using appropriate tools/machinery to store containers until treated or disposed of at a licensed hazardous landfill site.		As spill occurs
	▪ The ECO must determine the precise method of treatment for polluted soil. This could involve the application of soil-absorbent materials as well as oil-digesting powders to the contaminated soil.		As spill occurs
	▪ If a spill occurs on an impermeable surface such as cement or concrete, the spill must be contained using oil-absorbent material. Alternatively, any spill must follow the station's dirty water channels.		As spill occurs
	▪ The ECO must determine the precise method of treatment for polluted soil. This could involve the application of soil-absorbent materials as well as oil-digestive powders to the contaminated soil.		As spill occurs
	▪ If a spill occurs on an impermeable surface such as cement or concrete, the spill must be contained using oil-absorbent material. Alternatively, any spill must follow the station's dirty water channels.		As spill occurs
	▪ Materials used for the remediation of petrochemical spills must be used according to product specifications and guidance for use. Contaminated remediation materials must be carefully removed from the area of the spill to prevent further release of petrochemicals to the environment and stored in adequate containers until appropriate disposal.		As spill occurs
	▪ The ECO must determine the precise method of treatment for polluted soil. This could involve the application of soil-absorbent materials as well as oil-digestive powders to the contaminated soil.		
	▪ Materials used for the remediation of petrochemical spills must be used according to product specifications and guidance for use. Contaminated remediation materials must be carefully removed from the area of the spill to prevent further release of petrochemicals to the environment and stored in adequate containers until appropriate disposal.		As spill occurs

Biodiversity	▪ Only vegetation within the construction footprint and working servitude may be removed	PC	Once off
	▪ Vegetation is to be removed as it becomes necessary rather than removal of all vegetation throughout the site in one step.		Monthly Monitoring
	▪ Vegetation clearing on the site must be kept to a minimum.		Monthly Monitoring
	▪ Existing access roads must be utilised as much as possible.		Monthly Monitoring
	▪ Materials must not be delivered to the site prematurely which could result in additional areas being cleared or affected.		Monthly Monitoring
	▪ No vegetation is to be used for firewood.	PC	Monthly Monitoring
	▪ The construction areas must be well demarcated, and no construction activities must be allowed outside of this demarcated footprint.		Monthly Monitoring
	▪ Alien vegetation on the site will need to be controlled.		Monthly Monitoring
	▪ The contractor must be responsible for implementing a programme of weed control (particularly in areas where soil has been disturbed); and grassing of any remaining stockpiles to prevent weed invasion.		Monthly Monitoring

	▪ The use of pesticides and herbicides on the site must be discouraged.		Monthly Monitoring
	▪ The Contractor shall be responsible for dust control on site to ensure no nuisance is caused to sensitive receptors such as the surrounding landowners and the neighbouring communities.	PC	Monthly Monitoring
	▪ Dust generation must be kept to a minimum and suppressed on access roads and construction areas during dry periods. This can be accomplished by the regular application of water.	PC	Monthly Monitoring
	▪ Speed limits on unsurfaced roads must not be exceeded.	PC	Monthly Monitoring
	▪ Speed limits for construction vehicles must be clearly signposted and must be monitored by the PC ELO and ECO. Any complaints or claims emanating from the lack of dust control shall be attended to immediately by the PC ELO. The ECO monitors the implementation.	PC ELO & ECO	Monthly Monitoring
Noise	▪ The construction phase must aim to adhere to the relevant noise regulations (SANS 10328:2008) and limit noise to within standard working hours and acceptable industrial limits (61 dBA for industrial noise) to reduce disturbance of dwellings near the development.	PC	Monthly Monitoring
	▪ Truck traffic must be routed away from noise-sensitive areas, where possible.		Monthly Monitoring
	▪ Construction activities are to be conducted at reasonable hours during the day and early evening (weekdays from 06:00 am to 18:00 pm). Night-time activities near noise-sensitive areas must not be allowed.		Monthly Monitoring

	▪ Construction workers must wear necessary Personal Protection Equipment (PPE).		Monthly Monitoring
	▪ Noise suppression measures must be applied to all construction equipment. Construction equipment must be kept in good working order and, where appropriate fitted with silencers which are kept in good working order. Should the vehicles or equipment not be in good working order, the contractor may be instructed to ▪ remove the offending vehicle or machinery from site.		Monthly Monitoring
	▪ Applying regular and thorough maintenance schedules to equipment and processes. An increase in noise emission levels is very often a sign of the imminent mechanical failure of a machine.		Monthly Monitoring
	▪ Should blasting be required, the contractor will need to obtain a blasting permit. Moreover, the contractor must make the public aware of when blasting is to take place as well as the specific times of blasting. Blasting activities must take place at reasonable times and during daily working hours		Monthly Monitoring
Labour Impacts/concerns	• The use of labor-intensive construction measures must be used where appropriate.	PC	Throughout
	• All unskilled labourers must be drawn from the local market i.e., and where possible use must be made of local semiskilled and skilled personnel.		Throughout
	• Local suppliers to be used where and as far as possible		Throughout
	• The recruitment process must be equitable and transparent. A concerted effort will be made to guard against nepotism and/or any form of favoritism during the process		Throughout

	• Record of official complaints by employees to authorities i.e., Labour and Social Security (see Appendix A for complaints record sheet).		Throughout
Occupational Health and Safety	▪ Safety measures for work procedures must be implemented.	PC	Throughout
	▪ First aid kits must be available and accessible on site.		Monthly Monitoring
	▪ A health and safety plan in terms of the Occupational Health and Safety Act (Act No. 85 of 1993) must be drawn up by the Contractor and approved by the ECO to ensure worker safety.		Monthly Monitoring
	▪ Workers must be thoroughly trained in using potentially dangerous equipment.		Monthly Monitoring
	▪ Contractors must ensure that all equipment is maintained in a safe operating condition.		Monthly Monitoring
	▪ A safety officer must be appointed.		Monthly Monitoring
	▪ A record of health and safety incidents must be kept on site.		Monthly Monitoring
	▪ Any health and safety incidents must be reported to the Project Manager immediately.		Monthly Monitoring
	▪ First aid facilities must always be available on site and several employees trained to carry out first aid procedures.		Monthly Monitoring
	▪ Workers have the right to refuse work in unsafe conditions.		Monthly Monitoring
	▪ The Contractor shall take all the necessary precautions against the spreading of disease, such as measles, foot and mouth, etc.		Monthly Monitoring

	▪ A record shall be kept of drugs administered to construction staff at the station's health facilities or precautions taken and the time and dates when this was done. This can then be used as evidence in court should any claims be instituted against the Proponent or the Contractor.		Monthly Monitoring
	▪ A record of health and safety incidents must be kept on site.		Monthly Monitoring
	▪ Material stockpiles or stacks must be stable and well secured to avoid collapse and possible injury to site workers/residents.		Monthly Monitoring
	▪ Working areas must be provided with adequate ventilation and dust/fume extraction systems to ensure that inhalation exposure levels for potentially corrosive, oxidising, reactive or siliceous substances are maintained and managed at safe levels.		Monthly Monitoring
	▪ Eye wash and emergency shower systems must be provided in areas where there exists the possibility of chemical containment of workers and the need for rapid treatment.		Monthly Monitoring
	▪ Use of electrical safety devices on all final distribution circuits and appropriate testing schedules applied to such safety systems.		Monthly Monitoring
	▪ All sources of hazardous energy or hazardous substances must have written procedures for isolation, identifying how the system, plant or equipment can be made and kept safe.		Monthly Monitoring
	▪ Use of contrast colouring on equipment/machinery including the provision of reflective markings to enhance visibility.		Monthly Monitoring

	▪ Use of moving equipment/machinery equipped with improved operator sight lines.		Monthly Monitoring
	▪ Issuing workers with high visibility clothing.		Monthly Monitoring
	▪ Personal Protective Equipment (PPE) must be made available to all construction staff and must be compulsory. Hard hats and safety shoes must be always worn, and other PPE worn were necessary i.e., dust masks, ear plugs etc.		Monthly Monitoring
	▪ No person is to enter the site without the necessary PPE.		Monthly Monitoring
	▪ Emergency numbers for local police and fire department etc. must be placed in a prominent area		Monthly Monitoring
	▪ All speed limits must be adhered to.		Monthly Monitoring
	▪ All equipment used for construction must be in good working order with up-to-date maintenance records.		Monthly Monitoring
	▪ From the construction phase, an emergency evacuation plan must be drawn up to ensure the safety of the staff and surrounding land users in the case of an emergency.		Monthly Monitoring
	▪ All permanent staff must undergo safety training.		Monthly Monitoring

	▪ The construction activities must fall within the construction site.		Monthly Monitoring
Crop Farming (Loss of Arable Land, Dust Deposition on Crops, Chemical Contamination)	▪ Demarcate and maintain a safe buffer distance between construction activities and crop fields. ▪ Regularly water exposed surfaces, install dust nets or barriers near crop areas, and avoid construction during high winds. ▪ Store chemicals in bunded areas away from farmland and implement a spill prevention and response plan. ▪ Limit access roads and machinery movement near crop fields. ▪ Protect existing irrigation infrastructure from accidental damage.	PC	Monitored weekly
Grazing (Loss of Grazing Land, Disturbance and Stress to Livestock, Blocking of Grazing Routes)	▪ Erect temporary fencing to prevent livestock from entering construction activity site. ▪ Avoid peak grazing periods where possible; provide temporary alternative routes or access to grazing areas. ▪ Restore disturbed grazing land using indigenous grass species suitable for livestock feeding.	PC	Monitored Monthly
Heritage and Palaeontology	▪ Based on the Heritage report conducted by Vhubvo a structure over 60 years was observed on site, therefore, the contractor must ensure that the borehole must be avoided, and not altered in any way.	PC	Monthly Monitoring
	▪ The Construction Workers must receive basic training in environmental awareness, including the minimisation of disturbance of the sensitive areas and they must be informed of how to recognize historical/archaeological artefacts that may be uncovered.		Should Findings occur
	▪ The contractor must ensure that his workforce is aware of the necessity of reporting any possible historical or archaeological finds to the ECO so that appropriate action can be taken.		Should Findings occur

	▪ Any discovered artefacts shall not be removed under any circumstances. Any destruction of a site can only be allowed once a permit is obtained, and the site has been mapped and noted. Permits shall be obtained from the South African Heritage Resources Association (SAHRA) should the proposed site affect any world heritage sites or if any heritage sites are to be destroyed or altered.		Once Off
	▪ Should any archaeological sites/graves be uncovered during construction, their existence shall be reported to the South African Heritage Resource Agency (SAHRA) immediately.		Should Findings occur
	▪ Should any archaeological sites/graves be uncovered during construction, their existence shall be reported to the necessary authorities immediately.		Should Findings occur
OPERATION PHASE			
Decommissioning of Construction Site	▪ All structures comprising the construction camp are to be removed from site.	PC	To take place at the end of the Construction Phase
	▪ The area that previously housed the construction camp is to be checked for spills of substances such as oil etc., and these shall be cleaned up.		Inspection at end of Construction Phase
	▪ All hardened surfaces within the construction camp area must be ripped, all imported materials removed, and the area shall be top soiled and regressed using the guidelines set out in the rehabilitation section that follows in this document.		Inspection at end of Construction Phase
	▪ Surfaces are to be checked for waste products from activities such as concreting and cleared in a manner approved by the Engineer.		Inspection at end of Construction Phase

	▪ All surfaces hardened due to construction activities are to be ripped, and imported material thereon is to be removed.		Inspection at end of Construction Phase
	▪ All rubble is to be removed from the site to in line with the stations waste management procedures. Burying rubble on site is prohibited.		Inspection at end of Construction Phase
	▪ The construction camp site is to be cleared of all litter.		Inspection at end of Construction Phase
	▪ Fences, barriers and demarcations associated with the construction phase are to be removed from the site unless otherwise stipulated by the Engineer.		Inspection at end of
	▪ All residual spoil and topsoil stockpiles must be removed to spoil or spread on site as directed by the Engineer.		Inspection at end of Construction Phase
	▪ All residual building materials must be returned to the depot or removed from the site.		Inspection at end of Construction Phase
Rehabilitation	▪ All alien vegetation in the footprint area as well as immediate vicinity of the proposed project should be removed. Alien vegetation control should take place for a minimum period of two growing seasons after rehabilitation is completed.	Viomec Farm (Pty) Ltd	Throughout the life cycle of the activity
Soil Erosion	▪ All damaged areas shall be rehabilitated upon completion of the contract	Viomec Farm (Pty) Ltd	Inspection at end of Construction Phase
	▪ All natural areas impacted during construction must be rehabilitated with locally indigenous grasses typical of the representative botanical unit.		Inspection at end of Construction Phase

	▪ Rehabilitation must take place in a phased approach as soon as possible.		Inspection at end of Construction Phase
	▪ Rehabilitation must be executed in such a manner that surface run-off will not cause erosion of disturbed areas.		Inspection at end of Construction Phase
Waste	▪ The site must be always kept clear of litter	Viomec Farm (Pty) Ltd	Inspection at end of Construction Phase
	▪ Solid waste separation and recycling must take place for the duration of the operational phase for the development in line with the plant's waste management procedures.		Continuous
	▪ All waste must be removed promptly to ensure that it does not attract vermin or produce odours.		Continuous
	▪ In-house treatment procedures must be followed strictly.		Continuous
	▪ Solid waste must be collected regularly.		Continuous
Health and Safety	▪ Upon completion of the construction phase, an emergency evacuation plan must be drawn up to ensure the safety of the staff and surrounding land users in the case of an emergency.	Viomec Farm (Pty) Ltd	Once-off
	▪ The site is to be regularly maintained. A maintenance schedule must be drawn up and records of all maintenance kept.		Continuous

	▪ Firefighting equipment in the form of fire hydrants or fire extinguishers must be available on the site. These must be regularly maintained by an appropriate company.		Continuous
	▪ A spill kit needs to be kept on site to address any unforeseen spillages.		Continuous
	▪ Transport of all hazardous substances must be in accordance with the relevant legislation.		Continuous
Visual	▪ Lighting must be kept to a minimum and restricted to low level, downward facing lights to reduce light spill.	Viomec Farm (Pty) Ltd	Continuous
	▪ Lighting must be inward and downward pointing to reduce glare in surrounding areas.		Continuous
	▪ The site and surrounds must be kept clean, tidy and well maintained to reduce negative visual impacts.		Continuous
	▪ Surrounding roads must be well maintained.		Continuous
	▪ Regular maintenance of the associated infrastructure must be undertaken.		Continuous
Odour and pest management	▪ Implement and adhere to the Biosecurity measures outlined in the Biosecurity plan that forms part of the Environmental Management Programme Report.	Viomec Farm (Pty) Ltd	Continuous

	▪ Implement and adhere to the waste management measures outlined in the waste management plan that forms part of the Basic Assessment Report..		
Waste management	▪ The waste bins shall be cleared by municipal services on a weekly basis. ▪ During municipal strikes special arrangements must be made to have the waste removed via private waste removal services. ▪ Several waste bins must be provided and clearly marked, or colour coded ▪ according to industry standards to allow for recycling of waste into separate bins.	Viomec Farm (Pty) Ltd	Continuous
Disease transmission between other animals.	▪ Enforce strict biosecurity protocols ▪ Separate housing, feeding, and handling areas ▪ Routine veterinary checks ▪ Restrict the other animals access to poultry areas	Viomec Farm (Pty) Ltd	Continuous
Stress and behavioural disruption to poultry caused by noise or presence of other animals	▪ Install physical barriers or fencing to separate the animals ▪ House dogs away from the poultry farm area ▪ Designate separate activity zones (Distance between the animals housing)	Viomec Farm (Pty) Ltd	Continuous
Risk of poultry injury or predation by other animals or accidental trampling by larger animals	▪ Prohibit unsupervised animal movement ▪ House the other animals in secure enclosures ▪ Install perimeter fencing around the poultry area	Viomec Farm (Pty) Ltd	Continuous

8. REPORTING

8.1 Administration

Before the contractor begins each construction activity, the Contractor shall give to the ECO and engineer a written method statement setting out the following:

- The type of construction activity.
- Locality where the activity will take place.
- Identification of impacts that might result from the activity.
- Identification of activities or aspects that may cause an impact.
- Methodology and/or specifications for impact prevention for each activity or aspect.
- Methodology and/or specifications for impact containment for each activity or aspect.
- Emergency/disaster incident and reaction procedures.
- Treatment and continued maintenance of impacted environment.

The contractor may provide such information in advance of any or all construction activities provided that new submissions shall be given to the ECO and/or engineer whenever there is a change or variation to the original.

The ECO and/or engineer may provide comment on the methodology and procedures proposed by the Contractor, but he shall not be responsible for the contractor's chosen measures of impact mitigation and emergency/disaster management systems. However, the contractor shall demonstrate at inception and at least once during the contract that the approved measures and procedures function properly.

8.2 Auditing

A monitoring programme will be implemented for the duration of the construction phase of the development. The ECO will be responsible for liaising with the construction team and the approving authorities if so required. The ECO must submit monthly environmental audit reports to the applicant and contractor. These audit reports must contain the following information:

- Description of the general state of the site, with specific reference to sensitive areas and areas of non-conformance.
- Establishing a baseline through the taking of photographs of identified environmental aspects and potential impact sites prior to construction
- Weekly monitoring during the first month of construction where after monthly audits will be conducted by the Environmental Control Officer for the remainder of the construction phase to ensure compliance to the EMPr conditions, and where necessary make recommendations for corrective action. These audits can be conducted randomly and do not require prior arrangement with the Project Coordinator.

- Compilation of an audit report with a rating of compliance with the EMPr. The ECO shall keep a photographic record of any damage to areas outside the demarcated site and construction area.
- A register shall be kept of all complaints from the Landowner or community. All complaints / claims shall be handled immediately to ensure timeous rectification / payment by the responsible party.

8.3 Good Housekeeping

The contractor shall undertake “good housekeeping” practices during construction. This will help avoid disputes on responsibility and allow for the smooth running of the contract. Good housekeeping extends beyond the wise practice of construction methods that leaves production in a safe state from the ravages of weather to include the care for and preservation of the environment within which the site is situated.

8.4 Record Keeping

The engineer and the ECO will continuously monitor the contractor’s adherence to the approved impact prevention procedures and the engineer shall issue to the contractor a notice of noncompliance whenever transgressions are observed. The ECO should document the nature and magnitude of the non-compliance in a designated register, the action taken to discontinue the noncompliance, the action taken to mitigate its effects and the results of the actions. The noncompliance shall be documented and reported to the engineer in the monthly report. These reports shall be made available to Gauteng Department of Environmental when requested.

The Contractor shall ensure that an electronic filing system identifying all documentation related to the EMP is established.

A list of reports likely to be generated during the proposed Poultry Farm Expansion is provided below, and all applicable documentation must be included in the environmental filing system catalogue or document retrieval index as follows:

- Relevant Environmental Approvals
- Final design documents and diagrams issued to and by the Contractor.
- All communications detailing changes of design/scope that may have environmental implications.
- Daily, weekly and monthly site monitoring reports.
- Complaints register.
- Medical reports.
- Training manual.
- Training attendance registers.
- Incident and accident reports.

- Emergency preparedness and response plans.
- Copies of all relevant environmental legislation.
- Permits and legal documents, including letters authorising specific personnel of their duties as part of emergency preparedness teams e.g., fire teams, etc.
- Crisis communication manual.
- Disciplinary procedures.
- Monthly site meeting minutes during construction.
- All relevant permits.
- All method statements from the Contractor for all phases of the project.

8.5 Document Control

The Contractor and resident engineer shall be responsible for establishing a procedure for electronic document control. The document control procedure should comply with the following requirements:

- Documents must be identifiable by organisation, division, function, activity and contact person.
- Every document should identify the personnel and their positions, who drafted and compiled the document, who reviewed and recommended approval, and who finally approved the document for distribution.
- All documents should be dated, provided with a revision number and reference number, filed systematically, and retained for a five-year period.

The Contractor shall ensure that documents are periodically reviewed and revised, where necessary, and that current versions are available at all locations where operations essential to the functioning of the EMPr are performed. All documents shall be made available to the independent external auditor.

9. CONCLUSION

It is the view of the Environmental Assessment Practitioner that the Proposed Expansion of the Chicken Facility will not have any significant negative geophysical, biophysical or socio- economic environmental impacts provided the recommendations regarding the mitigation and rehabilitation measures presented in this EMPr are adhered to. The issues related to respect of landowner's property and general conduct during construction phase is very important. No construction work shall commence until the final EMPr is authorised by the GDEnv.

Furthermore, environmental biophysical and social impacts of the project have been assessed to be spread throughout the project life. Both positive and negative project-related impacts have been identified but it has been concluded that all the negative impacts could be perfected to acceptable

levels or made negligible through the implementation of the mitigation measures contained within this EMPr. The following section briefly describes some of the major impacts and proposed mitigation measures within each of the project phases.

9.1 Pre-Construction Phase

The first site activities, before mobilization of equipment, will be a survey for final development designs. There will be negative impacts on land associated with the site preparation and laydown areas (temporary loss), site and vegetation clearing, water supply, excavations, dust, soil erosion, worker safety, storage of hazardous or dangerous materials, vehicle and machinery maintenance. Adequate signage and temporary sanitation and ablution facilities must be provided to mitigate health and safety potential impact. Construction contracts will include environmental monitoring and management procedures and requirements. These must be in place prior to the commencement of any pre-construction activities.

9.2 Construction Phase

This phase of the project could result in both positive and negative impacts. The positive impacts are employment opportunities offered to the construction workers and any other labourer who will be hired to provide his/her services during the construction phase. The potential negative impacts would include establishment of the construction lay-down area, storage of materials, traffic, soil and geology, erosion control, water use and pollution, surface and groundwater concerns, waste, spills and contamination, biodiversity concerns, dust control, noise, labour impact concerns, occupational health and safety concerns and heritage and palaeontological concerns. Most of the negative impacts are minor and temporary. However, on mitigating negative impacts, the contractor shall ensure that all staff have adequate protective clothing and are adequately trained. The whole range of mitigation measures are however, outlined in the EMPr in this regard.

9.3 Operational Phase

The proposed project will have minimal potential negative effects which mainly relates to decommissioning of the construction site, soil erosion, waste, health and safety concerns and visual concerns. The impacts on the operational phase will be managed through the EMPr, Biosecurity and Waste Management Plans. These potential negative impacts are unlikely to occur when mitigated to acceptable levels. Mitigation measures stipulated in this EMPr outline procedures that should be followed in the event of potential negative impacts occurring

ENVIRONMENTAL INCIDENTS

ENVIRONMENTAL INCIDENT LOG				
Date	**Env. Condition**	**Comments** *(Include any possible explanations for current condition and possible responsible parties. Include photographs, records etc. if available)*	**Corrective Action Taken** (*Give details and attach documentation as far as possible)*	**Signature**

COMPLAINTS RECORD SHEET

Complaints Record Sheet	**File Ref:** Page …. of ….	**Date:**
COMPLAINT RAISED BY:		
CAPACITY OF COMPLAINANT:		
COMPLAINT RECORDED BY:		
COMPLAINT:		
PROPOSED REMEDIAL ACTION:		
NOTES BY ECO:		
ECO:	Date:	