

**DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) THE PROPOSED IKHUHU POULTRY FARM FOR THE PROPOSED 6 BROILERS FOR REARING AT HONINGNESTKRANS (±24 HACTER) FARM No 269, PORTION 154 ALONG THE WITHIN CITY OF TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG PROVINCE, SOUTH AFRICA. GAUT 002/20-21/E2671**

**November 2019**

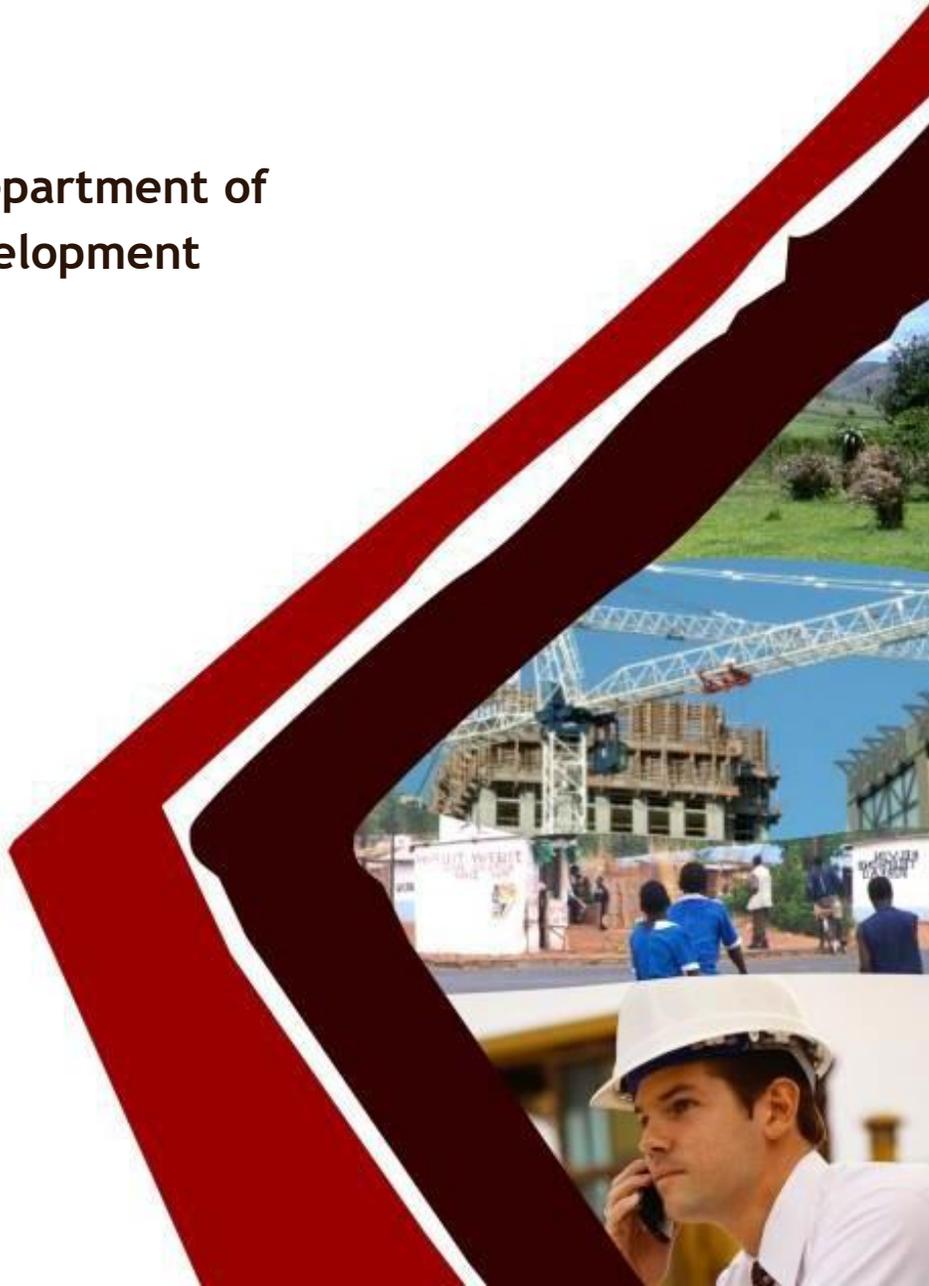
**Submitted To:** Gauteng Department of Agriculture and Rural Development



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Ck No. 2007/196934/23 - Income Tax Registration: 9455120163



## TITLE AND APPROVAL PAGE

<b>GDARD REF NO:</b>	<b>GAUT 002/20-21/E2671</b>	
<b>TITLE:</b>	DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) THE PROPOSED IKHUHU POULTRY FARM FOR THE PROPOSED 6 BROILERS FOR REARING AT HONINGNESTKRANS (±24 HACTER) FARM No 269, PORTION 154 ALONG THE WITHIN CITY OF TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG PROVINCE, SOUTH AFRICA.	
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<b>PROJECT STATUS:</b>	Draft Basic Assessment Phase	
<b>REVIEW PERIOD:</b>	October 2020m	
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Document Approval Matrix						
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Date		Signature		Signature		
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QMS Approved						
Effective Date						
Revision Date		Revision No		Description of Change		

## **Glossary**

“Corrective action” - Action taken to correct a detected non-conformity

“Cradle-to-Grave” - A policy of controlling Hazardous Waste from its inception to its ultimate disposal.

“Duty of care” - This requires that any person who generates, transports, treats or disposes of waste must ensure that there is no unauthorised transfer or escape of waste from his control. Such a person must retain documentation describing both the waste and any related transactions. In this way he retains responsibility for the waste generated or handled.

“Environment” - Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation.

“Environmental management system” - A tool that systemizes the way an organization goes about its environmental business and demand yearly improvements on targets set by the company.

“Environmental performance criteria” - Environmental objective, target or any other intended level of environmental performance set by the management of the organisation and used for the purpose of environmental performance evaluation.

“Environmental performance evaluation” - Process to facilitate management decisions regarding an organisation’s environmental performance by selecting indicators, collecting and analysing data, assessing information against environmental performance criteria, reporting and communicating and periodically reviewing and improving this process.

“Environmental performance indicator” - Specific expression that provides information about an organization’s environmental performance.

“Environmental Policy” - Statement by the organization of its intentions and principles in relation to its overall environmental performance that provides a framework for action and the setting of environmental objectives and targets.

“General waste” - The generic term for waste that if properly managed does not pose an immediate threat to man or the environment. It may comprise of the following:

- Clean building rubble (no contamination with any hazardous waste e.g. asbestos or used oil etc.)
- Garden refuse
- Domestic waste
- Plastic
- Timber
- Scrap steel
- Rubble
- Glass
- Paper, cardboard.

“Generator” - An industry or company whose activities result in the production of waste. The responsibility for a Hazardous Waste remains from cradle-to-grave with the Generator of the waste and the Generator is held liable for any damage that the waste may cause to humans or to the environment.

“Hazardous waste” - Waste that has the potential, even in low concentrations, to have a significant adverse effect on public health and the environment because of its inherent toxicological, chemical and physical characteristics. It may comprise of the following:

- Used batteries and some degreasers (contain acids and alkali's).
- Waste containing asbestos fibres/products.
- Oily waste (used oil rags, filters, drums, oil contaminated soil).
- Used grease.
- Left-over paints, solvents and resins (and empty containers).
- Sewerage sludge.
- Redundant chemicals.
- Lead, nickel, cadmium (heavy metals) found in electrical/electronic appliances.
- Mercury (heavy metal) found in fluorescent tubes and other electrical appliances.
- Pesticides, insecticides, fertilisers, herbicides and their containers.

“Impact” Any change to the environment, whether harmful or beneficial, wholly or partially resulting from the organisation’s environmental aspects.

“Integrated Waste Management Approach” (also referred to as the waste management hierarchy);

- prevent and avoid the production of a waste by applying the “cradle-to-grave” principle (where possible) e.g. bulk procurement of goods or sending packaging back to suppliers;
- minimise or reduce the volume of a waste or the hazard rating (in the case of hazardous waste by for example purchasing less hazardous materials);
- resource recovery by recycling of waste or the recovery of energy from that waste’;
- treatment of waste to reduce the volume or hazardousness;
- as a last resort the safe disposal of waste so that it will not pollute the environment or cause health hazards.

“Non-compliance” - Non fulfilment of a requirement or legislation.

“Objective” - Overall goal that the organisation sets itself to achieve, which may be quantitative, but because it is overall, is usually expressed in qualitative terms. □ “Poultry” is the raising of domesticated birds such as chickens, turkeys, ducks, and geese, for the purpose of farming meat or eggs for food. Poultry are farmed in great numbers with chickens being the most numerous. Chickens raised for eggs are usually called layers while chickens raised for meat are often called broilers.”

“Preventative action” - Action taken to prevent or eliminate the cause of a potential non-conformity.

“Recycle” - The use, re-use or reclamation of a material so that it re-enters the industrial process rather than becoming a waste.

“SANS” - The South African National Standard.

“Sustainable development” - Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

“Target” - Detailed or specific performance requirement, which is quantified where possible that needs to be met in order to achieve the objectives. The target will be quantitative in order that performance against can be measured.

“Waste” - An undesirable or superfluous by-product, emission, or residue of any process or activity which has been discarded, accumulated or stored for the purpose of discarding or processing. It may be gaseous, liquid or solid or any combination thereof. And may originate from a residential, commercial or industrial area. This definition excludes industrial waste water, sewage, radioactive substances, and mining, metallurgical and power generation waste. Government Gazette No. 12703, August 1990.

“Waste stream” - A continuous flow of waste from an industry, activity, process or group.

## 1. OVERVIEW OF THE PROJECT

IKhuhu Poultry Farm (PTY) Ltd is a black owned company that saw a need in the market to which it will be playing a role in the poultry market by assisting the industry to meeting the growing market of chicken business while creating jobs for South African youth. As with most agricultural enterprises there is a continuing need to expand the current operation in order to be more efficient and economically viable as well as a need to meet the ever-increasing demand for poultry products in South Africa, IKhuhu Poultry Farm (PTY) Ltd is to work in partnership with the Festive chicken production firm.

IKhuhu Poultry Farm (PTY) Ltd purchased the Honingnestkrans farm with the vision of poultry farming, the Honingnestkrans farm 269, portion 154, is approximately  $\pm 24$  hectares in size, it falls under Tshwane Metropolitan municipality under Region 1, Ward 4. IKhuhu Poultry Farm (PTY) Ltd is the rightful owner of the land, see the attached title deeds in Appendix I. The farm is located along the R101 main road, the proposed project is estimated to affect approximately  $\pm 3$  hectares footprint. The study area is situated immediately south of Katlagter Road (gravel road) and approximately 500 m north of Piet My Vrou Road (gravel road). The M 35 (Soutp'n Road) is situated approximately 2.6 km west of the study area, while the M39 (Roiwalpad Road) is situated 1.5 km to the south, and the R80 4.2 km west. The residential area of Shoshanguve is located approximately 3.8 km west of the study area.

The proposed project development comprises of two layers and four broilers houses to be constructed, each to house to accommodate a minimum of 40 000 chicks and 240 chicks in total on site. Associated infrastructure includes but not limited to site offices and toilet for customers, stay in rooms for labours, security small hut, a new access road of 7m to be paved). The farm already has 3 active borehole water with yield capacity of 4580l/h and a storage capacity of 10 000L and 50 000 L reservoir that is to be used for both domestic and commercial purpose of the farm. The proposed houses will make use of some of the latest technology available for ventilation, lighting, heating and cooling, as environmental conditions such as temperature and lighting play a very vital role in bird growth and development and will therefore be carefully controlled. The proposed houses will also make use of latest technology for automatic feed and water distribution.

### **1.1. Purpose and Objectives of Environmental Management Programme.**

This document considers the impacts that are likely to arise from the implementation of the project and the mechanisms recommended to minimise the severity of these impacts. The EMPr outlines the principles, responsibilities and requirements applicable in order to effectively implement environment management, throughout all phases of the project.

The main reason of EMPr compilation, is to outline measures that are to be implemented in order to minimise adverse environmental impacts that are either; direct, indirect or cumulative associated with the development of the proposed poultry farm. This is done to stimulate good management practices through planning and commitment of environmental issues and complying all applicable laws, regulations, standards and guidelines for the protection of the environment. The EMPr serves as a guide for contractors and employees on their roles and responsibilities concerning environmental management on site. Furthermore, it provides a framework for environmental monitoring throughout the development's life cycle. This document provides appropriate mitigation measures designed to minimise or eliminate the significant adverse impacts that may be caused as a result of the proposed project and to also enhance positive impacts.

### **1.2. Objectives of the EMPr**

The EMPr objectives aims to achieve the following:

- a. To provide a structure or framework within the environmental management requirements which will be implemented, audited and reported on, in order to ensure that potential impacts on the environment are minimized.
- b. To set out the mitigation measures and environmental specifications which are required to be implemented during various phases of the development in order to minimize the extent of environmental impacts, to manage environmental impacts and where possible to improve the condition of the environment.
- c. To state standards and guidelines that are required to be achieved in terms of environmental legislation and authorization conditions.
- d. To provide a clear indication of the environmental management requirements of each of the role players involved.

### **1.3. Structure of The Environmental Management Programme**

It is intended to be an overview document that specifies the on-site environmental management philosophy of the proposed poultry farm and the organisational structure necessary to achieve that vision. In addition, it specifies common environmental management and monitoring principles that will be applied to all aspects of the proposed project.

#### **Planning Phase**

This section of the EMPr incorporates pro-active environmental management measures with the goal of attaining sustainable development which can be achieved during this phase. Pro-active environmental measures help minimize the chance of negative impacts occurring. Necessary corrective actions are proposed to further limit potential impacts. The planning phase should include measures that will dictate how the proposed activities should be carried out.

#### **Construction Phase**

This section of the EMPr provides management principles for the construction phase of the project. Environmental actions, procedures and responsibilities as required within the construction phase are specified. This specification will form part of the contract documentation and, therefore, the contractor will be required to comply with the specifications to the satisfaction of the Site Manger in terms of the construction contract.

#### **Operation and Maintenance Phase**

This section provides management for the operational and maintenance phase of the project. Environmental actions, procedures and responsibilities as required within these phases are specified.

Through taking pro-active measures during the design and planning phases as well as the construction phase; potential environmental impacts originating during the operational phase can be minimized or even prevented.

## Decommissioning Phase

Decommissioning takes place once the poultry farm is no longer serving the purpose for which it was constructed for, or if it may have deteriorated over the duration of its operation thus making decommissioning a feasible option.

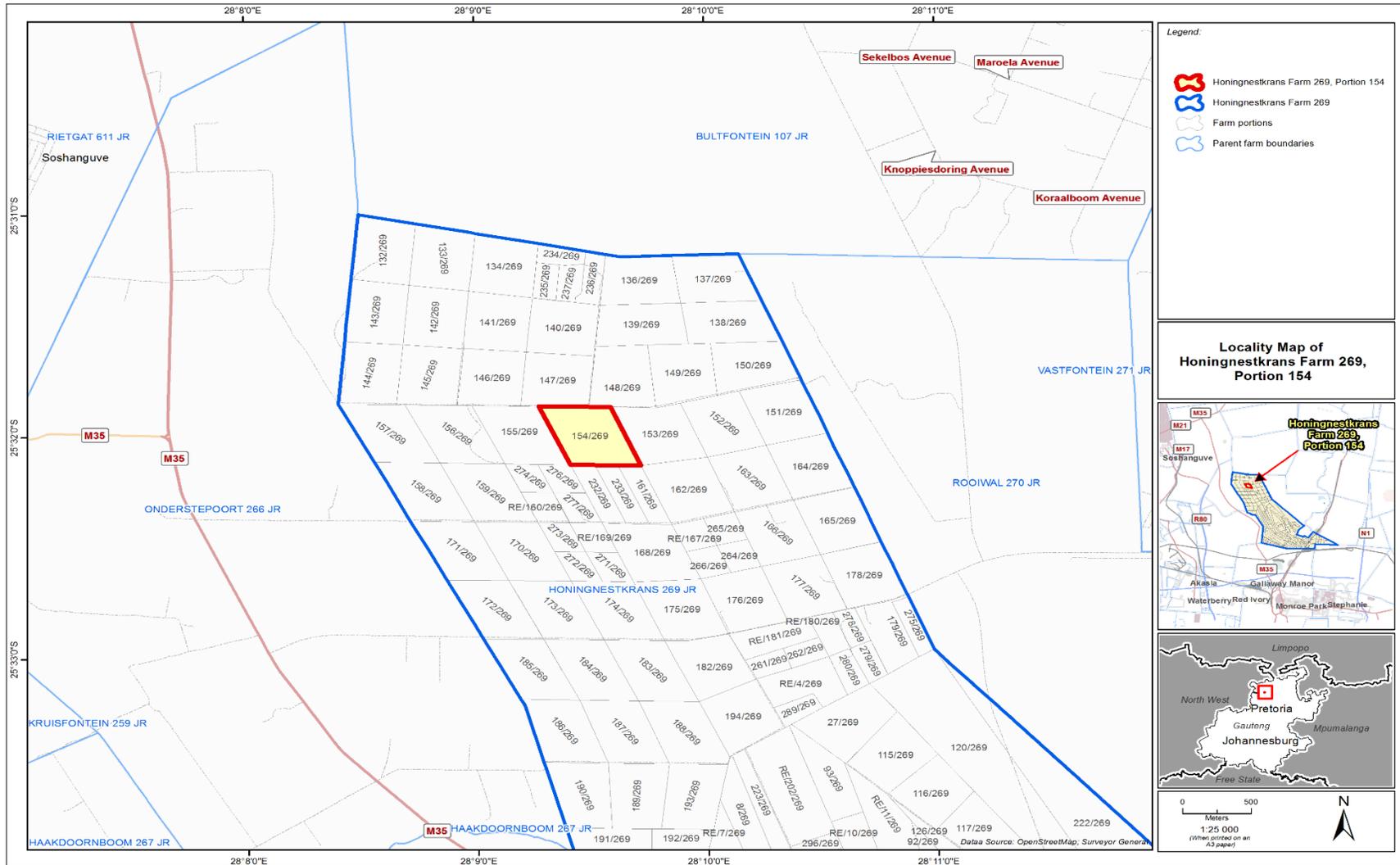
## 2. THE IMPORTANCE OF EMPr

EMPr outline how negative environmental impacts will be managed and minimised; how positive impacts will be maximised; and how the activities of the poultry and associated infrastructure will be managed. The plan will provide guidelines for the planning, design, construction (where necessary), operation, maintenance and eventual decommissioning of the proposed development, as well as a holistic management and monitoring plan for the entire project. Recommendations will be given with regard to the responsible parties for the implementation of the EMPr.

The aims of this EMPr are to:

- a. Encourage good management practices through planning and commitment to environmental issues;
- b. Comply with all applicable laws, regulations, standards and guidelines for the protection of the environment;
- c. Adopt the best practicable means available to prevent or minimise adverse environmental impacts;
- d. Ensure safe storage and distribution of all products;
- e. Ensure effective maintenance of equipment and facilities;
- f. Develop waste management practices based on prevention, minimisation, recycling, treatment or disposal of wastes;
- g. Describe all monitoring procedures required to identify impacts on the environment;
- h. Train employees and contractors with regard to environmental obligations and aspects of the proposed development;
- i. Define how the management of the environment is reported and performance evaluated. Outline guidelines for operational management for the sound management of environmental issues pertaining to the execution of work associated with the facility; and
- j. Provide detailed specifications for the management and mitigation of activities that have the potential to impact negatively on the environment.

### 3. LOCALITY OF THE PROPOSED PROJECT



#### **4. Guideline to EMPr**

Section 24N (2) of NEMA: the Environmental Management Programme must contain-

- Information on any proposed management, mitigation, protection or remedial measures that shall be undertaken to address the environmental impacts that have been identified in a report contemplated in subsection 24(1A), including environmental impacts or objectives in respect of –
  - ❖ planning and design;
  - ❖ pre-construction and construction activities;
  - ❖ the operation or undertaking of the activity in question;
  - ❖ the rehabilitation of the environment; and
  - ❖ Closure, where relevant.
  - ❖ Details of –
    - the person who prepared the environmental management programme; and
    - the expertise of that person to prepare an environmental management programme.
- A detailed description of the aspects of the activity that are covered by the draft environmental management plan;
- Information identifying the persons who shall be responsible for the implementation of the measures contemplated in paragraph (a);
- Information in respect of the mechanisms proposed for monitoring compliance with the environmental management programme.
- As far as is reasonable practicable, measures to rehabilitate the environment affected by the undertaking of any listed activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and
- A description of the manner in which it intends to-
  - ❖ Modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
  - ❖ Remedy the cause of pollution or degradation and mitigation of pollutants; and
  - ❖ Comply with any prescribed environmental management standards or practices.

**(3)** The environmental management programme must, where appropriate-

- Set out time periods within which the measures contemplated in the environmental management programme must be implemented;
- Contain measures regulating responsibilities for any environmental damage, pollution, pumping and treatment of extraneous water or ecological degradation as a the proposed project

- Develop an environmental awareness plan describing the manner in which-
  - ❖ the applicant intends to inform his or her employees of any environmental risk which may result from their work; and
  - ❖ risks must be dealt with in order to avoid pollution or the degradation of the environment.

## **5. POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROPOSED POULTRY**

Specialist findings were assessed and summarised in the Basic Assessment Report. Potential environmental impacts associated with the proposed transmission power line are expected to occur during the construction and operational phases. Some of the identified potential impacts and recommended mitigation measures in the specialist studies are summarized below:

### **Vegetation impacts**

- a. Rocky Grassland Habitat Unit – this habitat unit is of intermediate floral sensitivity; as it supports a moderately high floral diversity as well as a number of floral SCC, with suitable habitat for the near threatened *Searsia gracillima* var *gracillima* present within this habitat unit. Furthermore, although this habitat unit has been modified from a Bushveld habitat to a grassland ecosystem, the habitat integrity of this modified ecosystem is considered moderately intact with only a few scattered AIP individuals observed.
  - It is recommended that this habitat unit be excluded from the proposed development as far as possible. Should it not be deemed feasible to exclude this (*Searsia gracillima* var *gracillima*) habitat unit in its entirety, It is recommended that once designs have been finalised, a walkdown of the development footprint area be undertaken and all protected species marked.
- b. Secondary Grassland Habitat Unit – This habitat unit is of moderately low floral importance and sensitivity.
  - It is recommended that once designs have been finalised, a walkdown of the development footprint area be undertaken and all protected species marked. This should preferably be undertaken during the summer season, when above-ground plant parts are still visible (November to March).

- c. Modified Habitat Unit - low ecological importance and sensitivity due to the level of habitat degradation.
  - it is recommended that this habitat unit be utilised as far as possible as a first alternative for the location of the proposed development.

### **Heritage site impacts**

It is concluded that Kutamba Estate where Ikhuhu Poultry Farm is proposed does not contain any archaeological and heritage resources. It also falls within an area that is of Low Sensitivity in terms of the Council of Geoscience and SAHRA Palaeontological sensitivity layer. In terms of the natural environment setting and its potential to contribute to cultural landscape, Kutamba Estate does not contain any special environmental features that are important in terms of their cultural heritage significance such as mountains, forest, caves or water bodies such as wetlands and springs that may have cultural association.

It also does not contain trees that are of cultural significance such as Morula trees or plant species that are of medicinal importance in terms of terrestrial biodiversity which when assessed contains some of the important terrestrial biodiversity species. Based on these conclusions made about the site, the following recommendation is made.

Disturbance or destruction during construction phase.

- Mitigation measures include isolating known sites and declare them as no-go zones with sufficient associated buffer zones around them for protection, and ensuring that construction personnel can recognize artefacts that may be disturbed around the farm. SAHRA would have to be notified if any artefacts are found.

Overall, the specialist impact assessments undertaken did not identify any significantly detrimental issues associated with the construction of IKhuhu Poultry farm broiler houses. The impacts can be successfully mitigated through the implementation of the management measures in this EMPr.

## **6. PARTIES INVOLVED**

- a. Construction Manager – SuperChicks Pty Ltd)

The Construction Manager is appointed by SuperChicks Pty Ltd to oversee the work of all consultants, contractors, residents and site visitors. The lead contractor will be responsible for the following:

- i. Overall construction programme, project delivery and quality control for the construction of the upgraded Storage Terminal.
- ii. Overseeing compliance with the Health, Safety and Environmental Responsibilities specific to the project construction.
- iii. Promoting total job safety and environmental awareness by employees, contractors and sub-contractors and stress to all employees and contractors and sub-contractors the importance that the project proponent attaches to safety and the environment.
- iv. Ensuring that each subcontractor employ an Environmental Officer (or have a designated Environmental Officer function) to monitor and report on the daily activities on-site during the construction period.
- v. Ensuring that safe, environmentally acceptable working methods and practices are implemented and that sufficient plant and equipment is made available, is properly operated and maintained in order to facilitate proper access and enable any operation to be carried out safely.
- vi. Meeting on site with the EHS Manager prior to the commencement of construction activities to confirm the construction procedure and designated activity zones.
- vii. Ensuring that all appointed contractors and sub-contractors are aware of this EMPr and their responsibilities in relation to the programme.
- viii. Ensuring that all appointed contractors and sub-contractors repair, at their own cost, any environmental damage as a result of a contravention of the specifications contained in the EMPr, to the satisfaction of the EHS Manager.

b. Contractor (C)

This refers to the main contractor(s) appointed by SuperChicks Pty Ltd for the construction of the hatchery, or portion of the Project. The main contractor(s) are required to adhere to the EMPr and are responsible to ensure that all sub-contractors, suppliers and staff appointed by them also adhere to the EMPr.

c. Environmental Liaison Officer (ELO)

The Environmental Liaison Officer will be appointed by the contractor to monitor activities on site on a daily basis. The ELO will be the ECO's representative on the site and will report back on all audit trips. The ELO must report any major incidents immediately to the ECO. The ECO will be responsible for overseeing the implementation of the EMPr during the Construction of all the Phases and Operations of the pig production and chicken broiler facilities, including for the monitoring environmental impacts, record-keeping and updating of the EMPr as and when necessarily.

During the Construction Phase, the ECO will be responsible for the following:

- i. Meeting the site with the Farm Manager prior to the commencement of the construction to confirm the procedure and designated activity zones;
- ii. Monitoring of site activities during construction to ensure adherence to the specifications contained in the EMPr, using a monitoring checklist that is to be prepared by the ECO at the start of the construction phase;
- iii. Preparation of the monitoring report as needed; and Conducting an environmental inspection on completion of the Construction Phase
- iv. During Operations the ECO will be responsible for overseeing the implementation of the EMPr for the operation phase;

d. All Staff

All workers employed by the contractor or SuperChicks Pty Ltd, persons involved with activities related to this project, or persons present or visiting the construction area, including permanent, contract, or casual labour and informal traders.

e. Environmental Control Officer (ECO)

An individual nominated by SuperChicks Pty Ltd to act on behalf of a Contractor in matters concerning the day-to-day implementation of the EMPr, and for liaison with: Department of Environmental Affairs; GDARD, local Municipalities; and other relevant stakeholders affected by this construction project.

An ECO must be appointed in terms of the NEMA EIA Regulations No. R543 of 18 June 2010. The ECO will inspect this development on a regular basis during the construction and rehabilitation phases, and will advise GDARD and anyone acting in accordance with the Environmental Authorisation (e.g. SuperChicks Pty Ltd, contractors etc.). In addition, anyone acting in accordance with the Environmental Authorisation (e.g. SuperChicks Pty Ltd, contractors etc.) would have to comply with the EMPr. Furthermore, anyone acting in accordance with the Environmental Authorisation (e.g. SuperChicks Pty Ltd, contractors etc.) would need to sign an acknowledgement form, which will form part of the contractual agreements between individuals acting in accordance with the Environmental Authorisation (e.g. SuperChicks Pty Ltd and the contractors) to ensure compliance with the conditions and requirements of the EMPr.

f. GDARD

The Compliance Officer appointed by the Provincial Gauteng Department: Agriculture and Rural Development to this project.

g. Local Community

People residing or present in the region and near the construction activities, including the owners and / or managers of land affected by construction, workers on the land, and people in nearby towns and villages.

h. Public

Any individual or group concerned with or affected by the Project and its consequences, including: the local community; local, regional, and national authorities; investors; workforce; customers; consumers; environmental interest groups; and the general public.

## **7. RECORD KEEPING**

Copies of any Authorisation or EMPr's required for specific construction activities shall be kept on site and made available for inspection by visiting officials from the Employer or relevant environmental departments. A copy of this authorisation and approved EMPr must be kept at the property where the activity will be undertaken. The authorisation and approved EMPr must be produced to any authorised official of the Department who request to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who work or undertake work at the property.

The Project Manager will monitor the Contractor's adherence to the approved impact prevention procedures and shall issue the Contractor a notice of non-compliance whenever transgressions are observed. The Contractor must document the nature and magnitude of any non-compliance in a designated register, the action taken to correct the non-compliance, the actions taken to mitigate its effects and the results of those actions. Any non-compliance shall be documented and reported to the Project Manager in a monthly report.

The Contractor shall also record all complaints received regarding activities on the construction site pertaining to the environment, and the response noted with the date and the action taken. These records shall also be submitted to the Project Manager in the monthly report. All monthly and quarterly reports produced by the ECO should be submitted to both the construction manager and SuperChicks Pty Ltd Project Manager. These reports should be kept in a file on site at all times.

## **8. COMPLIANCE AND PENALTIES**

The duration over which the Contractor's controls shall be in place cover the construction period of the project as well as the limited time after the contract completion in the General Conditions of Contract, and the project specifications, as the defects liability period.

The Applicant / Contractor are deemed not to have complied with the EMPr if:

- i. Within the boundaries of the site, site extensions and access roads there is evidence of contravention of clauses;
- ii. Environmental damage occurs due to negligence;
- iii. The contractor fails to comply with corrective or other instructions issued by the Project Manager or Engineer or Environmental Control Officer within a specified time frame; and/or
- iv. The contractor fails to respond adequately to complaints from the public or local community.

The Contractor shall act immediately after a notice of non-compliance is received, and correct the cause for the issuing of the notice. Application of a penalty clause will apply for incidents of non-compliance. The imposition of such a penalty shall not preclude the relevant provincial authority from applying an additional penalty in accordance with statutory powers.

Failure to redress the cause shall be reported to the relevant authority for them to deal with the transgression, as they deemed fit. The polluter-pays principle applies.

The "polluter-pays" principle provides that "the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment".

NEMA imposes a duty of care on every person who causes, has caused or may cause significant pollution or degradation of the environment is authorised by law or cannot reasonably be avoided, NEMA requires that the pollution must be minimised and rectified.

## **9. AMENDMENTS TO THE EMPr**

Any major issues not covered in the EMPr as submitted, will be addressed as added to this EMPr, and submitted for approval prior to implementation. The EMPr is a living document and is subject to change from time to time in consultation with GDARD. Any amendments to the EMPr will require approval from GDARD. A confirmation letter from GDARD approving the amendments to the EMPr will be attached as addenda.

## **10. ENFORCING THE EMPr**

The Applicant / Contractor have a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes sub-contractors, casual labour, etc.). The EMPr shall be part of the terms of reference for all contractors, sub-contractors and suppliers. All contractors, sub-contractors and suppliers have to give some assurance that they understand the EMPr and that they will undertake to comply with the conditions therein.

## **11. SIGNING OF THE EMPr**

The acknowledgement form provided in Annexure B is to be signed by the Applicant (SuperChicks Pty Ltd) and all the Contractors. All the Contractor's Employees, especially the machine and equipment operators, are to be made aware of the conditions as contained in the EMPr and the contractual conditions relating to the environment, as contained in the contract document.

## **12. CONCLUSION**

It is the view of the Environmental Assessment Practitioner that the Proposed SuperChicks hatchery and rearing 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.

Issues related to respect of land owner's property and general conduct during construction phase is very important. A procedure must be established whereby all employees involved with this project undertake to ensure the closure of gates and mend broken fences immediately.

**Please note!** No construction work shall commence until the final EMPr is authorised by the GDARD.

## **13. PROCEDURE**

### **13.1. PRE-CONSTRUCTION PHASE**

The requirements of the EMPr will be discussed at professional team meetings in order to understand the environmental content of the document. The requirements of the EMPr must be incorporated into any tender/contract documents by way of specific clauses that convey the impact and mitigation required. These clauses are to be agreed between the responsible professional members of the team and the environmental consultant.

### **13.2. THE CONSTRUCTION PHASE: RESPONSIBILITIES AND GENERAL MATTERS**

Miscellaneous environmental matters and the relationships between the Contractors, ECO and the other members of the professional team are outlined in the following sections.

#### **13.3. The Contractor**

The Contractors must comply at all times with the requirements of the EMPr and must acknowledge in writing by signing the acknowledgement form that they will abide by the contents of EMPr.

#### **13.4. The Applicant**

SuperChicks Pty Ltd must be in overall charge of the contract, the contractor/s and the adjudication of the EMPr requirements. SuperChicks Pty Ltd can delegate the daily controls on site to a project manager or similar responsible person, when necessary.

#### **13.5. The Environmental Control Officer (ECO)**

SuperChicks Pty Ltd must appoint an independent ECO for the purpose of ensuring that the environmental conditions as outlined in this EMPr are implemented by the Contractor. Other environmental site-related issues will be monitored and reported on by the ECO as and when they may arise. The ECO is to have access to the site at all times, for the purpose of inspections to ensure that the environmental conditions of the EMPr are being implemented and adhered to.

The functions, duties and responsibilities listed below are not exhaustive and the ECO will also be required to perform other duties, which may not be included herein, as required from time to time or as is consistent with the position.

Summary of Duties to be specified by GDARD upon EMPr approval

To provide an on-site environmental management service to SuperChicks Pty Ltd to ensure effective implementation of EA, EMPr and landowner conditions. Ensure implementation and compliance with any SuperChicks Pty Ltd site procedures and requirements. Be responsible for the planning and management of all environmental activities for this position, but more specifically the conditions stipulated by GDARD.

## **14. Communication**

- a. To liaise closely with SuperChicks Pty Ltd and Contractor's Environmental Officer (CEO).
- b. To ensure that the landowners agreed General and Special Conditions are implemented.
- c. To negotiate the Access Plan between landowners and Contractor and to ensure its implementation, so as to provide timeous servitude access to the Contractor to carry out its duties with as little interference/objections as possible. ECO must identify if any large turning circles are required for large machinery, before this access is negotiated.
- d. To agree with landowners where gates are to be installed at fence crossings, before the Contractor gains entry to the properties for construction activities.
- e. To agree with landowners on the bush clearing method e.g. how must trees be chopped up, how must the waste be disposed of.
- f. To assist the Environmental Liaison Officer (ELO) in conflict resolution.
- g. Measuring and evaluating crop damage and other related claims, resulting from the construction activities, in conjunction with the landowner and submitting the relevant forms to the Project Manager for payment to the landowner (but not where the Contractor was negligent). This to be done equitably and timeously.
- h. To ensure that the Contractor rehabilitates any damage caused during construction. To indicate where bird guards, bird diverters, bird lights and aviation warning spheres are to be installed as specified in the EMPr, EA conditions and or the line profile.
- i. After the final rehabilitation has been completed on a property, to obtain the immediate release from the landowner.

### **14.1. Reporting Structure**

Both the ECO and Contractor are obliged to report any incidents and non-compliance to the SuperChicks Pty Ltd Project Manager at agreed intervals. The Environmental Liaison Officer (ELO) is responsible for advising and reporting to the Contractor during the construction process. Open communication between the ELO and ECO (Figure 2) should be encouraged so as to ensure that incidents identified are reported and rectified timeously.

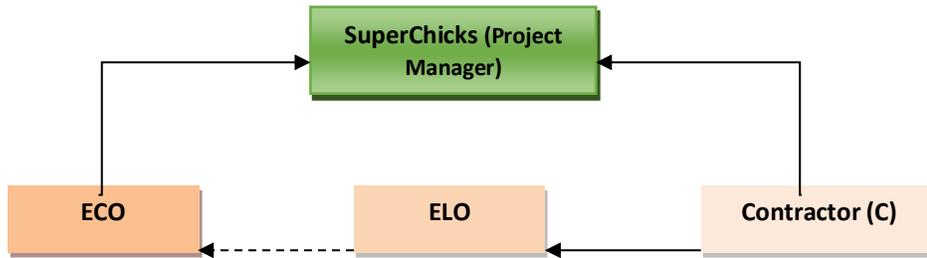


Figure 2: Communication channel between ECO, ELO, C and SuperChicks Pty Ltd PM.

## 15. ENVIRONMENTAL MANAGEMENT DURING PROJECT PHASES

The tables contained in Section 11 Procedure below (Pre-Construction Phase; Construction Phase; and Operational Phase) form the core of this EMPr for the construction and operational phases of the development. These tables should be used as checklists on site, especially during the construction phase. Compliance with this EMPr must be audited weekly or monthly depending on construction phase. After completion of construction, this must be followed up with annual audits for a period of two years during the operational phase.

Abbreviation	Meaning
C	Contractor
ELO	Environmental Liaison Officer
E	Engineer
PM	Project Manager
ECO	Environmental Control Officer

Table 1: Table of abbreviations used below:

## 16. PROCEDURE

A Contractor shall submit a written method statement to the ECO for review and recommendations, covering those activities, which are identified (in this document and/or by the ECO), as being potentially harmful to the environment. Method statements indicate how compliance with the Environmental Specification will be achieved. The approval of the method statements will be undertaken by both the ECO and SuperChicks Pty Ltd. The Method Statement shall state clearly:

- a) Timing of activities;
- b) Materials to be used;
- c) Equipment and staffing requirements;
- d) Proposed construction procedure designed to implement the relevant environmental specifications;
- e) The system to be implemented to ensure compliance with the above; and
- f) Other information deemed necessary by the ECO.

The method statement shall be submitted at least 14 working days prior to projected commencement of work on an activity, to allow the ECO time to review and provide recommendations on the method statement. The Contractor shall not commence work on that activity until such time as the method statement has been approved in writing by ECO, which shall be done within seven working days of receipt.

Due to changing circumstances, it may be necessary to modify method statements. In such cases, the proposed modifications must be indicated and agreed upon in writing between SuperChicks Pty Ltd, the ECO and the Contractor. The ECO must retain records of any amendments and ensure that the most current version of any method statement is being used.

The following are typical Method Statement's which will be called for by the ECO:

- a) Location, layout and preparation of the construction camp(s) and materials storage areas;
- b) Location, layout and preparation of cement/concrete batching facilities including the methods employed for the mixing of concrete and the management of runoff water from such areas;
- c) Contaminated Water Management Program, including the containment of runoff and polluted water;
- d) Emergency construction Method Statements (including details of methods for fuel spills and clean-up operations);
- e) Rehabilitation of disturbed areas and re-vegetation after construction is complete;
- f) Solid waste management and removal of waste from site; and
- g) Crossing of erosion trenches and drainage lines.

Additional method statements may be required by the ECO during the course of works, depending on the nature of the construction works and the location thereof. The ECO shall approve any deviation from a method statement.

## **Table 2: EMPr Activities**

## 17. PLANNING PHASE

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>a. Design and planning of the proposed poultry farm</b>	Inadequate planning and design	Impact on the environment that could potentially have been avoided	To plan and design productive poultry farm	<p>Site selection for the proposed activities should include consideration of the following factors:</p> <ul style="list-style-type: none"> <li>• Design and construction requirements for spillage control, storm water management and erosion control measures.</li> <li>• Access to and from the proposed site.</li> <li>• Available water and electricity supply.</li> <li>• Fire protection services and their reaction times.</li> <li>• Security and general services facilities in the area.</li> <li>• General housing keeping practices.</li> <li>• Soil types.</li> </ul> <p>The above listed information must be recorded before the construction at site commences and should be used for future monitoring.</p>	Developer/ Construction/Contractor	Daily or weekly

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>b. Environmental training</b>	Lack of environmental knowledge among employees.	Harm to the environment due to employees being unaware of how their activities may impact the environment.	To prevent harm to the environment through the actions of uneducated employees.	<p>All site personnel must have a basic level of environmental awareness training:</p> <ul style="list-style-type: none"> <li>• Communication of all environmental issues will be communicated to all personnel, stakeholders, interested and affected parties that shall be involved in the construction and operation of the Poultry farm.</li> <li>• The need for a “clean site” policy must be explained to the workers especially with regard to the potential for disease outbreak.</li> <li>• All aspects relating to the operation of the facility and must be familiar with the content of the environmental authorization and Environmental Management Programme.</li> <li>• Workers must also be sensitized on all “no-go” areas.</li> </ul>	ELO / Construction	1 <sup>st</sup> day at site and every time when there is a new labor or contractor on site.
Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>c. Alien Vegetation Management</b>	Removal of alien invasive vegetation from the proposed project area.	Widespread loss of habitat	Ensure the correct removal of alien invasive vegetation from the proposed project area and prevent the establishment and spread of alien invasive plants due to the project activities.	<ul style="list-style-type: none"> <li>• Ensure compliance with relevant Environmental Specifications for the control and removal of alien invasive plant species.</li> <li>• Appoint a specialist or contact relevant authorities to seek guidance on the removal of the alien vegetation on site.</li> </ul>	Project Developer	Daily

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>d. Indigenous Vegetation Management</b>	-	Loss of Indigenous and Conservation Important Species from clearing of vegetation and increase in vehicle and human activity.	Obtain the relevant prerequisite permits from the relevant Authorities prior to the removal of the indigenous species.  Once these permits are obtained, search and Rescue must be undertaken.	<ul style="list-style-type: none"> <li>Appoint a suitable Search and Rescue Specialist/ Contractor to undertake translocation.</li> </ul>	Contractor/ Specialist	Once-off prior to construction.

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>e. Visual and aesthetic</b>	The design of coops	Visual impacts	To minimise visual intrusion	<p>The chicken coops should be designed to minimise visual intrusion.</p> <ul style="list-style-type: none"> <li>The color selection and tone must be carefully considered to mitigate visual impacts of the chicken coops.</li> <li>Visual screen planting can be undertaken in the form of boundary planting around the chicken coops.</li> </ul>	Developer / Construction/Building Contractor	Once planning begins.

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>f. Social economic</b>	Job creation	Social economic impacts	The proposed development will potentially create	The Local Municipality and Ward Councilor will be engaged prior to	Developer / Construction/	Daily

			jobs and business opportunities for local businesses	recruitment of personnel; preference will be given to locals wherever possible.	Ward Councillor/ Municipality	
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>g. Risks of accidents and hazards during the construction and operational phases.</b>	Labors injury	Incident to the labors and local areas	The design must comply with all applicable legislative requirements, specifically as prescribed in the Occupational Health and Safety Act (Act 85 of 1993) under the Construction Regulations.	<ol style="list-style-type: none"> <li>1. Compile an Emergency Response Action Plan (ERAP) prior to the commissioning of the proposed project.</li> <li>2. Ensure that the recommendations from the Emergency Response Action Plan (ERAP) are taken into consideration during the design phase.</li> </ol>	Safety Officer / Construction	Daily

## 18. CONSTRUCTION PHASE

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>a. Site Establishment</b>	Demarcation of the site	Unnecessary clearing and removal of vegetation	Minimise the footprint of disturbance, the extent of soil erosion, loss of vegetation and the potential for the pollution of soils.	<p>Where possible no clearing of the vegetation should be done for site establishment and naturalised camping should be utilised where necessary to avoid extensive impacts on the environment.</p> <ul style="list-style-type: none"> <li>• Where clearing of vegetation cannot be avoided, it should be</li> </ul>	Construction Manager/ ELO/ ECO	Daily

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
				strictly limited to the exact footprint required for the site establishment. <ul style="list-style-type: none"> <li>• Ablution facilities should be within 100m from workplaces but not closer than 100m from any natural water bodies or boreholes.</li> <li>• There should be enough toilets available to accommodate the workforce.</li> <li>• Safe drinking water for human consumption must be available on site.</li> </ul>		
<b>b. Clearance of topsoil for the construction of poultry farm</b>	Disturbance of soil due to clearance of topsoil and vegetation.  Loss of natural vegetation.	Soil erosion can take place due to the exposed surfaces	Good vegetation Clearing.  Stockpiling of topsoil in such a way that causes least harm to soil for reuse for rehabilitation purpose.	<ul style="list-style-type: none"> <li>• Topsoil is to be stripped when soil is dry, to reduce compaction.</li> <li>• Compaction of the removed topsoil should be avoided.</li> <li>• Storm water should be diverted away from compacted areas.</li> </ul>	Construction Manager /ELO/ ECO	Daily
<b>c. Vegetation Management</b>	Alien and Invasive Species	Soil erosion and over dominant of alien species	Control of alien and invasive species	<ul style="list-style-type: none"> <li>• Compliance with NEMBA. Duty of care related to listed invasive species are referred to in NEMBA Section 73 (Page 29 of vegetation Assessment Impact.</li> </ul> <p><b>NOTE: This specialist Recommendation should be prioritized during this phase!</b></p> <ul style="list-style-type: none"> <li>• <b>Rocky Grassland Habitat ;</b></li> </ul>		

				<p>This habitat unit be excluded from the proposed development as far as possible. Should it not be deemed feasible to exclude this habitat unit in its entirety, It is recommended that once designs have been finalised, a walk-down of the development footprint area be undertaken and all protected species marked.</p> <ul style="list-style-type: none"> <li>• <b>Habitat Unit 2: Secondary Grassland Habitat Unit</b></li> </ul> <p>Once designs have been finalised, a walk-down of the development footprint area be undertaken and all protected species marked. This should preferably be undertaken during the summer season when above-ground plant parts are still visible (November to March).</p> <ul style="list-style-type: none"> <li>• <b>Habitat Unit 3: Modified Habitat Unit.</b></li> </ul> <p>This habitat unit be utilised as far as possible as a first alternative for the location of the proposed development.</p>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>d. Environmental Contamination</b>	Soil and water pollution	Soil and water contamination	Reduce any environmental contamination	Ensure that excrement, carcasses, feed, and other operational waste and hazardous materials are appropriately and	ELO/ ECO /	Daily

				<p>effectively contained and disposed of without detriment to the environment.</p> <p>Ensure that that the birds and hatchery houses and associated drains and slurry facility are designed and lined with impermeable substances (clay-type soils, geosynthetic plastic, or concrete) in accordance with advice from suitably qualified agricultural experts and international best practice norms.</p>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
e. Visual	Light Pollution	<p>Potential visual intrusion of construction activities on the views of sensitive visual receptors.</p> <p>To maintain the site's Aesthetics.</p>	Prevent unnecessary visual clutter from focusing attention of surrounding visual receptors on the proposed development.	<p>The Contractor should maintain good housekeeping on site to avoid litter and minimise waste. Ensure that rubble and litter are appropriately stored and regularly removed from site to a licensed waste disposal facility.</p> <p>Dust generation must be kept at a minimum, and conduct dust suppression on windy weather conditions.</p> <p>The following must be considered</p> <ul style="list-style-type: none"> <li>Night lighting of construction sites must be minimised within requirements of safety and efficiency to ensure security but will not constitute 'light pollution' to the surrounding areas.</li> </ul>	ECO/ CLO/ Safety Concern	Weekly

				<ul style="list-style-type: none"> <li>• Soil excavated (if any) must not be stockpiled above 2m.</li> <li>• No painting or marking of natural features shall take place.</li> <li>• Marking for surveying and other purposes shall only be done with pegs and beacons.</li> <li>• All temporary structures erected on site for the purposes of the project's construction phase will be removed from site during demolition phase completion of the project.</li> </ul>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>f. Noise</b>	Noise Pollution	Sensory disturbance of faunal communities	Minimise sensory disturbance surrounding faunal communities	Limit disturbances caused by Noise. <ul style="list-style-type: none"> <li>• Offending machinery and vehicles will be banned from use on site until they have been repaired.</li> <li>• Noise levels must be kept within acceptable limits and must not be of such nature as to detract adjacent land users.</li> <li>• The project team should keep noise generating activities to a minimum and within working hours 07:00 – 17:00 Monday to Friday, Saturday 08:00- 13:00 to (If the contractor plans to operate outside these working hours, the CEO</li> </ul>	Construction Manager /ELO/ ECO	Daily

				<p>Must communicate via notification letters to surrounding neighbors.</p> <ul style="list-style-type: none"> <li>• Where possible the contractor must use equipment, which falls within the allowable noise limits 85dB.</li> <li>• Noise generating activities with output levels of 85dB or more must be scheduled between 7h00 – 17h00 Mondays to Fridays and weekends as required and with the permission of the ECO and consent from landowner.</li> <li>• Any complaints pertaining to noise must be recorded and reported to the ECO and addressed accordingly.</li> <li>• Labourers to be provided with hearing protection as and when required.</li> </ul>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
g. Health and Safety: Potential dangerous working conditions	Safety and Health	Health and safety risk to employees	Be compliant to the relevant Occupational Health and Safety Legislation and regulations.	<p>To the relevant Occupational Health and Safety Legislation working on the site with the necessary personal protective equipment.</p> <ul style="list-style-type: none"> <li>• Implement safety induction.</li> <li>• Training on relevant machinery. All safety signs as required by the Occupational Health and Safety Act must be visible on site.</li> </ul>	Construction Manager & Safety Officer	1st day at site and every time when there is a new labor or contractor on site.

Draft Environmental Management Programme (EMPr) The Proposed IKhuhu Poultry Farm for The Proposed 6 Broilers for Rearing at Honingnestkrans (±24 hector) Farm No 269, Portion 154 along the City of Tshwane Metropolitan Municipality, Gauteng Province, South Africa.

				<ul style="list-style-type: none"> <li>• Ensure that all employees adhere to the Occupational Health and Safety Act.</li> <li>• A First Aid kit should be provided within the site. This should be fully equipped at all times; site workers should also be trained on basic first aid skills.</li> </ul>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
h. Air quality	Dust and air quality	Air pollution through dust and vehicle emissions	To reduce the generation of dust and emissions on construction site	Dust control: <ul style="list-style-type: none"> <li>• Dampening down of un-surfaced and un-vegetated areas must be done during dusty periods.</li> <li>• Vegetation must be retained where possible to reduce dust travel.</li> <li>• The Contractor must be responsible for dust control onsite to ensure no nuisance is caused to the workers and neighboring communities.</li> <li>• A speed limit of 40km/h must not be exceeded on internal gravel or dust access roadways.</li> <li>• Any complaints or claims emanating from the lack of dust control must be attended to immediately.</li> </ul>	Construction Manager/ ECO/ Safety Officer	Daily

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
i. Water Quality	Water resources	Pollution of water resources	To prevent the pollution of water resources.	Sanitation	Construction Manager/ECO/C LO/ Safety Officer	Daily

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
				<ul style="list-style-type: none"> <li>Adequate sanitary and ablutions facilities must be provided for construction workers.</li> <li>The facilities must be regularly serviced to reduce the risk of surface or groundwater pollution.</li> </ul>		
<b>j. Storm Water Management</b>	Water pollution	<p>Possible discharge of contaminated stormwater into the surrounding environment.</p> <p>Contamination could result from chemicals, oils, fuels, sewage, solid waste, litters etc.</p>	To reduce The potential impact from runoff on sensitive	<p>Suitable stormwater/ surface water quality monitoring programme should be established and implemented.</p> <p>Regular inspections of stormwater infrastructure should be undertaken to ensure that it is kept clear of all debris and weeds.</p>	Construction Manager/ Construction Manager /ECO/ CLO	Daily

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>k. Socio economic</b>	Job creation	Socio economic impact	The proposed development will potentially create jobs and business opportunities for local businesses.	The Local Municipality and Ward Councilor will be engaged prior to recruitment of personnel; preference will be given to locals where applicable.	Developer/ Construction Manager/ Ward Councillor/ Municipality	Construction phase

## 19. OPERATIONAL PHASE

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
a) Management of condemned carcasses or general waste or solid waste	Waste Management	Bad smelling odors, health risk, Pollution	To ensure that waste is correctly stored and disposed of, decreasing the visual impact during operation of the poultry farm.	<p>Every coop must undergo a visual inspection at every shift change to check for possible mortalities and defects in the automated coop operating system and a report of the condition of the coop generated and filed.</p> <p><b>Chicken manure:</b></p> <ul style="list-style-type: none"> <li>• must be stored under a roof to prevent it from mixing with the storm water or it must be used or sold as fertilizer directly after cleaning.</li> <li>• Chicken manure will be removed on a manure belting system (conveyor belts) at a frequency of once in three days.</li> <li>• The manure will then be conveyed to a manure house or container and packaged; the manure should be removed from the site within three days.</li> <li>• The manure is to be sold to end users such as crop and piglet farmers and nurseries. The removal of manure will occur every three days to prevent accumulation on site, keeping the nutrient rich manure from potentially polluting the ground surface.</li> <li>• General waste must be collected on site and be disposed of at Bronkhorstspuit landfill site.</li> </ul> <p><b>Litter:</b></p>	Construction Manager/ ELO	Daily

				<ul style="list-style-type: none"> <li>• keeping the litter dry throughout the production cycle. The automated humidity control systems within the chicken coop should be monitored for efficiency all the time.</li> <li>• Litter must be preserved in dry area, covered by sheeting or within a shed to protect it from rain and leaching in order to prevent noxious odours and ammonia from forming.</li> <li>• Chicken manure and bedding material should be removed from site at least once every 3 weeks.</li> <li>• Dead chickens should be collected from the chicken coops on a daily basis.</li> <li>• A mortality register should be kept.</li> <li>• Mortalities should be stored in closable bio-hazard bins at a suitable and controlled holding facility until they are removed from site and disposed of according to the State Vet's instructions.</li> <li>• Flies, rodents and other vermin should be strictly controlled.</li> <li>• Workers should be instructed not to litter on site.</li> <li>• General and household waste should be properly disposed of on a regular basis at the Bronkhorstspuit Landfill Site.</li> </ul> <p><b>Chicken mortalities</b></p> <ul style="list-style-type: none"> <li>• There should be temporary storage of mortalities.</li> </ul>		
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				<ul style="list-style-type: none"> <li>• The temporary storage area for mortalities must be a covered area that has access control, preventing the unlawful removal of mortalities.</li> <li>• In the event of temporary storage, mortalities must be stored in sealed bins prior to disposal.</li> </ul> <p><b>Disposal of mortalities</b></p> <ul style="list-style-type: none"> <li>• Mortalities must be disposed of as soon as possible.</li> </ul> <p><b>Mass disposal of mortalities.</b></p> <ul style="list-style-type: none"> <li>• In the event of disease outbreak.             <ul style="list-style-type: none"> <li>○ Notify the State Vet.</li> <li>○ The State Vet must visit the site</li> <li>○ The State Vet will place the property, or the specific chicken site or house that is infected, under quarantine.</li> <li>○ Depending on the disease and severity, the chickens can be slaughtered on site or transported to an abattoir with a Red Cross permit.</li> </ul> </li> </ul> <p><b>Effluent:</b></p> <ul style="list-style-type: none"> <li>• Effluent should be channeled to a septic tank.</li> <li>• Septic tanks should be installed further than 100m on either side of any watercourse.</li> </ul>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
b) Reduce odor level	Odor	Bad odor from chicken manure	To minimise the impact of odor from chicken manure by implementation of chicken manure.	<p>The chicken houses must be well ventilated to avoid odors. The automated ventilation system to be used must be checked for effectiveness on a regular basis.</p> <ul style="list-style-type: none"> <li>Chicken waste must be maintained at optimal moisture content to control odors and simultaneously minimise dust levels.</li> <li>Smells and odors from chicken coops must be highly controlled by removing chicken droppings and chickens from the chicken coops.</li> <li>Avoid offensive smells by ensuring the hygiene and health of the chickens.</li> </ul>	Construction Manager/ ECO/CLO	Daily

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
c) <b>Waste management</b>	Proper solid waste, hazardous and general waste	Poor management of waste	Establish effective waste management systems.	<p>Management of general waste:</p> <ul style="list-style-type: none"> <li>An appropriate area where waste can be stored before disposal must be designated.</li> <li>General waste will be disposed off at a nearest Landfill Site.</li> </ul> <p>Management of chicken waste</p> <ul style="list-style-type: none"> <li>Design must include a system for the proper capturing and collection of waste streams.</li> <li>Waste must be placed on impermeable surfaces to minimise leakage and soil contamination.</li> </ul>	ECO/ CLO/ Safety Officer	Daily

				<ul style="list-style-type: none"> <li>• Designate an appropriate area where waste can be stored before disposal.</li> <li>• Residue from cement mixing and/or the mixing of related materials must be cleared away.</li> <li>• The mixing of cement and/or related materials will not be permitted on areas which form part of the open space system.</li> </ul>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>d) Health and safety</b>	Human health	Health risk to the site staff and surrounding community due to activities on site	Manage and mitigate health impacts on site and to surrounding community	<p>A detailed bio-security protocol/ programme should be compiled and implemented by the Applicant.</p> <ul style="list-style-type: none"> <li>• Natural buffer zones around chicken Coops should be maintained.</li> <li>• Chickens will be vaccinated and coops will be cleaned on a daily basis.</li> <li>• Restricted admission (e.g. functional fence with gates that can be locked, access control, restricting visitors to the minimum).</li> <li>• There should be Transit facilities (e.g. at the site office) where private clothes and foot wear are exchanged for farm clothes and foot wear to reduce the risk of diseases being carried onto the farm.</li> <li>• Proper sanitary facilities must be provided for staff, i.e. wash rooms</li> </ul>	Construction Manager/ ECO /CLO	Daily

				<p>with showering facilities. Distinction should be made between the “private clothes area” and the “site clothes area”.</p> <ul style="list-style-type: none"> <li>• Vehicles entering the site must be disinfected. If not, they must be left at a safe parking area at a distance away from chicken houses.</li> <li>• Workers should be adequately trained to follow all safety procedures and wear protective equipment provided.</li> <li>• Water drinking troughs for chickens should be flushed and cleaned on a daily basis, i.e. daily to at least three times per week to provide protection against microbial contamination and the build-up of bio-film. Chicken coops should be ventilated</li> <li>• Dead chickens should be collected from the chicken coops on a daily basis. A mortality register should be kept.</li> <li>• Mortalities should be stored in closable bio-hazard bins at a suitable and controlled holding facility until they are removed from site and disposed of at the landfill site</li> <li>• Flies and other vermin should be strictly controlled.</li> <li>• A Mortality Disposal Procedure (MDP) should be implemented.</li> </ul>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
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<b>e) Security</b>	Site Material Safety	Theft of material and personnel intimidation from surrounding community.	Crime prevention	<ul style="list-style-type: none"> <li>No unauthorised firearms or weapons of any kind will be permitted onsite.</li> <li>Independent site security must be provided by the Proponent on site during hours of darkness, and if possible, during the day at temporary access points</li> <li>24-hour security should be appointed by the Proponent.</li> </ul>	Construction Manager/ ECO /CLO	Daily
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>f) Traffic Impacts</b>			Prevent unnecessary or excessive heavy vehicles.	<ul style="list-style-type: none"> <li>Implement good logistics planning during.</li> <li>Compile a scheduled loading time programme to minimise potential delay in loading.</li> </ul>	Construction Manager Operational/ ECO/ CLO/ Safety Officer	Weekly

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
<b>g) The use of water</b>	Inefficiency and unsustainable use of water resources	Potential wastage of water depletion of water resource. The existing borehole will be used for all purposes	To prevent wastage of natural resource.	Leaking water taps and hosepipes must be repaired immediately. <ul style="list-style-type: none"> <li>Running water taps and hosepipes should not be left unattended.</li> <li>All hose and tap connections are to be fitted with correct and appropriate plumbing fittings.</li> <li>Implement and awareness campaign regarding water use.</li> </ul>	Construction Manager Operational/ ECO/ CLO/ Safety Officer	Daily.
Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency

<b>h) Increase in Pest invertebrates</b>	water and soil contamination		Highly localized pest invertebrate control that does not affect non-target populations or taxa.	Detect and control pest infestations before they become a problem through frequent and careful cleaning, monitoring and control.	Construction Manager CLO/ Safety Officer	Weekly
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## 20. DECOMMISSIONING

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
a. Rehabilitation of the site.	Removal of structures and infrastructure (such as fencing, signage, equipment,	Environmental degradation as a result of inapt removal of structures and Infrastructure.	To ensure proper removal and disposal of structures and Infrastructure.	<p>The construction area must be rehabilitated as soon as construction ceases. The following must be considered;</p> <ul style="list-style-type: none"> <li>Remove all construction equipment, storage containers, signage, fencing etc. from site.</li> <li>No unauthorised entry, stockpiling, dumping or storage of equipment outside the site boundary is permitted.</li> <li>Remove all temporary structures and re-instate the area on completion of the works.</li> <li>All effluent washing water should be properly disposed of.</li> <li>Dustbins should be emptied and removed from the site.</li> </ul>	Construction Manager/ ECO/CLO	Daily

				<ul style="list-style-type: none"> <li>Dispose refuse and waste from site at a registered waste site.</li> </ul>		
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Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
b. Generation, disposal and storage of waste.	Potential incorrect disposal of general waste (including domestic waste and building rubble) generated during the operational phase.	Domestic waste generated by employees and contractors,  Potentially hazardous waste such as chicken odors or contaminated soil removed due to leaking runoff water.	Implement and maintain waste management system.	Materials should be reused or recycled where possible <ul style="list-style-type: none"> <li>General waste should be collected by the Municipality and be disposed of to the Bronkhorstspuit Landfill Site.</li> <li>All Waste Storage areas including areas where potentially hazardous waste is stored should be adequately fenced in and secured to prevent any access of public members and unauthorised people.</li> <li></li> </ul>	ECO/ CLO	Weekly

Activity	Aspect	Impact	Objectives	Mitigation Measures	Responsibility	Frequency
c. Replacement of topsoil and vegetation	Incorrect replacement and levelling of the topsoil	Potential soil compaction or soil erosion as a result of incorrect replacement and levelling of the topsoil	Develop and implement a rehabilitation strategy for the waste dump.	Set rehabilitation objectives with regards to the Waste Dumping area including the following: <ul style="list-style-type: none"> <li>Soil usage,</li> <li>Vegetation establishment,</li> <li>Removal of infrastructure,</li> <li>Sloping methods,</li> <li>End land use requirements.</li> <li>Long-term erosion prevention,</li> <li>Confirmatory monitoring</li> <li>Rehabilitation will be undertaken to the natural angle.</li> </ul>	ECO/ CLO	Weekly

Activity	Objectives	Mitigation Measures	Responsibility	Frequency
d. Waste Management:	To ensure that the waste management hierarchy is observed for the facility	<p><b>General</b></p> <ul style="list-style-type: none"> <li>The general cleanliness of the site and compliance with the waste disposal requirements outlined will form part of the site inspections.</li> <li>Where possible, waste must be collected for recycling purposes.</li> </ul> <p><b>Scrap Metal and Hazardous Substance Containers</b></p> <ul style="list-style-type: none"> <li>Scrap metal (components, sheet metal, nails, tins) must be stored in a designated scrap metal container (e.g. a skip).</li> <li>When the scrap metal container is full, the scrap metal must either be collected by a scrap metal GDARDler or transferred to an appropriate disposal site.</li> <li>Hazardous substance containers, contaminated substrates and materials used in the clean-up of spillages must be stored in a designated, impermeable container (e.g. a skip).</li> <li>The hazardous substance containers, contaminated soil, clean-up materials, etc. must be transferred to an appropriate disposal site on a weekly basis.</li> </ul>	Site Manage/ ECO/ CLO	Daily

Activity	Objectives	Mitigation Measures	Responsibility	Frequency
e. Concrete Mixing:	To ensure that concrete mixing will not cause any detrimental effect to the receiving environment	If small volumes of concrete are to be mixed (manually), mixing is to be undertaken on a hard surface covered in plastic sheeting so that concrete waste and runoff can be contained.	Site Manage/ ECO/ CLO	Daily

		All concrete waste is to be collected, recycled if possible, and removed from the site for disposal at an appropriate disposal site.		
Activity	Objectives	Mitigation Measures	Responsibility	Frequency
f. Water Quality:	To prevent the contamination of water by materials used during construction and operational phases.	<ul style="list-style-type: none"> <li>Implement measures to prevent seepage of liquid materials into ground where it could contaminate groundwater.</li> <li>Ensure prompt cleaning up of accidental spillages (Section 20 of the National Water Act).</li> <li>The machinery / equipment should be maintained in a good operating condition.</li> <li>Specially designated areas for vehicle maintenance should be identified.</li> <li>Accidental spillages should be cleaned up promptly.</li> <li>Ensure adequate procedures are in place for implementation of the above mentioned.</li> </ul>	Site Manage/ ECO/ CLO	Weekly

Activity	Objectives	Mitigation Measures	Responsibility	Frequency
g. Dust Control:	Prevent/minimise dust at all times	<ul style="list-style-type: none"> <li>Excavation, handling and transport of materials must be avoided under high wind conditions or when a visible dust plume is present.</li> <li>During high wind conditions, dust suppression measures will be required.</li> </ul>	Site Manage/ ECO/ CLO/ Safety Officer	Daily

Activity	Objectives	Mitigation Measures	Responsibility	Frequency
h. Social Amenity:	To ensure that the operational activities pose as little nuisance as possible to the surrounding communities	<p>Minimisation of disturbance of the residents in the vicinity of the site will have to be taken into account during all phases of the project.</p> <ul style="list-style-type: none"> <li>The siting of areas for delivery of equipment and materials must take into account the noise generated</li> </ul>	Project Manager & Construction Manager	Weekly

		by the vehicle as well as noise generated by off-loading equipment. <ul style="list-style-type: none"> <li>• Noise should be limited to site.</li> <li>• All vehicles and equipment must be properly maintained to reduce unnecessary noise. Factors to take into account are; arriving and departing traffic, loading and unloading of equipment and materials; and day-to-day operations.</li> </ul>		
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Activity	Objectives	Mitigation Measures	Responsibility	Frequency
i. Contaminated Water and Soil Management:	To conserve soil resources and to maintain the viability of soil disturbed by the development and associated infrastructure.	All soil that is contaminated must be removed and stored in a skip until it can be disposed of at an appropriate disposal site.  All wastewater and polluted runoff from contaminated areas must be channeled into appropriately sized, designed and located collection sump.	Project manager & Construction Manager	Weekly
Activity	Objectives	Mitigation Measures	Responsibility	Frequency
j. Employment Creation	To maximise possible employment opportunities	Local labour (both male and female, skilled and unskilled) will be employed as a priority. <ul style="list-style-type: none"> <li>• Workers are to be made aware that employment is only temporary and will cease at the end of the contract period.</li> <li>• Where possible, employment of local persons is also encouraged during the Operational Phase of the Project.</li> </ul>	Project manager & Construction Manager	Weekly

Draft Environmental Management Programme (EMPr) The Proposed IKhuhu Poultry Farm for The Proposed 6 Broilers for Rearing at Honingnestkrans ( $\pm 24$  hector) Farm No 269, Portion 154 along the City of Tshwane Metropolitan Municipality, Gauteng Province, South Africa.

## **21. ENVIRONMENTAL AUDIT**

An Environmental Audit of the re-conducting process and documentation compiled by the ECO must be conducted by an independent qualified auditor. This should be carried out mid-way through the re-conducting project and at the end of the rehabilitation phase. On-site Environmental Management for each project which will be guided by the existing Environmental Authorisation (EA), Environmental Management Programme (EMPr) and Land Owner conditions. The role of the ECO would be to ensure implementation and compliance with these existing documentations and their respective conditions.

Interested and affected parties, as listed in the register for the EIA (If conducted) must be informed of the date of commencement of construction activities and an Access Plan must be negotiated between landowner, adjacent land owners and the contractor. This plan must be communicated to all parties through the Independent ECO whose role is to ensure that the mitigation and rehabilitation measures listed in the EA are implemented and to ensure compliance with the approved EMPr.

An Induction for the contractor and employees will be conducted by the ECO prior to any construction work in which environmental awareness will be communicated to provide them with a basic understanding of the environment they are working in. The workers will also be informed of SuperChicks Pty Ltd's site requirements, safety and health procedures. Communication pertinent to all Environmental Management tasks will be the responsibility of the ECO who will thus assist in conflict resolution and to measure and evaluate damage to adjacent land owner's properties for timeous and equitable settlement of claims.

Preconstruction and construction phase measures, as contained in the approved EMPr will be communicated and monitored once construction commences. Demarcation of sensitive areas will precede and construction activity. The day to day tasks of the appointed ECO will include enforcing specific conditions as contained in the EA document. The ECO will keep a daily record of all activities in the form of a register, and all documentation related to monitoring and auditing must be kept on site.

Monthly reports to the Land and Rights Project manager on the compliance of the contractor will be submitted at the end of each month. The reports will include before and after photographs with specific dates of any incidents identified on site and mitigation measures carried out thereof. The ECO shall also monitor the Environmental Officer's (EO) complaints register, records of environmental incidents. Other tasks include recommending modifications to the EMPr as when site conditions require. These changes must be communicated to all parties.

The ECO must also ensure necessary permits and disposal certificates were obtained and kept on site before regulated activities take place. Once the Construction phase is concluded the ECO must prepare the contractor for rehabilitation as per measures contained in the approved EMPr. The ECO will ensure that all rehabilitation measures are implemented and adhered to.

At the conclusion of the rehabilitation phase the ECO will submit all registers, schedules and reports to the Department of Compliance and Monitoring to GDARD. The applicant will be required to submit an audit within 30 days of the construction and rehabilitation activities in terms of compliance with the EA and EMPr conditions. Beyond submission of an audit, 14 days written notice must be given to the department before the operation phase of the activity can commence.

## **22. DECOMMISSIONING PHASE**

The objective of providing guidelines during the decommissioning phase is to prevent structures from being left to deteriorate and look unsightly. It is imperative that non-functional structures be removed as soon as possible, and that the site is rehabilitated as soon as possible. If non-functional structures are not needed anymore, and not removed, it must be maintained that they will be used to prevent the environmental degradation of the site. SuperChicks Pty Ltd Holdings SOC Limited is responsible for ensuring the proposed SuperChicks hatchery is properly maintained at all times.

## **23. CONCLUSION**

This Environmental Management Program should be used as an on-site reference document during all phases of this development, and auditing should take place in order to determine compliance with this EMPr. Parties responsible for transgression of this EMPr should be held responsible for any rehabilitation that may need to be undertaken. Parties responsible for environmental degradation through irresponsible behavior/ negligence should receive penalties. The environmental specialist studies facilitated the identification of relevant and practical mitigation measures, which may be used by the construction team and SuperChicks Pty Ltd to draw up and respond to tender documentation. It is thus a key to this process that this document is included during tendering to allow all potential bidders for this work to seriously consider and cost for such mitigation.

This will ensure that the document receives the necessary buy in that it requires from the outset of the project. This EMPr was compiled in an iterative manner that allowed for specialists to identify other places to avoid more sensitive environmental features, such as drainage lines, areas susceptible to erosion and heritage artefacts.

This is important in terms of guiding the construction vehicles and other machinery during the construction phase of the project, its operational phase and closure thereof. In order to have records of environmental incidences and the handling thereof, it is suggested that incidence logs to be filled in by the Environmental Control Officer or Environmental Liaison Officer. The contract manager needs to be informed of such incidences and further actions need to be taken, should the need arise.

## **ANNEXURE A**

### **STAFF CODE OF CONDUCT**

	<b>ALL STAFF MUST OBEY THE FOLLOWING RULES:</b>
1	<b>DO NOT</b> leaves the construction site untidy and strewn with rubbish that will attract animal pests.
2	<b>DO NOT</b> brings your pets to the construction site.
3	<b>DO NOT</b> trespass on private properties not linked to the project.
4	<b>DO NOT</b> carries a weapon on the construction site or in the vehicles transporting workers to and from the construction site.
5	<b>DO NOT</b> set fires unnecessarily.
6	<b>DO NOT</b> cause any unnecessary disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
7	<b>DO NOT</b> drives a construction-related vehicle under the influence of alcohol.
8	<b>DO NOT</b> exceed the national speed limits on public roads or exceed the recommended speed limits in this management plan (where applicable) whilst driving a construction vehicle.
9	<b>DO NOT</b> drive a vehicle that is generating excessive noise (noisy vehicles must be reported and repaired as soon as possible).
10	<b>DO NOT</b> litter along the roadsides, including both public and private roads.
11	<b>DO NOT</b> remove or destroy vegetation at the construction camp/construction site without the prior consent of the Project Manager and Environmental Control Officer.
12	<b>DO NOT</b> tamper with, destroy or remove vegetation from any areas that have been fenced off or marked.

## **ANNEXURE B (SAMPLE)**

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### **INCIDENT AND ENVIRONMENTAL LOG**

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