

# OPERATIONAL ENVIRONMENTAL MANAGEMENT PROGRAMME

Remainder of Farm 225 Grootvlei, Caledon

July 2024



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## KEY TERMS AND ABBREVIATIONS

**Applicant/Operator** - Bapchix (Pty) Ltd. The applicant/operator has the overall environmental responsibility to ensure that the implementation of the construction and operational requirements complies with the relevant legislation and the conditions of the approved EMPr.

**Auditing** - A systematic and objective assessment of an organization's activities and services conducted and documented on a periodic basis to a predetermined standard.

**Council** – the local authority, Theewaterskloof Local Municipality, its successors in title or assigns.

**Department of Environmental Affairs and Development Planning (DEA&DP)** – the provincial authority for sustainable environmental management and integrated development planning.

**Environmental Assessment Practitioner (EAP)** – a suitably qualified environmental consultant to be appointed by the applicant to develop the EMPr and/or conduct external auditing as required.

**Environmental Management Programme (EMPr)** an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation, and decommissioning of a project are managed, and that positive benefit of the projects are enhanced.

**Environmental Control Officer (ECO)** – a suitably qualified individual who understands the onsite operations to be trained or appointed by the applicant to oversee the implementation of the EMPr.

**Landowner** - Zonderend Valley Farm (Pty) Ltd.

**National Environmental Management Act (Act 107 of 1998, as amended) (NEMA)**– national legislation that provides principles for decision-making on matters that affect the environment.

**National Water Act (NWA)** – national legislation that provides principles for decision making on matters that relate to watercourse/water use/water bodies.

**Site** - Area where the proposed development will take place

**Site Manager / Control Officer** – A suitably qualified individual to fulfill a combined function of managing the day-to-day operation of the poultry facility and overseeing the implementation of the EMPr.

**Workdays** – the days of the week excluding Sundays and public holidays.

## SECTION 1: CONTEXTUAL INFORMATION

### 1.1. Project Background

This report aims to supply an Operational Environmental Management Programme (OEMPr) for the management of an established poultry rearing facility on the Remainder (RE) of Farm 225 Grootvlei, Caledon. The farm is located approximately 15 kilometres northeast of Caledon and approximately 3 kilometres north of the N2 with access via a dirt road (Figure 1). The property is a working farm and is approximately 311,15ha in size. The development of the existing poultry rearing facility (Figure 2) took place onsite prior to the applicant obtaining the necessary Environmental Authorisation (EA). The applicant, Bapchix Pty (Ltd), therefore intends on applying for a retrospective EA to legalise the existing chicken pens by means of a Section 24G application process.

This OEMPr describes management and mitigation measures in detail, and is prescriptive, identifying specific individuals or organisations responsible for undertaking specific tasks to ensure that impacts on the environment are minimized during the operation of the existing development. This OEMPr is an open-ended document and information gained during on-going monitoring of procedures on site could lead to changes in the recommendations and specifications of this document.

This document is intended to guide and manage the operational phase of the existing poultry rearing facility on RE/225 Grootvlei, Caledon. The document should be implemented in addition to existing protocol and management plans already in place for the existing operations on site. Along with the contract, this document forms an agreement between the council and the applicant that the environmentally sensitive features on the site will be suitably protected during the operational phase of the development.

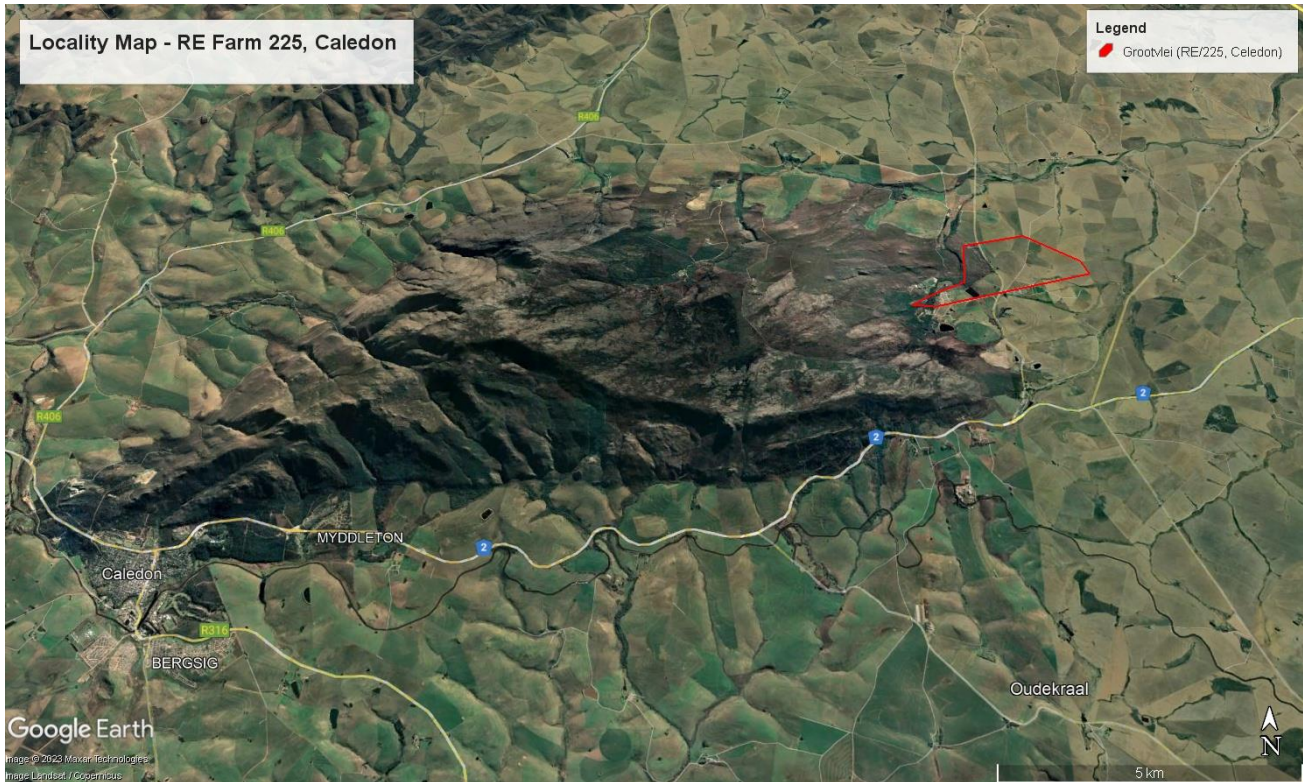


Figure 1: Location of the development site – RE/225, Grootvlei, Caledon

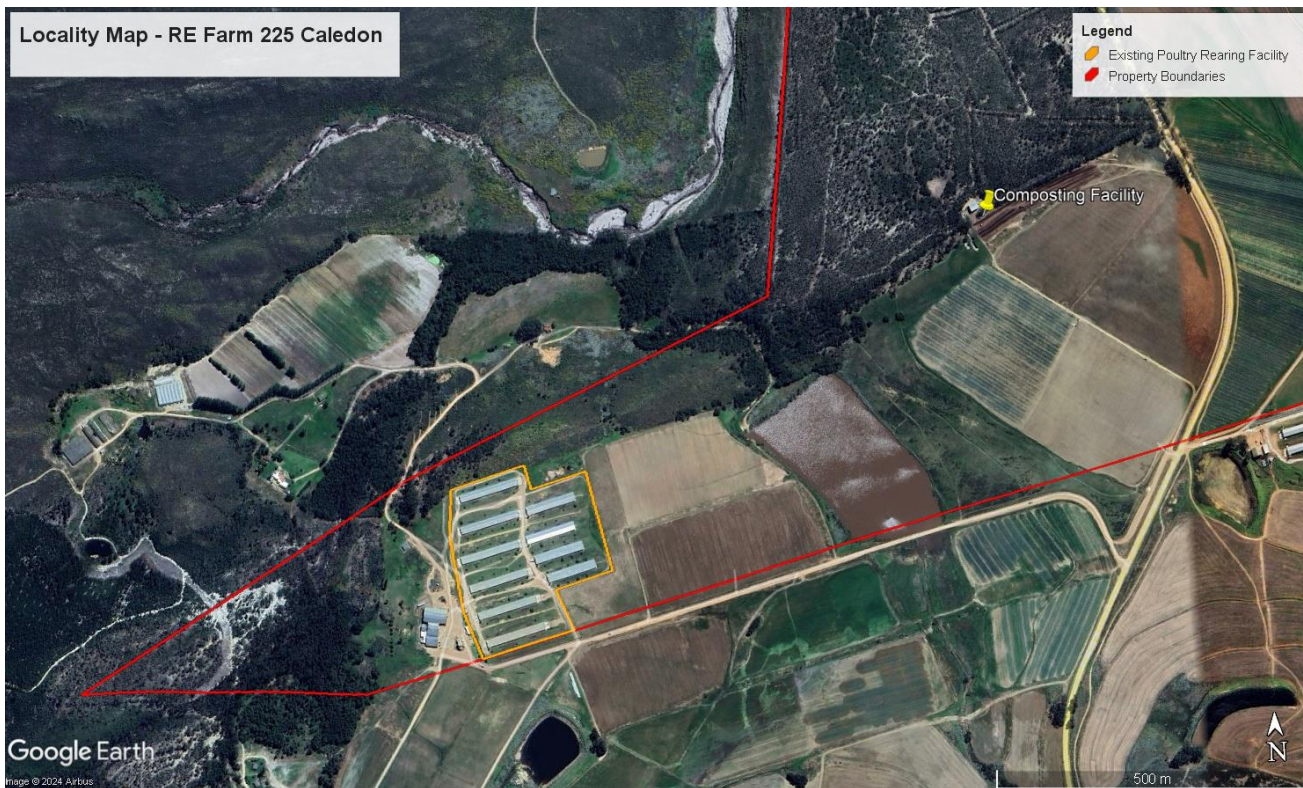


Figure 2: Site map indicating the location of the existing poultry rearing facility

### 1.3. Status of the EMPr

The Environmental Authorization will ascribe legal status to the EMPr and any subsequent amendments thereto. The EMPr includes all relevant documentation within this report and/or referred to within it. The National Environmental Management Act, 1998 (Act No. 107 of 1998) is pertinent to the project. All activities on site must adhere to and comply with the provisions of the Act. The approval of the EMPr by DEA&DP will require that the applicant/ landowner and all appointed contractors must comply with the requirements therein. Any amendments/ changes/ upgrades to the EMPr will require submission to and approval by DEA&DP.

### 1.4. Comment to the EMPr

The EMPr forms part of the contract identifying and specifying the procedures to be followed by the operator in order to eliminate or reduce adverse impacts of the free-range chicken farming activities. Should the operator or employee persistently fail to observe provisions of the EMPr, the site manager should notify the relevant authority for a compliance audit, and possibly the prosecution of an individual.

The OEMPr will include goals and objectives set to achieve the required environmental standards. The S24G Application identified issues that will have to be addressed in the operational phase to ensure mitigated impact on the environment.

**NOTE: The EMPr must be implemented in conjunction with conditions contained in the Environmental Authorization.**

### 1.5. The competent authority

DEA&DP will review the EMPr and on approval they may have the following role to play:

- Review and monitor implementation of the EMPr;
- Review whether there is compliance by the applicant;
- Perform random control checks;
- Review Site Manager/ECO, incident and audit reports;
- Enforce legal mechanisms for contraventions of the EMPr.

### 1.6. Department of Water and Sanitation (BOCMA)

The DWS is the national authority that authorizes and licenses the use of water and water resources in South Africa, and BOCMA is the designated representative in this area. The BOCMA may require additional measures in the WUA/GA (if relevant) which will have to be implemented alongside this EMPr.

## SECTION 2: RESPONSIBILITIES AND ENFORCEMENT OF THE EMPR

### 2.1. The Applicant / Operator

The applicant/operator is accountable for the potential impacts of the activities that are undertaken and is responsible for managing these impacts. The applicant has the overall environmental responsibility to ensure that the implementation of the operational requirements complies with the relevant legislation and the conditions of the approved EMPr.

The applicant must ensure that he/she is fully familiar with the requirements of this EMPr, any relevant Environmental Authorisation, General Authorisation (water use) or any other legally binding documentation. Training on the requirements of the EMPr will be presented to the applicant by the EAP upon appointment.

Environmental awareness training of all staff/contractors involved in the EMPr work activities will be completed by the site manager or ECO on their roles and responsibilities, compliance to the EMPr and required monitoring as outlined in Section 5 of this document. The applicant must ensure that the required training takes place.

### 2.2. Environmental control onsite

#### 2.2.1. Operational Manager / Site Manager

An operations or site manager or similar, must be identified to assume overall responsibility for managing the day-to-day operations onsite including managing any contractors that may be required and ensuring that the environmental management requirements are met. All decisions regarding environmental procedures and protocol must be approved by the site manager, who also has the authority to stop any activity in contravention of the EMPr.

The site manager will have the following environmental control responsibilities:

- Present environmental awareness training to all staff in conjunction with the ECO,
- Regularly monitor the site and operation of the facility for potential environmental issues,
- Consult with the ECO, applicant/operator, and all staff/contractors to resolve emerging environmental issues,
- Issue any instructions related to environmental management to the management team via an appropriate management tool, and
- Keep a digital Site Control Register consisting of the following sections:
  - The **Site Control Sheet** will be used to record the comments from site monitoring as they relate to potential environmental aspects and any problems encountered as it relates to works from the site.
  - The **Environmental Site Instruction Section** will be used for the recording of general site instructions relating to the protection of environmentally sensitive or potentially impacted areas or features on the site.

- The **Incidents Reporting Section** will be used to record all incidents pertaining to environmental issues onsite as well as remedial actions steps that were or need to be taken.
- The **Complaints Register** will be used to record all complaints received and responses thereto.

### ***2.2.2. Environmental Control Officer (ECO)***

A suitably qualified individual should be trained and appointed by the applicant to fulfil the role of Environmental Control Officer, to ensure and oversee the implementation of the EMPr in its entirety on site during operation.

The responsibilities of the ECO during the operational phase of the project will include:

- To review method statements and to determine the most environmentally sensitive options of modus operandi for the operational tasks.
- To oversee the implementation of environmental procedures set out in this document.
- To report on environmental issues.
- Liaison with the operational / site manager, contractors and authorities.
- Compilation of a monitoring plan.
- Monitoring of contractors, the OEMPr and the monitoring plan.
- Conflict resolution.
- Meetings and obtain specialist environmental input if required.

## **SECTION 3: REQUIREMENTS AND OPERATIONAL GOALS**

The S24G report identified several operational impacts and concerns that were addressed through the process. Many of the issues need to be mitigated by ongoing management procedures and therefore goals need to be set to ensure implementation of these measures. Management activities are described to achieve the objectives together with monitoring and target criteria.

### **3.1. Components of Operational Management**

- **Goals:** The key environmental goals are set for the operation of the property.
- **Objectives:** These are set to meet the goals.
- **Risk:** If the goal is not achieved.
- **Actions:** Measures put in place to achieve objectives.
- **Monitoring:** To check if the objectives are achieved.
- **Targets:** Indicators of the effectiveness of the programme.
- **Remedial Action:** If targets aren't met.

During the lifespan of human habitation people generally waste on a daily basis. This includes food waste, packaging (paper, plastic, cardboard), glass bottles, metal cans, sewage etc. Excessive use of water and electricity is also wastage.



To minimize potential environmental impacts, the measures outlined below should be integrated into the operation of the chicken rearing facility on a daily basis:

### ***3.1.1. Water***

Water will be supplied from an existing registered source. The water from the source should be managed according to water saving principles and stormwater runoff quality should be protected against possible pollution sources:

- Capture and use rainwater from gutters and roofs into rainwater storage tanks for individual structures where viable;
- Any new washbasin and shower taps to be fitted with flow reduction devices, aerators and motion sensors to ensure water conservation and prevent that they can be left running;
- Any new toilets should be fitted with reduced flow or preferably a dual flush system;
- Re-use water for gardening and/or flushing;
- Washing facilities to be provided with flow reduction devices and adequate catchment to contain wash water;
- All hoses to be fitted with trigger gun spray nozzles to limit wastage;
- Preference should be given to planting only endemic/indigenous gardens and using such for landscaping to minimize water demand;
- Have timed irrigation systems with the focus on the hours when the least evaporation occurs; rain sensors to form part of the irrigation system.
- Taps around the farm fitted with locks to prevent unauthorized use and included on a maintenance schedule to detect and repair leaks;
- Washing appliances (dishwashers and washing machines) filled only to the minimum level required for effective functioning;
- Physical brushing or sweeping used in preference to water cleansing wherever possible (e.g. cleaning pathways and inside the units);
- After the units have been dry swept they will be washed down with high pressure hoses. As the units are raised from the ground it ensures that rainwater does not enter the units during rainfall events, thus protecting the quality of the runoff from site.

### ***3.1.2. Electricity***

Electricity will be supplied by Eskom. Internal reticulation will be according to the appointed Electrical Engineers standards. The following energy saving mechanisms should be implemented:

- Energy saving bulbs in all structures, alternatively use low voltage or compact fluorescent lights;
- Use energy saving geysers;
- Use proper insulation to reduce the need for air conditioning;
- Solar glazing or energy efficient windows to reduce the need for air conditioning;

- Maximize the use of solar heating where viable;
- Structures should be orientated to optimize use of ambient weather and climate conditions for heating and cooling;
- Natural light used wherever possible during the day in preference to artificial light (trade off between using large windows for use of sunlight but this may require additional air-conditioning);
- Programmed lighting;
- Cold rooms and freezers fitted with counter-weight doors to ensure that they cannot be left open unnecessarily;

### ***3.1.3. Sewage***

Staff ablutions with sufficient capacity are available. Through the above water saving mechanisms the load on the general sewage flow will be reduced and therefore limit the load on the system.

### ***3.1.4. Materials***

Material used during construction or in the life-cycle of the project should be focused on renewable and recyclable elements:

- Select building materials for durability to minimize maintenance or replacement;
- Use standard materials to increase the potential for re-use and re-cycling;
- Materials should be sourced locally where possible; and
- Use recycled shuttering, door and window frames, sanitary ware, concrete aggregate and roofing materials where possible.

## **3.2 Operational Biosecurity Guidelines**

This should focus on mechanisms that need to be implemented by operator.

### ***3.2.1. General Guidelines***

#### ***a) [Cleaning Procedures](#)***

*The following cleaning procedure is followed per pen:*

- 1) Manure is removed from unit, including all material from floor, walls, curtain sides and equipment. Blow out switchboard and remove fan belt covers. Remove feed hoppers and remove feed from lines. Empty feed tank and remove boot.
- 2) Dry sweep down walls and floor to remove all material.
- 3) Wash house out with high pressure hoses (using clean water) to remove any remaining dust.
- 4) Use foam soap on all inside areas
- 5) Wash unit inside with high pressure hoses (using clean water) to remove any remaining soap.

6) Disinfect unit.

All water used in the cleaning process is to be measured.

b) Water and Stormwater Management:

- Units are to be washed (with high pressure hoses) only once dry matter has been removed (dry-swept).
- No ingress of stormwater into units to protect runoff quality.
- No storage of manure on outside areas.

c) Manure

A registered composting facility is located onsite, and a portion of the manure generated within the onsite poultry rearing facility will feed into the composting facility. The remaining manure will be used directly in the agricultural industry.

- All dry matter is to be swept from the shed after each production cycle.
- All dry matter is to be removed from the facility and either composted within the registered-on site composting facility, used directly onsite or collected by neighbouring farmers and contracted growers as per existing operations.
- If the manure is disposed of it needs to be at a licenced waste disposal facility.

d) Waste Management

- All standard refuse from the operation is to be contained and removed from the facility weekly, and suitably disposed of.
- Onsite bins for different wastes must be provided.

e) Mortalities

- Mortalities (not infected with avian flu) will immediately be placed within a closed container which is collected and transported to the registered onsite composting facility every morning (as required).

f) Planning

- Operational logistics and improvement of the various operational techniques.
- Preparation and finalisation of time schedules for production.
- Work according to the operational environmental management plan.

g) Training

- All contractors (including workers) and/or any other persons directly involved in any forms of activity or actions related to the project will be trained in basic on-site environmental management before being permitted on site.
- An ECO may be present on site to advise and monitor all activities and actions taking place.

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- Training is to be an ongoing process to ensure that contractors and new staff are familiar with the general environmental status of the site.
- Responsibilities for mitigation and monitoring actions should be clearly defined.
- These responsibilities will be delegated by management to the workers.

### h) Bio-security

- Bio-security is standard procedure at any chicken rearing farm facility, in order to avoid the outbreak and spread of possible avian diseases.
- Standard procedures include the screening and washing of staff, vehicles and machinery.
- Bio-security measures specific to the chicken rearing facility should be implemented at all times, staff should be aware of all requirements and the bio-security of the farm should be monitored continuously.
- Bio-security should be strictly monitored at all times.

### i) Environmental Monitoring:

The implementation of regular monitoring will ensure that environmental impacts can be detected early, and remedial action implemented timeously.

*The following needs to be monitored on a weekly basis:*

- Removal of manure from the facility;
- Removal of mortalities from the facility;
- Pen cleaning procedures;
- The water sources and drainage on site;
- Landscaping (planting of screening vegetation) and soil conditions;

The above listed categories need to be linked to evaluate if the one triggers the other.

Indicators which need to be measured:

- Manure supply and cleaning procedures:
  - Removed from pen and taken to composting facility or relevant use location;
  - No storage on site;
  - If disposed it needs to be at a licenced facility;
  - If re-used it needs to be in line with the provisions of NEM:WA;
  - Minimum standard for leftovers after removal from units;
  - Wash down procedures and water amount control.
- Water sources and water courses:
  - Stay within the water registered totals;
  - Test water source on an annual basis for quality.
- Landscape and soil conditions:
  - Planting tempo

- Growth evaluation
- Visual evaluation

j) Schedules and Reporting

Each of the above components needs to be evaluated and a schedule must be drafted by management with the following headings:

- Timing
- Frequency
- Duration of Mitigation
- Progress
- Results of mitigation

***3.2.1. General Mortality Disposal Procedure:***

All daily mortalities to be collected out of the units by farm staff. Mortalities to be assessed and counted. A register containing information on possible cause of death, number and mass of mortalities to be kept. Bio-security and optimum hygiene practices should be applied throughout the daily collection process and all the containers and instruments used to transfer deceased birds should be washed and disinfected after use.

**NOTE: PRACTICE SPECIFIC OPERATIONAL REGULATIONS AND GUIDELINES FOR OPERATION OF CHICKEN LAYING AND REARING FARMS IN SOUTH AFRICA SHOULD BE ADHERED TO AT ALL TIMES.**

### **3.3. Operational Goals and Management Objectives**

The following goals were set to ensure minimal environmental impact during the operation and life cycle of the project:

1. Ensure aesthetic appeal of the site
2. Protect the surrounding environment
3. Create awareness of waste management and waste minimization
4. Create awareness of water conservation and sewage management

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Goal 1: To ensure aesthetic appeal of the site					
<b>Objective</b>	<b>Risk</b>	<b>Actions</b>	<b>Monitoring</b>	<b>Targets</b>	<b>Remedial Action</b>
To ensure that measures were put in place during the design and construction phase. This will include landscaping, fencing	<ul style="list-style-type: none"> <li>• Inappropriate landscaping</li> <li>• Development areas not properly screened</li> </ul>	<ul style="list-style-type: none"> <li>• Implement landscaping around units to assist with screening</li> <li>• No naked light sources should be visible from outside units, only reflected light to be visible</li> <li>• Lighting to be sufficient for safety and clarity of movement only</li> <li>• Only low voltage lights to be used.</li> <li>• All colours or textures to blend into surrounding landscape</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor that landscaping around the development footprint is implemented</li> <li>• Monitor health of landscaped land areas.</li> <li>• Monitor design and colour of the development structures</li> <li>• Monitor the placement of aerials in terms of visual intrusion</li> </ul>	<ul style="list-style-type: none"> <li>• Adherence of operator/owner/landscaper to the guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• Operator to take immediate action against non-compliance</li> </ul>
Maintenance of units	<ul style="list-style-type: none"> <li>• Decrease in aesthetic appeal</li> <li>• Poor screening of development</li> <li>• Poor maintenance of units, fences and natural vegetation</li> <li>• Poor maintenance of landscaped areas</li> <li>• Contamination of wild birds vice versa</li> </ul>	<ul style="list-style-type: none"> <li>• All buildings and associated infrastructure that has been erected, must be neat, functional and visually neutral</li> </ul> <p align="right"><b>Responsibility: Operator</b></p>	<ul style="list-style-type: none"> <li>• Monitor condition of units</li> <li>• Monitor effect of lights on surrounding area</li> <li>• Monitor fence for bio-security</li> <li>• All faults to be repaired immediately</li> </ul> <p align="right"><b>Responsibility: Operator</b></p>	<ul style="list-style-type: none"> <li>• All units to be in an acceptable condition</li> </ul> <p align="right"><b>Responsibility: Operator</b></p>	<ul style="list-style-type: none"> <li>• Deviation from job description must be dealt with in terms of contractual or employment terms of reference.</li> </ul> <p align="right"><b>Responsibility: Operator</b></p>

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<p>Maintenance of landscaped area outside of units –</p> <p>Landscaping is to mitigate possible visual intrusion, act as a buffer against noise and to act as a windbreak</p>	<ul style="list-style-type: none"> <li>• Decrease in aesthetic appeal</li> <li>• Inappropriate landscaping</li> <li>• Poor screening of development</li> <li>• Misuse of water</li> </ul>	<ul style="list-style-type: none"> <li>• Use only indigenous/ endemic water wise plants to act as buffer area between units and surrounding environment</li> <li>• Implement guidelines for landscaped area</li> <li>• Ensure visual screening</li> <li>• Rain-sensor to be installed as part of automatic irrigation system</li> </ul> <p><b>Responsibility: Operator</b></p>	<ul style="list-style-type: none"> <li>• Monitor landscaped area to ensure no alien vegetation</li> <li>• Monitor water use on site</li> <li>• Monitor irrigation system for effective use of water – adjust where necessary</li> </ul> <p><b>Responsibility: Operator</b></p>	<ul style="list-style-type: none"> <li>• Ensure effective screening of development</li> <li>• Ensure optimal &amp; effective water use</li> <li>• Ensure landscaped areas act as buffers</li> <li>• Ensure landscaped areas are alien free</li> <li>• Implement alien control programme</li> </ul> <p><b>Responsibility: Operator</b></p>	<ul style="list-style-type: none"> <li>• Irrigation system to be kept in optimal condition</li> <li>• Leaks to be repaired immediately</li> <li>• Alien vegetation to be removed as part of ongoing maintenance programme</li> </ul> <p><b>Responsibility: Operator</b></p>
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Goal 2: Protection of surrounding environment					
Objective	Risk	Actions	Monitoring	Targets	Remedial Action
<p>Implement Bio-security measures</p>	<ul style="list-style-type: none"> <li>• Contamination of wild birds</li> <li>• Contamination of chickens</li> </ul>	<ul style="list-style-type: none"> <li>• Train all staff and contractors to ensure an understanding of bio-security measures</li> <li>• Set strict biodiversity guidelines to be adhered to</li> <li>• Determine baseline for regarding cleanliness of units</li> <li>• Delegate responsibility to specific members of staff for aspects of bio-security</li> <li>• Remove manure after each rearing cycle</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor management's bio-security guidelines</li> <li>• Monitor staff training and actions</li> <li>• Monitor staff's adherence to bio-security measures</li> <li>• Monitor cleanliness of units according to baseline which has been set.</li> <li>• Monitor adjacent water resources (if relevant) to ensure that no pollution of water takes place</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure environmental health – for surrounding environment as well as for chickens</li> <li>• Ensure that staff understands importance of bio-security measures.</li> </ul>	<ul style="list-style-type: none"> <li>• Operator to take immediate action against non-compliance</li> <li>• Penalise individuals who do not comply to bio-security measures which have been implemented</li> <li>• Deviation from job description must be dealt with in terms of contractual or employment terms of reference.</li> </ul>

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		<ul style="list-style-type: none"> <li>• Ensure that no accidental run-off from the units leaves the development footprint.</li> </ul> <p><b>Responsibility: Site Manager/ECO</b></p>	<ul style="list-style-type: none"> <li>• Minimise use of washing water to ensure that no run-off occurs</li> </ul> <p><b>Responsibility: Site Manager/ECO</b></p>		
Management & Conservation of Water Resources	<ul style="list-style-type: none"> <li>• Contamination of water resources</li> <li>• Overuse of water resources</li> </ul>	<ul style="list-style-type: none"> <li>• Minimize the use of wash water onsite.</li> <li>• Dry-sweep chicken pens before high pressure washing.</li> <li>• Minimize the use of wash water inside units such that the moisture left after high pressure washing can evaporate.</li> <li>• No wash water from inside the units should reach the outside environment and possibly pollute stormwater.</li> <li>• No water used during washing of units to be re-used on site.</li> <li>• Minimise water used on site for irrigation.</li> </ul> <p><b>Responsibility: Operator/ Site Manager/ ECO</b></p>	<ul style="list-style-type: none"> <li>• Monitor intake quality to ensure that no pollution is taking place.</li> <li>• Measure usage through installation of water meters on abstraction point.</li> <li>• Internal audit of the facility to ensure compliance with standard operating procedures.</li> </ul> <p><b>Responsibility: Operator/ Site Manager/ ECO</b></p>	<ul style="list-style-type: none"> <li>• Ensure that all water resources remain unpolluted.</li> <li>• Ensure that irrigation system is leak free – all leaks to be repaired immediately.</li> </ul> <p><b>Responsibility: Operator/ Site Manager/ ECO</b></p>	<ul style="list-style-type: none"> <li>• Report and repair infrastructure failure immediately.</li> <li>• Operator to take immediate action against non-compliance.</li> <li>• Penalise individuals who do not comply to bio-security measures which have been implemented.</li> <li>• Deviation from job description must be dealt with in terms of contractual or employment terms of reference.</li> </ul> <p><b>Responsibility: Operator/ Site Manager/ ECO</b></p>



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<p>Conservation of sensitive environmental features</p>	<ul style="list-style-type: none"> <li>• Contamination of wild birds</li> <li>• Contamination of natural vegetation</li> <li>• Erosion as a result of excessive run-off</li> <li>• Irreversible loss of habitat</li> <li>• Invasion of alien species into a natural habitat</li> </ul>	<ul style="list-style-type: none"> <li>• No removal of any vegetation unless authorised</li> <li>• Fence site to ensure bio-security of wild birds and chickens</li> <li>• Implement alien control programme</li> <li>• Minimize water used onsite for irrigation</li> </ul> <p><b>Responsibility:</b> <i>Operator/ Site Manager/ ECO</i></p>	<ul style="list-style-type: none"> <li>• Monitor buffer areas around units for erosion</li> <li>• Monitor clearance against approved building plans</li> </ul> <p><b>Responsibility:</b> <i>Operator/ Site Manager/ ECO</i></p>	<ul style="list-style-type: none"> <li>• To ensure that alien vegetation does not encroach on natural vegetation</li> <li>• Limited disturbance on site</li> <li>• To ensure integrity of wild fauna</li> <li>• Conservation and management of natural vegetation on site, focussing on high conservation area</li> </ul> <p><b>Responsibility:</b> <i>Operator/ Site Manager/ ECO</i></p>	<ul style="list-style-type: none"> <li>• Operator to take immediate action against non-compliance</li> </ul> <p><b>Responsibility:</b> <i>Operator/ Site Manager/ECO</i></p>
<p>Manage remaining habitat on site to support fauna</p>	<ul style="list-style-type: none"> <li>• Mobile species moving off the site if site can't support current mobile species</li> <li>• Wildlife suffers disturbance during operation</li> </ul>	<ul style="list-style-type: none"> <li>• No feeding of wild animals</li> <li>• Feral cats and dogs should be removed</li> <li>• Use only biologically friendly pesticides and fertilisers</li> <li>• No waste left out to attract scavengers</li> <li>• No pets on site</li> <li>• Mortalities removed to onsite composting facility are to be fully integrated into and covered by composting material to deter scavengers</li> </ul> <p><b>Responsibility:</b> <i>Site Manager / ECO</i></p>	<ul style="list-style-type: none"> <li>• Monitor for litter and dumping</li> <li>• Monitor disposal and removal of waste streams from site</li> </ul> <p><b>Responsibility:</b> <i>Site Manger / ECO</i></p>	<ul style="list-style-type: none"> <li>• To increase biodiversity</li> <li>• Litter free farming area</li> <li>• No disturbance of fauna and flora</li> <li>• Employees to remain in determined areas</li> <li>• Ensure that all employees maintain strict bio-security in order to protect wild fauna &amp; avi-fauna</li> </ul> <p><b>Responsibility:</b> <i>Site Manager / ECO</i></p>	<ul style="list-style-type: none"> <li>• Maintain buffer areas between units and the remainder of the farm</li> <li>• Institute a litter collection programme</li> <li>• Increase awareness of fauna and flora</li> </ul> <p><b>Responsibility:</b> <i>Site Manager / ECO</i></p>

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Goal 3: To create awareness of waste management and waste minimisation					
Objective	Risk	Actions	Monitoring	Targets	Remedial Action
To minimise and manage waste indoors	<ul style="list-style-type: none"> <li>Lack of on site waste management</li> </ul>	<ul style="list-style-type: none"> <li>Educate employees to sort waste</li> <li>Recycle waste</li> <li>Re-use waste where possible</li> <li>Reduce waste produced</li> </ul>	<ul style="list-style-type: none"> <li>Check operational components if recycling is followed</li> </ul>	<ul style="list-style-type: none"> <li>Recycling to be actively implemented by the operator, manager and staff</li> </ul>	<ul style="list-style-type: none"> <li>Refer non-compliance to the operator and site manager</li> </ul>
Manage operational waste (including manure)	<ul style="list-style-type: none"> <li>Irresponsible waste management</li> <li>Unsanitary and smell</li> <li>Attraction of pests</li> </ul>	<ul style="list-style-type: none"> <li>Manure immediately removed to composting facility or relevant use location</li> <li>No composting or storage of manure within the development footprint</li> <li>Composting at the registered facility on the farm.</li> <li>If re-used, must conform to the provisions of NEM:WA</li> </ul> <p><b>Responsibility:</b> <b>Site Manager / ECO</b></p>	<ul style="list-style-type: none"> <li>Monitor litter on a weekly basis</li> <li>Check suitable removal of manure from the development footprint.</li> </ul> <p><b>Responsibility:</b> <b>Site Manager / ECO</b></p>	<ul style="list-style-type: none"> <li>No waste or pollution incidents may occur</li> <li>Minimise waste to landfill so encourage re-use options</li> </ul> <p><b>Responsibility:</b> <b>Site Manager / ECO</b></p>	<ul style="list-style-type: none"> <li>Any non-compliance to be referred to operator</li> </ul> <p><b>Responsibility:</b> <b>Site Manager / ECO</b></p>

Goal 4: To create awareness of water conservation and sewage management					
Objective	Risk	Actions	Monitoring	Targets	Remedial Action
Responsible and sustainable water use and prevention of	<ul style="list-style-type: none"> <li>Water wastage</li> <li>Overloading of sewerage system</li> </ul>	<ul style="list-style-type: none"> <li>Plant indigenous plants</li> <li>Water wise gardening</li> </ul>	<ul style="list-style-type: none"> <li>Check water usage of staff ablutions and gardens</li> </ul>	<ul style="list-style-type: none"> <li>Water use targets to be set according to water availability</li> </ul>	<ul style="list-style-type: none"> <li>Water leaks, non-compliance to be reported to operator</li> </ul>

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<p>contamination of water resources.</p>		<ul style="list-style-type: none"> <li>• Water gardens and pastures early in the morning or late at night</li> <li>• Use permeable and semi-permeable hard surfaces</li> <li>• Lock farm taps</li> <li>• Development of water awareness interpretative signage</li> </ul> <p><b>Responsibility:</b> <b>Operator/ Site Manger /ECO</b></p>	<p><b>Responsibility:</b> <b>Operator/ Site Manger/ ECO</b></p>	<p><b>Responsibility:</b> <b>Operator/ Site Manager/ ECO</b></p>	<ul style="list-style-type: none"> <li>• Increased awareness programme amongst staff</li> </ul> <p><b>Responsibility:</b> <b>Operator/ Site Manager/ ECO</b></p>
<p>Manage Sewage system</p>	<ul style="list-style-type: none"> <li>• Mismanagement</li> <li>• Unsightly and smell</li> <li>• Poor functioning of septic system</li> </ul>	<ul style="list-style-type: none"> <li>• Follow cleaning schedule</li> </ul> <p><b>Responsibility:</b> <b>Operator/ Site Manager/ ECO</b></p>	<ul style="list-style-type: none"> <li>• Monitor sewage system on a weekly basis</li> </ul> <p><b>Responsibility:</b> <b>Operator/ Site Manager / ECO</b></p>	<ul style="list-style-type: none"> <li>• No ground water pollution incidents may occur</li> </ul> <p><b>Responsibility:</b> <b>Operator/ Site Manager / ECO</b></p>	<ul style="list-style-type: none"> <li>• Any non-compliance to be referred to operator</li> </ul> <p><b>Responsibility:</b> <b>Operator/ Site Manager /ECO</b></p>

## SECTION 4: GENERAL MANAGEMENT REQUIREMENTS

The following items must be integrated into the management of the activity whenever relevant:

a) [Environmental awareness training](#)

All employees (including seasonal laborers) must be briefed on their obligations towards environmental controls and methodologies. The briefing should take the form of an on-site talk and demonstration by the ECO, Site Manager and/or the Operator. All environmental impacts and aspects and their mitigating measures must be discussed, explained, and communicated to employees.

The environmental awareness education program should commence with entry onto the site and is likely to be an ongoing process. All personnel must be made aware of the details of the EMPr which will be applicable to them. It must be ensured that staff members who are not proficient in the language of instruction are provided with training in a suitable alternative language.

As a minimum the training must include:

- Explanation of the **reason for complying** with the EMPr;
- Discussion of the potential **environmental impacts** of operation activities;
- Employees' **roles and responsibilities on site**, including emergency preparedness;
- Explanation of the **mitigation measures** that must be implemented when carrying out the activities;
- Explanation of the specifics of this **EMPr** and its specifications (no-go areas, etc.);
- Explanation of the **management structure** of individuals responsible for matters pertaining to the EMPr.

**Environmental meetings** can be held with management, and selected groups of supervisors and/or employee representatives. The meetings will aid in environmental awareness being generated at all levels, as well as assist in identifying new environmental issues, concerns, or potential pollution sources.

**On the job training** is an essential tool in environmental awareness. Employees involved with the operation will be suitably trained in order to identify, prevent, minimize or manage actions or behaviors that could potentially result in negative environmental impacts. Employees will be given details of the expected environmental issues and concerns specifically related to their occupation. Employees will be trained in how to respond if an environmental problem or source of environmental pollution arises. The training will be on-going, and all new employees will be provided with the same standard of training as existing employees.

A regularly updated record must be kept of all personnel attending the Environmental Awareness training sessions.

b) Noise Impacts

During the operational phase, the site manager must take appropriate measures to limit the impact of unreasonable noise from operational activities. Operational activities are to be limited to working hours weekdays and half day Saturdays. No work, besides vital tasks, may be undertaken on Sundays and public holidays and all vehicles and machinery used onsite should be maintained in a good, working condition.

c) Cleanliness of Roads

The site manager must ensure that vehicles transporting materials to and from the facilities for operational usage do not spill or drop any materials (manure, fuel etc) onto public or private roads. If this should occur, it is the responsibility of the site manager to ensure that the roads are suitably cleaned.

d) Dust Control

The site manager shall take appropriate measures, to minimise the generation of dust nuisance on site. Watering of roads if required otherwise maintaining a speed limit of 20km/h.

e) Safety

The operator is to appoint a safety steward, who will be responsible for safety of the labour force and handling emergency situations on site during operational hours.

f) Emergency

All accidents and emergency situations are to be reported to the site manager. Emergency contact numbers for fire department to be kept on site.

Fire

In the case of a fire occurring on site, the site manager, safety steward and ECO are to be notified immediately. If fairly localized, an effort should be made to extinguish the fire immediately, and if required, the assistance of the local fire department should be sought by the safety steward.

First Aid

The operator must provide and maintain a suitable first aid kit on site, with a member of staff suitably qualified in first aid on site during working hours, in accordance with the Occupational Health and Safety Act.

a) Public Complaints

All public complaints received are to be registered by the site manager and addressed immediately. Public complaints, responses and mitigation measures implemented are to be recorded in the Site Control Register.

g) [Fuels](#)

Fuels for use in operational machinery are to be stored in suitably equipped storage areas, inside the existing farm work yard. These areas shall comply with general fire safety requirements. Impervious materials are to be used in these storage areas to prevent contamination of the ground in the event of spillages or leaks. Quantities of fuels stored on site should be appropriate to the requirement for these substances on site.

Bulk fuel depots are to be placed within hardened bund areas; bunds are to have a holding capacity equal to 110% of the largest fuel container. The site manager is to ensure that he is aware of the effects of all substances on staff and the environment, and the correct action to take in the case of any incident involving these materials.

h) [Stormwater Management](#)

The following management measures must be implemented to protect stormwater runoff quality against possible pollution sources:

- Units are to be washed (with high pressure hoses) only once dry matter has been removed.
- No ingress of stormwater into units to protect runoff quality.
- No storage of manure on outside areas prior to removal.
- No wash water from inside units to reach outside environment and possibly pollute stormwater.
- No water used during washing of units to be re-used on site.

The stormwater originating from the development will be channelled via drains to a low point near the development footprint where the water will be collected in a sump. The collected water will then be pumped out into a tank on a trailer and sprayed pasture lands as needed. This sump must be designed such that a degree of settling can take place prior to water being pumped out and used onsite. The rate at which stormwater is pumped out of the sumps must be managed to prevent overflow of the system.

Successful implementation of the above-mentioned management measures should be sufficient to protect stormwater runoff quality against possible pollution sources present onsite.

i) [Fossil Finds Procedure](#)

If any potential fossil materials are exposed during any actions on the site, these must immediately be reported to Heritage Western Cape. Heritage remains uncovered or disturbed during the works must not be further disturbed until the necessary approval has been obtained from the competent authority.

## **SECTION 5: MONITORING AND COMPLIANCE**

### **5.1. Monitoring**

The monitoring of works on site is necessary to demonstrate compliance with the specifications of the EMPr and to allow for problems or issues of non-conformance to be identified and appropriate corrective measures to minimize environmental damage to be implemented. Monitoring should include visual checks by the site manager on a daily basis and checks on particular requirements for site activities by the ECO (as required).

### **5.2. Penalties and Incentives**

Transgressions relate to actions by the operator and operating team members whereby damage or harm is inflicted upon the environment or any feature thereof and where any of the conditions or specifications of the EMPr are infringed upon. In the instance of environmental damage, the damage is where possible to be repaired and rehabilitated using appropriate measures, as specified and undertaken by appropriate specialists, for the account of the guilty party.

Issues of non-compliance are to be communicated to the site manager, who holds the responsibility of ensuring that the relevant parties are made aware of the lack of compliance with EMPr specifications, and that appropriate action is taken to rectify the situation. The ECO will advise on appropriate corrective actions when necessary.

### **5.3. Site Record**

Minutes of meetings on site must reflect environmental queries, complaints, actions agreed upon, dates of eventual compliance and must form part of the official environmental site record.

The site manager shall keep a quarterly (or as considered appropriate) photographic record of issues on site and an ad hoc record of incidents or events on site, especially in the case of transgressions from EMPr specifications. Such photographs are to be taken with an in-camera dating facility.

### **5.4. Review of EMPr**

The EMPr will be reviewed by the ECO on an ongoing basis. Based on observations during site inspections and issues raised at site meetings, the ECO will determine whether any procedures require modification to improve the efficiency and applicability of the EMPr on site. Any such changes or updates will be registered in the Site Control Register as well as being included as an annexure to this document. Annexures of this nature must be distributed to all relevant parties on site.

## 5.5. Environmental Audit

A suitably qualified Environmental Auditor is to be appointed, at the expense of the applicant, to undertake audits of compliance with the EMPr. An operational audit must be undertaken 6 months after the EA has been granted. A follow-up operational audit must be undertaken 5 years after the EA has been granted.

Objectives should be to audit compliances with the key components of the EMPr, to identify main areas requiring attention and recommend priority actions. The audit should cover a cross section of issues, including implementation of environmental controls, environmental management and environmental monitoring. Results of the audits should inform changes required to the specifications of the EMPr or additional specifications to deal with any environmental issues which arise on site and have not been dealt with in the current document.

## 5.6. Incident reporting

Environmental incident reporting is a vital part of communication. Employees are required to report all environmental related problems, incidents, and pollution, so that the appropriate mitigation actions can be implemented timeously. See Appendix A for a template that can be used for incident reporting

The operator and the site manager shall investigate the incident and record the following information:

- How the incident happened,
- The reasons the incident happened,
- How rehabilitation or clean up needs to take place,
- The nature of the impact that occurred,
- The type of work, process or equipment involved; and
- Recommendations to avoid future such incidents and/or occurrences.

The operator / site manager shall also:

- Inform the ECO of all incidents that were reported, and
- Consult with the ECO for recommendations on actions to be taken or implemented where appropriate (e.g., clean-ups).



## APPENDIX A: INCIDENT REPORT TEMPLATE

### Environmental Incident Report

<b>Date:</b>	<b>File reference number:</b>
<b>Name:</b>	
<b>Exact location of incident:</b>	

#### Section 1: Description of incident

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#### Section 2: Remedial action required

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#### Section 3: Relevant Documentation

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#### Section 4: Steps to prevent recurrence

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#### Section 5: Signatures

Site manager: .....	Date: .....
ECO: .....	Date: .....
Landowner: .....	Date: .....