

**EMERALDENE POULTRY FARM  
DC29/0041/07**

**DRAFT  
CONSTRUCTION PHASE ENVIRONMENTAL  
MANAGEMENT PLAN**

**FOR THE DEVELOPMENT OF ADDITIONAL  
POULTRY HOUSES AND A FEEDMILL**



TABLE OF CONTENTS

Number	Item	Page
1	<b>INTRODUCTION</b> BACKGROUND BASIS FOR EMP AIMS AND SCOPE OF THE EMP	3
2	<b>ROLES AND RESPONSIBILITIES AND IMPLEMENTATION</b> INTRODUCTION CLIENT THE ENGINEER THE CONTRACTOR IMPLEMENTATION SITE MEETINGS AMENDMENTS DISPUTES AND DISAGREEMENTS	4
3	<b>OPERATIONS</b> SITE OFFICE AND CONTRACTORS CAMP CONSTRUCTION SITE DEMARCATION AND FENCING CONSTRUCTION VEHICLES ACCESS AND PUBLIC RIGHT OF WAY CONSTRUCTION VEHICLES PUBLIC RIGHT OF WAY WORKS WORKS IN CLOSE PROXIMITY TO LAGOON VEGETATION MANAGEMENT DUST EROSION AND STORMWATER CONTROL NOISE CONTROL GENERAL WORKSHOP AND GENERAL MAINTENANCE ABLUTION FACILITIES BREAK AREAS WORKING HOURS GENERAL STAFF CONDUCT MATERIALS STORAGE AND HANDLING WASTE MANAGEMENT	8
4	<b>SIGNAGE, AWARENESS AND COMMUNITY LIASON</b> SIGNAGE EMPLOYEE CONTRACTOR TRAINING STAKEHOLDER LIASON	16
5	<b>CLEAN UP AND REHABILITATION</b> GENERAL REVEGETATION	17
6	<b>MONITORING AND RECORD KEEPING</b> EMP COMPLIANCE MONITORING RECORD KEEPING ECO DIARY METHOD STATEMENTS ENVIRONMENTAL INCIDENT REPORT FILE CONTRACTORS DAILY ENVIRONMENTAL CHECKLIST ECO CHECKLISTS	18
7	<b>APPENDICES</b>	20

## **1. INTRODUCTION**

### **1.1. BACKGROUND**

The proposed additional Emeraldene Poultry houses and a feedmill and associated infrastructure, such as access roads, storm water and waste disposal area are all to be managed by the developer, who is also the land owner and operations manager, on privately owned agricultural land outside the township of Zinkwazi in the KwaDukuza Municipal area in the Dolphin Coast Region of KwaZulu-Natal's North Coast.

The proposal has been authorised by the Department of Agriculture and Environmental Affairs (DAEA) in terms of the National Environmental Management Act (Act 107 of 1989 as amended). The approval is subject to a number of conditions, including the production of Environmental Management Plans (EMP) for construction and operation.

This document comprises of a Construction (EMP) and an Operational Environmental Management Plan (OEMP) for the ongoing management of Emeraldene.

This first part of the document comprises an EMP for the construction activities required for the additional poultry houses and feedmill. A separate EMP will be provided for the Operational Phase of the development.

Activities occurring will be as follows:

1. The construction of the poultry houses.
2. The construction of the feedmill.
3. The upgrading of the infrastructure including roads and parking, sewers, water, stormwater, solid waste disposal facilities, electricity and Telkom lines.
4. The management of existing vegetation, landscaping and rehabilitation with appropriate indigenous plants.

### **1.2. BASIS FOR EMP**

The EMP is a requirement of the Record of Decision issued by DAEA on XXX 2008.

This EMP is based on:

- The Draft Basic Assessment Report issued by INDIfloa cc in April 2008;
- The eThekweni Municipality Generic EMP for Construction Activities (October 2002);
- The KwaZulu Natal Department of Agriculture and Environmental Affairs Interim Guidelines for Environmental Management Plans (Construction & Operational Phases) (June 2003); and,
- The Western Cape Province Department of Environmental Affairs and Development Planning's Draft Standard Construction Phase

Environmental Management Plan for implementation on small or low impact developments approved under the Environment Conservation Act (Act 73 of 1989).

### 1.3. AIM AND SCOPE OF THE EMP

The Aim and Scope of the EMP is to:

- Ensure that impacts on the immediate environment are avoided;
- Where this is not possible, impacts are mitigated; and,
- Ensure that the environment is rehabilitated following construction
- Meet the requirements of the Record of Decision

The EMP outlines the required procedures and management actions necessary to avoid, remedy, or mitigate the effects on the environment. The plan covers;

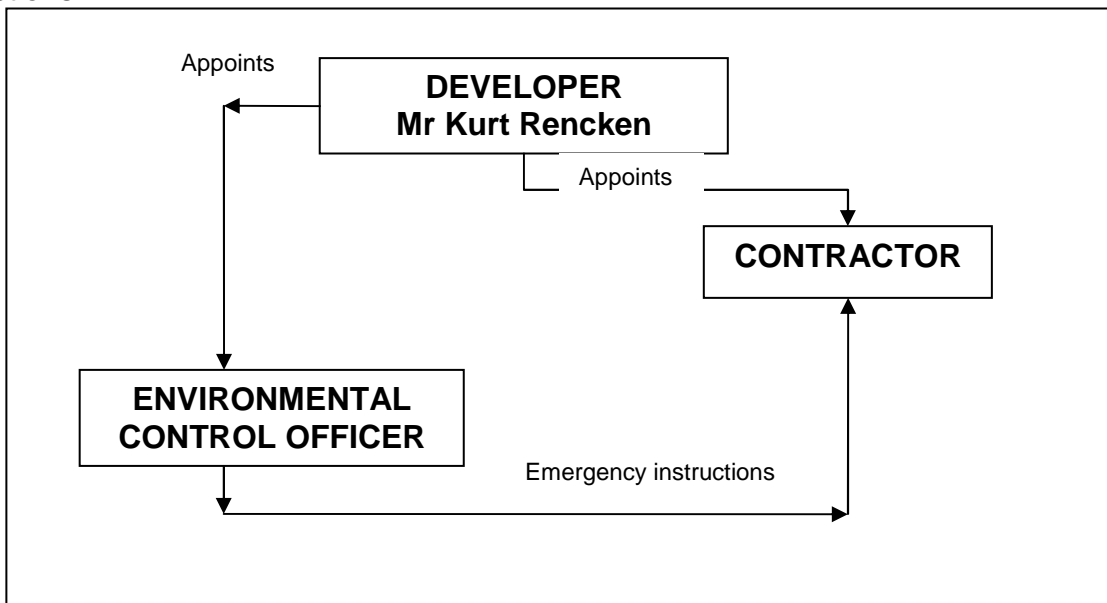
- Actions required to minimise or remedy any negative environmental impacts resulting from construction activities;
- Which bodies, organisations, or individuals are responsible for which activities;
- Performance criteria, and monitoring mechanisms to ensure instructions are achieving the desired level of protection and are correctly implemented.

The construction Phase EMP covers activities from project initiation through to the completion of construction (site handover) and rehabilitation of the site.

## 2. ROLES AND RESPONSIBILITIES, AND IMPLEMENTATION

### 2.1. INTRODUCTION

The various parties involved in the construction process, and their respective roles and responsibilities are outlined below and detailed in the following sections.



## 2.2. Mr Kurt Rencken (The applicant and developer)

Mr Kurt Rencken is the applicant and developer and is therefore responsible for ensuring all legal requirements in respect of the development are met which includes ensuring compliance with the conditions of the Record of Decision (ROD) and consequently the conditions of this EMP.

The applicant/developer is responsible for:

- providing an engineer to oversee the construction works
- appointing or providing an Environmental Control Officer for the construction period
- appointing a contractor to undertake the works
- notifying DAEA of the commencement of construction activities in terms of clause ..... of the ROD
- approving amendments to this EMP and notifying DAEA of the amendments
- ensuring that all future owners are made aware of the conditions pertaining to the development and operation of the property. In terms of item XXX of the ROD The Department must be notified within thirty (30) days thereof of any change of ownership and/ or project manager of the entire property, or of the intermediate and general residential subdivisions. Conditions imposed in terms of the ROD must be made known to the new owner/s and/or developer/s and are binding on the new owner/s and or developer/s.

## 2.3. THE ENVIRONMENTAL CONTROL OFFICER

The Environmental Control Officer (ECO) is a suitably qualified environmental professional appointed by the developer for the duration of the contract. The ECO must be appointed prior to construction commencing and should provide input in evaluating method statements submitted by contractors tendering for construction.

The ECO is responsible for:

- Ensuring that the provisions of the EMP are complied with during construction;
- Ensuring that all activities are undertaken in accordance with responsible environmental practices;
- Providing the monthly report to DAEA;
- Conducting environmental awareness training of all contract and sub-contract staff (see Section 4.2).

## 2.4. THE CONTRACTOR

The contractor(s) is/ are appointed by the developer and are directly responsible to the developer for carrying out the specifications of the contract(s), which shall include the provisions of this EMP.

Although the contractors are not directly responsible to the ECO, the contractor(s) are required to conduct their activities in accordance with method statements included in tender documentation or those issued by the engineer in consultation with the ECO. The contractor(s) and the ECO will communicate directly to resolve any queries the contractor(s) may have regarding environmental practices.

The contractor is responsible for:

- The cost incurred for implementing the specifications of the EMP <sup>1</sup>, apart from the appointment of the ECO;
- Ensuring that all relevant contract staff are familiar with the specifications of this EMP;
- Ensuring that all contract staff and sub contractors have attended the environmental awareness courses and comply with the instructions therein; and
- Ensuring that all contract staff and sub-contractors comply with the specifications of the EMP.

Specifically the contractor is responsible for:

- Site clearing and vegetation removal (See Section 3.2).
- Erection of the site offices and surrounding contractors camp including kitchen, ablution, and storage facilities.
- Erecting fencing on the boundary of the construction site.
- Erecting signage.
- Taking delivery of construction materials.
- Effecting the construction activities in terms of the contract with the developer.
- Dismantling the site office and contractors camp.
- Rehabilitating the area of the contractors camp.

## **2.5. IMPLEMENTATION**

### **2.5.1. SITE MEETINGS**

The ECO shall attend all formal site meetings between the contractor and the engineer. The contractor's compliance with the requirements of the EMP shall be discussed and recorded in the minutes which shall be distributed to the ECO for record purposes.

### **2.5.2. AMENDMENTS**

The EMP is a dynamic living document which is intended to be improved on and modified as the project progresses. Changes to ensure compliance with best environmental practice may be proposed by the ECO, or other parties through the ECO.

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<sup>1</sup> These costs should be provided for in the tender document

Proposed and suggested changes shall be discussed with the engineer or main contractor and developer and documented. Any changes to the EMP shall be forwarded to DAEA for approval.

The ECO shall be responsible for ensuring that the contractor is aware of the changes, and that contract staff are suitably trained.

### **2.5.3. DISPUTES AND DISAGREEMENTS**

Any dispute arising between the parties on site in respect of the requirements of this EMP and or environmental management issues shall be resolved by the engineer.

## **3. OPERATIONS**

Responsible environmental practice shall be applied to all activities taking place during the construction period.

The contractor may be required to provide method statements for approval by the ECO for any activities regarded as sensitive.

### **3.1. SITE OFFICE AND CONTRACTORS CAMP**

The location of the site office and the contractor's camp is to be determined by the ECO in consultation with the developer, engineer and contractor.

- No staff housing shall be provided on site.
- The camp area shall be as small as possible and shall allow for parking for visitors and site staff.
- The contractor shall make use of the existing power supply to the site.
- The camp shall be fenced and access thereto controlled to prevent unauthorised access occurring.
- Signage shall be erected as per Section 4.1.
- The visual impact of the camp shall be minimised by screening such as green shade cloth being provided on the fencing surrounding the camp.
- The site office and all associated infrastructure shall be removed after the completion of construction, and the camp area rehabilitated.

### **3.2. CONSTRUCTION SITE DEMARCATION AND FENCING**

- The boundary of the construction site shall be demarcated by the Engineer in consultation with the ECO before construction commences.
- The Contractor shall erect temporary or permanent fencing around the construction site area in order to prevent:
  - the movement of workers or plant along the 1:100 yr floodline area.
  - the public from accessing the construction site.
- No vegetation shall be cleared without permission from the ECO. Any trees to be felled shall be demarcated as such by the Engineer in consultation with the ECO.

- Any topsoil that is removed in setting up the contractor's camp or clearing the construction site area shall be conserved in an area identified by the contractor and approved by the ECO and Engineer, for later use in site rehabilitation.
- Any spoil or excavated material shall be disposed of as designated by the engineer in consultation with the ECO. No material shall be disposed of on areas beyond the boundary of the construction site unless on a registered landfill site.
- If, during construction, any potential items of historical or archaeological value are uncovered, the construction in the immediate area must be halted and the ECO must be notified. The ECO must contact AMAFA to determine their requirements prior to construction recommencing.

### **3.3. CONSTRUCTION VEHICLES ACCESS AND PUBLIC RIGHT OF WAY**

#### **3.3.1. CONSTRUCTION VEHICLES**

Light vehicles, light and heavy delivery vehicles, and heavy plant will have to access the construction site during the construction phase.

- All construction vehicles shall utilise the access off the farm road off the main road Road R403.
- All heavy vehicles, including construction and delivery vehicles, shall adhere to municipal speed limits in urban areas and a speed limit of 10km/hr on the construction site. All companies delivering goods and materials shall be made aware of these conditions.
- The contractor shall ensure that any vehicles transporting sand, rocks, gravel or any other material capable of falling off the truck, shall employ adequate measures such as netting or sacking over the loads, to prevent the load from falling onto the roads and endangering other road users.
- All spillages shall be cleaned up immediately and logged in the Environmental Incident Report File.
- A holding area for waiting delivery trucks and plant shall be designated by the Contractor and approved by the Engineer in consultation with the ECO. No trucks shall be permitted to park, or to wait to enter the site in the neighbouring areas outside the designated holding area.
- Deliveries shall be timed to avoid disturbance to neighbouring residents in the early morning or late evening.
- Vehicles shall be fitted with standard working silencers.
- If turning areas for heavy vehicles and plant are required, these shall be designated by the Contractor and approved by the Engineer in consultation with the ECO.

### **3.4. WORKS**

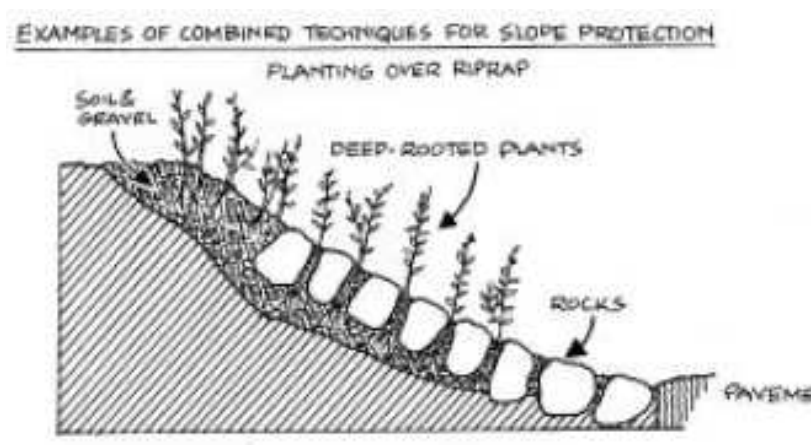
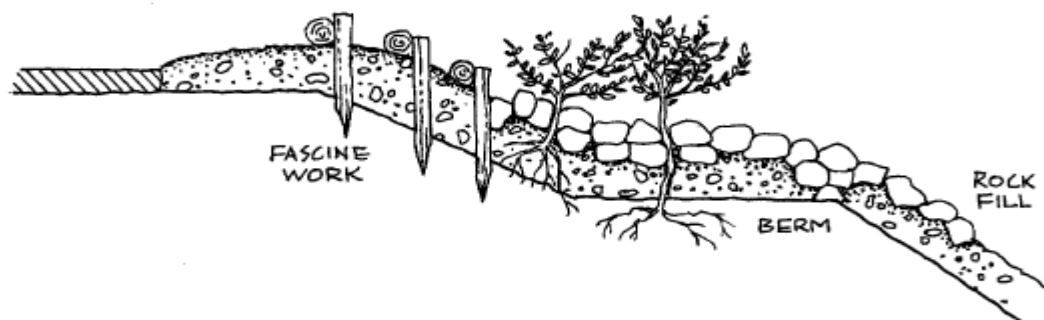
#### **3.4.1. VEGETATION MANAGEMENT**

The vegetation present on the site is cultivated lawn grass maintained by the poultry operation staff. This maintenance will continue during construction.

### 3.4.2. DUST EROSION AND STORMWATER CONTROL

The existing site is characterised by open areas (modified platormed area with grassed banks):

- The duration of time that stripped areas are left open to exposure and wind and water erosion, shall be minimised wherever possible and the full length of the works shall not be stripped unless active construction work is planned.
- Areas that have been stripped of vegetation shall be dampened as required, particularly during high wind conditions, to suppress dust.
- If dust generation is unavoidable, the neighbouring areas shall be monitored to ensure dust does not impact unduly on surrounding residences.
- All embankments, unless otherwise indicated by the Engineer shall be protected by a cut off drain to prevent stormwater erosion.
- Embankments shall be protected against erosion until sufficiently revegetated.
- Stormwater management on site shall be carried out in accordance with the Conditions of the ROD.
- Stormwater flow shall be controlled to avoid erosion.
- Heavily sedimented stormwater flow from the construction site shall be channelled into detention system ponds to capture any sediment prior to release into the stormwater system.



Examples of bio-engineered slope stabilisation<sup>2</sup>

<sup>2</sup> From eThekweni Generic EMP (2002)

### 3.4.3. NOISE CONTROL

- Machinery and vehicles shall be kept in good working order to minimise noise nuisance neighbouring residents.
- Notice of potentially particularly noisy activities shall be given to owners of adjacent properties and notice of such activities shall be posted as per Section 4.1. Examples of activities which may be of concern include:
  - Noise generated by jackhammers;
  - Dewatering pumps;
  - Drilling; and,
  - Continuous concrete pouring/pumping.

### 3.5. GENERAL

#### 3.5.1. WORKSHOP AND GENERAL MAINTENANCE

- Only very limited workshops shall be available on site for very basic repairs and maintenance to construction tools and equipment but not vehicles. Any dismantling of machinery or engines shall take place over drip trays to prevent soil contamination.
- Any oil, fuel or grease spills shall be reported to the ECO and the Environmental Incident Report File entry completed.
- Only biodegradable degreasers and detergents shall be used on site.
- All liquids generated in the maintenance activities shall be stored in weather proof drums and either recycled or disposed of at an appropriately licensed waste disposal facility.
- All used oils and greases shall be stored in suitably labelled, weather proof drums for recycling.
- All oils and greases shall be stored as specified in Section 3.6.
- All spare parts which could contain oils or greases shall be stored in such a manner that the action of rain or wind cannot result in environmental contamination.
- An area shall be designated for parking vehicles and plant by the Contractor. Any vehicles leaking oils or fuels are to be repaired immediately and the spills reported and cleaned up.
- **No construction vehicles of any description shall be washed on site**

#### 3.5.2. ABLUTION FACILITIES

- The contractor shall provide ablution facilities and temporary chemical toilets for contract staff for the duration of the contract.
- An area for such ablution facilities shall be designated by the Contractor and approved by the Engineer. The area shall be located such that potential nuisances on site and to neighbouring residents and the public are minimised. Ablution facilities shall be screened from public view.
- The ablution facilities to be provided on site shall be for minor ablutions such as washing of hands, showers and toilets only.
- Toilets shall be provided at a ratio of 1 toilet per 15 workers.
- Toilets shall be cleaned and, if chemical toilets, maintained regularly by a registered service provider. The condition of the toilets shall be checked

daily by the contractor and weekly by the ECO. The contractor to appoint a local worker to clean and sanitise the mobile toilets twice a day over and above the service provided by the toilet rental company to ensure the toilet experience by staff will encourage them to use it rather than the bush.

### **3.5.3. BREAK AREAS**

- A break area shall be designated by the Contractor and approved by the ECO and Engineer. Limited cooking and eating facilities shall be provided and cooking may only occur within this designated area.
- No open cooking fires shall be permitted and only gas may be used for cooking.
- Adequate fire-fighting equipment shall be provided in the cooking area.

### **3.5.4. WORKING HOURS**

Construction activities shall take place between sunrise and sunset from Monday to Saturday.

### **3.5.5. GENERAL STAFF CONDUCT**

Accordingly, the Contractor shall ensure that all contract staff and subcontractors have a regard for the public and environment and adhere to the following:

- No alcohol or drugs shall be permitted on site;
- No fires shall be permitted on site;
- No firearms shall be allowed on site unless used by security personnel and authorised by the Engineer;
- Noise shall be kept to a minimum;
- No pets shall be permitted onto the site;
- Contract staff and sub-contractors shall make use of the facilities provided (e.g. the use of the surrounding areas as a toilet is prohibited);
- Contract staff and sub-contractors shall be polite and courteous to any members of the public who may pass the site;
- No gathering of indigenous plants or plant parts, trapping of animals or fishing shall be permitted and;
- No contract staff or sub-contractors shall be permitted to go beyond the boundaries of the construction site to undertake construction work unless authorised by the Engineer in order to fulfil the terms of the construction contract;

### 3.6. MATERIALS STORAGE AND HANDLING

#### General

- Bulk storage of materials on site for extended periods of time is not permitted. Materials shall be ordered on an 'as needed' or 'just in time' basis.
- Limited material storage areas shall be identified by the Contractor and approved by the ECO and Engineer. The location of storage areas must take into account prevailing winds, and general on-site topography.
- Adequate fire-fighting equipment shall be provided at material storage areas where there is a risk of fire.
- Contractors shall prepare a method statement indicating the source of all natural materials (e.g. topsoil, sand, natural gravels, crushed stone, clay etc) and submit these for approval prior to commencement of work. All natural materials shall be from a legally compliant and certified source e.g. where materials have been mined, proof of authorisation to extract these materials from the landowner and Department of Minerals and Energy must be available.
- Material stockpiles shall not be higher than 2m unless otherwise permitted by the Engineer. Stockpiles exposed to windy conditions or heavy rain shall be covered by cloth if they have the potential to generate excessive dust and/or sediment.
- All stock piles of sand that could erode must be contained by means of a sand bag ring, a ring of building blocks or old scaffold planks around the base of the stock pile to contain it and prevent it from being lost.
- A bunded area shall be designated for any concrete batching by the Contractor and approved by the RE with input from the ECO. No water or run-off from this area is permitted to enter the stormwater system or flow into the wetland. An impermeable sump shall be created for concrete waste that is regularly desludged and the waste disposed off site.

#### Hazardous Materials, including oils, fuels and greases.

- Relevant Material Safety Data Sheets (MSDS) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDS's should additionally include information on ecological impacts and measures to minimise negative impacts during accidental releases or escapes.
- No bulk storage of fuel or oils (including hydraulic fluids) is permitted on site.
- An area shall be assigned for the storage of minor quantities of hazardous substances including fuels and oils by the Contractor and approved by the Engineer in consultation with the ECO. The area shall be clearly demarcated. In assigning a storage area, the proximity to public areas shall be taken into account.
- If fuels and oils to be used in the construction process then they are to be stored in 210 litre drums, the drums shall be positioned on drips trays

to prevent accidental spillage and pumps shall be used to decant the contents into vehicles or moveable equipment with adequate soil protection sheeting whilst filling machinery.

- Adequate fire-fighting equipment shall be provided at hazardous materials storage areas.
- All plant shall be fuelled at a designed dispensing area, designed to prevent or contain any pollution.
- In order to handle an emergency spill, a quantity of a material capable of encapsulating/absorbing a fuel or oil spill shall be available at the fuel storage and dispensing areas. The material shall be capable of handling a spill of at least 200l.
- Any fuel or spill of any size shall be reported to the ECO and logged in the Environmental Incident Report File (Section 6.2). Such spills shall be cleaned immediately and the unusable fuel and contaminated soil shall be removed and disposed of to a licensed hazardous waste facility.
- Any oil or fuel that cannot be removed shall be treated in situ with an appropriate remedial agent as determined by the ECO.
- All spills greater than 200l shall be reported to DAEA (Cedara) and the Department of Water Affairs and Forestry (DWAf).

### **3.7. WASTE MANAGEMENT**

- No waste may be buried or burned on site.
- An area shall be designated for temporary storage of bulk waste by the Contractor, approved by the Engineer and the ECO. Builder's rubble, earth and stone shall be temporarily sorted in this area. Waste in this area shall be disposed of within two days to an appropriately licensed waste disposal site i.e. bulk waste may not be stored for longer than two days. Waybills shall be obtained and retained on site as proof of safe disposal.
- Sufficient weather and vermin proof bins shall be provided for the disposal of general solid waste within the contractors camp and on the construction site;
- Bins shall be emptied a minimum of once a week or more frequently if required and the contents disposed of to a licensed waste disposal facility.
- The contractors Camp and the construction site shall be kept clear of litter on a daily basis. An active litter prevention and collection programme shall be initiated by the Contractor and monitored by the ECO.
- All hazardous wastes, including all spent oils and greases shall be separated from general waste and stored in weather proof drums for disposal to recyclers or an appropriately licensed waste disposal facility. Waybills shall be obtained and retained on site as proof of safe disposal.

Separation and recycling of wastes are encouraged. Receptacles for different types of waste shall be provided and solid waste separated into paper, plastic, glass, metal and non-hazardous waste at the designated waste storage area.

## **4. SIGNAGE, AWARENESS AND COMMUNITY LIASON**

### **4.1. SIGNAGE**

The Contractor shall be responsible for designing and erecting the signage outlined below. Signage shall be weather proof and approved by the ECO and Engineer prior to being erected.

#### **Information boards**

Information boards shall be erected at the entrance to the Emeraldene site. The boards shall detail:

- What is being constructed and why;
- Contact details of the ECO for more information, input or complaints; and,
- Contact details for the RE, contractor and emergency services.

The boards shall also indicate that only authorised personnel shall be permitted on site.

#### **Access Information**

A board providing access information shall be erected:

- One board at the service/construction entrance.

This access information board shall detail:

- What is occurring and the duration of the construction project;
- Access arrangements for the public; and,
- Contact details of the ECO for more information, input or complaints.

#### **Adhoc Notices**

- Adhoc notice of particularly noisy or dangerous operations must be posted alongside the access information boards as required.

### **4.2. EMPLOYEE CONTRACTOR TRAINING**

The ECO shall be responsible for conducting environmental awareness training of all contractor and sub-contractor staff. The Contractor shall keep a log of all attendees and no staff members shall be permitted to work on the site unless they have undergone such training.

The courses shall:

- Be run as part of the contractors health and safety training programmes to avoid duplication and unnecessary down time for employees;
- Cover three components:
  - Basic environmental awareness and good operating practices including Sections 28 – 31 of the National environmental Management Act;
  - Details of the EMP requirements;

- Make use of translators where necessary.

### **4.3. STAKEHOLDER LIASON**

- The ECO shall act as the stakeholder liaison officer.
- The ECO shall provide a telephone number for the use of the public should they require further information or wish to report a non-compliance.
- The ECO shall notify the neighbouring property owners of the commencement of construction and the contact telephone number one week prior to construction commencing.
- A stakeholder complaints record shall be maintained at the construction site office detailing all complaints and issues raised by the public and the manner in which problems were resolved. Complaints shall be resolved within a reasonable period of time.

## **5. CLEAN UP AND REHABILITATION**

Once construction is complete, the site shall be rehabilitated and landscaped to the satisfaction of the Engineer and Developer.

### **5.1. GENERAL**

- The construction camp, site office and associated infrastructure shall be removed unless otherwise indicated by the Engineer. Those areas of the site requiring revegetation shall be ripped/scarified and revegetated as per the property owner's requirements.
- Fences and barriers associated with the construction shall be removed unless otherwise indicated by the Engineer.
- The area shall be inspected for spills of hazardous and other substances (e.g. paint). Any contaminated areas shall be cleaned up.
- The site shall be cleared of all litter and rubble. Rubble shall be disposed of at a licensed waste disposal site.
- All leftover materials are to be returned to suppliers and depots and removed from the site.
- All embankments shall be trimmed and shaped to the Engineers satisfaction and left in a state where erosion will not occur.

### **5.2. REVEGETATION**

The site shall be rehabilitated with indigenous vegetation appropriate to the area as per the rehabilitation plan. The Emeraldene Poultry Farm will be responsible for the ongoing maintenance of the rehabilitated poultry house surrounds.

## **6. MONITORING AND RECORD KEEPING**

### **6.1. EMP COMPLIANCE MONITORING**

The ECO is responsible for monitoring compliance with the EMP. In order to do this the ECO shall conduct two-weekly site inspections which shall include:

- A visual inspection of the Contractor's Camp and the construction site.
- Recording of any non-compliance in the ECO diary and requiring response by the contractor.
- Responding to any incident reports and monitoring the implementation of remedial measures.
- Liaising with the contractor and engineer to effect EMP compliance.

A monthly report detailing EMP compliance shall be submitted to the Kwa Dukuza Local Municipality and the Department of Agriculture and Environmental Affairs (DAEA) marked for the attention of:

#### **INSERT CASE OFFICER**

Environmental Management  
Department of Agriculture & Environmental Affairs  
Private Bag X006  
Bishopsgate  
4008

### **6.2. RECORD KEEPING**

All records in respect of the implementation of this EMP (eg ECO Diary, Complaints register, and Incident report register) shall be kept safely together on site where they can be retrieved easily.

All environmental queries, agreed actions and dates of compliance must be reflected in the contractors meeting minutes.

#### **6.2.1. ECO DIARY**

An ECO Diary, wherein the ECO shall record comments with regard to activities on site after inspections and call outs, shall be kept on site and shall be available to the engineer/developer.

#### **6.2.2. ENVIRONMENTAL INCIDENT REPORT REGISTER AND COMPLAINT REGISTER**

An Environmental Incident Report Register and Complaint Register shall be kept at the site office.

Any incidents such as fuel or oil spillages, unauthorised vegetation removal etc shall be recorded in the incident report file together with comments from the ECO and his/her recommendations to prevent recurrence.

In the event that any member of the public or authority has any complaint to lodge it shall be recorded in the complaint register and attended to by the ECO.

### 6.2.3. CONTRACTORS DAILY ENVIRONMENTAL CHECKLIST

The Contractor is to ensure that the daily checklist is completed at the end of the day by an environmentally aware responsible staff member for examination by the ECO.

### 6.2.4. ECO CHECKLISTS

The following checklists shall be completed by the ECO and the information summarised for inclusion in the compliance reports to DAEA:

- Project Start-up checklist – once the Contractor(s) has been appointed and before construction commences (Appendix 7.1)
- ECO Two-Weekly Checklist – on completion of site inspection (Appendix 7.2)
- ECO Monthly checklist – after monthly site meeting (Appendix 7.3)
- ECO Site Closure Checklist – during and after post construction rehabilitation assessment (Appendix 7.4)

## 7. APPENDICES

### 7.1 PROJECT START-UP CHECKLIST

(When the Contractor(s) is appointed and before construction commences)

	ITEM	SIGN
1.	There is no staff housing	
2.	Site camp is approved by Engineer	
3.	Site camp is approved ECO	
4.	Site camp is fenced	
5.	Signage is erected	
6.	Visual impact has been minimised	
7.	Construction site is temporarily fenced off	
8.	Contractor's camp top soil is conserved in a protected stockpile.	

## 7.2 ECO TWO-WEEKLY CHECKLIST

(On completion of site inspection)

ITEM	SIGN
<p><b>1. ACCESS:</b></p> <ul style="list-style-type: none"> <li>• All heavy vehicles, including construction and delivery vehicles, shall adhere to municipal speed limits in urban areas and a speed limit of 10km/hr on the construction site. All companies delivering goods and materials shall be made aware of these conditions.</li> <li>• The contractor shall ensure that any vehicles transporting sand, rocks, gravel or any other material capable of falling off the truck, shall employ adequate measures such as netting or sacking over the loads, to prevent the load from falling onto the roads and endangering other road users.</li> <li>• All spillages shall be cleaned up immediately and logged in the Environmental Incident Report File.</li> <li>• A holding area for waiting delivery trucks and plant shall be designated by the Contractor and approved by the Engineer in consultation with the ECO. No trucks shall be permitted to park, or to wait to enter the site in the neighbouring areas outside the designated holding area.</li> <li>• Deliveries shall be timed to avoid disturbance to neighbouring residents in the early morning or late evening.</li> <li>• Vehicles shall be fitted with standard working silencers.</li> <li>• If turning areas for heavy vehicles and plant are required, these shall be designated by the Contractor and approved by the Engineer in consultation with the ECO.</li> </ul>	
<p><b>2. WORKS</b></p> <p><b>2.1 DUST, EROSION AND STORMWATER CONTROL</b></p> <p>The existing site is characterised by open areas (modified platform and grassed banks):</p> <ul style="list-style-type: none"> <li>• The duration of time that stripped areas are left open to exposure and wind and water erosion, shall be minimised wherever possible and the full length of the works shall not be stripped unless active construction work is planned.</li> <li>• Areas that have been stripped of vegetation shall be dampened as required, particularly during high wind conditions, to suppress dust.</li> <li>• If dust generation is unavoidable, the neighbouring areas shall be monitored to ensure dust does not impact unduly on surrounding residences.</li> <li>• All embankments, unless otherwise indicated by the Engineer shall be protected by a cut off drain to prevent stormwater erosion.</li> <li>• Embankments shall be protected against erosion until sufficiently revegetated.</li> <li>• Stormwater management on site shall be carried out in</li> </ul>	

<p>accordance with the Conditions of the ROD.</p> <ul style="list-style-type: none"> <li>• Stormwater flow shall be controlled to avoid erosion.</li> <li>• Heavily sedimented stormwater flow from the construction site shall be channelled into detention ponds to capture any sediment prior to release into the stormwater system.</li> </ul> <p><b>2.5 NOISE CONTROL</b></p> <ul style="list-style-type: none"> <li>• Machinery and vehicles shall be kept in good working order to minimise noise nuisance to patrons and residents.</li> <li>• Notice of potentially particularly noisy activities shall be given to owners of adjacent properties and notice of such activities shall be posted as per Section 4.1. Examples of activities which may be of concern include: <ul style="list-style-type: none"> <li>- Noise generated by jackhammers;</li> <li>- Dewatering pumps;</li> <li>- Drilling; and,</li> <li>- Continuous concrete pouring/pumping.</li> </ul> </li> </ul>	
<p><b>3. GENERAL</b></p> <p><b>3.1 WORKSHOP AND GENERAL MAINTENANCE</b></p> <ul style="list-style-type: none"> <li>• Only very limited workshops shall be available on site for very basic repairs and maintenance to construction tools and equipment but not vehicles. Any dismantling of machinery or engines shall take place over drip trays to prevent soil contamination.</li> <li>• Any oil, fuel or grease spills shall be reported to the ECO and the Environmental Incident Report File entry completed.</li> <li>• Only biodegradable degreasers and detergents shall be used on site.</li> <li>• All liquids generated in the maintenance activities shall be stored in weather proof drums and either recycled or disposed of at an appropriately licensed waste disposal facility.</li> <li>• All used oils and greases shall be stored in suitably labelled, weather proof drums for recycling.</li> <li>• All oils and greases shall be stored as specified in Section 3.6.</li> <li>• All spare parts which could contain oils or greases shall be stored in such a manner that the action of rain or wind cannot result in environmental contamination.</li> <li>• An area shall be designated for parking vehicles and plant by the Contractor. Any vehicles leaking oils or fuels are to be repaired immediately and the spills reported and cleaned up.</li> <li>• <b>No construction vehicles of any description shall be washed on site.</b></li> </ul>	
<p><b>4. ABLUTION FACILITIES</b></p> <ul style="list-style-type: none"> <li>• The contractor shall provide ablution facilities and temporary chemical toilets for contract staff for the duration of the contract.</li> </ul>	

<ul style="list-style-type: none"> <li>• An area for such ablution facilities shall be designated by the Contractor and approved by the Engineer. The area shall be located such that potential nuisances on site and to neighbouring residents and the public are minimised. Ablution facilities shall be screened from public view.</li> <li>• The ablution facilities to be provided on site shall be for minor ablutions such as washing of hands, showers and toilets only.</li> <li>• Toilets shall be provided at a ratio of 1 toilet per 15 workers.</li> <li>• Toilets shall be cleaned and, if chemical toilets, maintained regularly by a registered service provider. The condition of the toilets shall be checked daily by the contractor and weekly by the ECO. The contractor to appoint a local worker to clean and sanitise the mobile toilets twice a day over and above the service provided by the toilet rental company to ensure the toilet experience by staff will encourage them to use it rather than the bush.</li> </ul>	
<p><b>5. BREAK AREAS</b></p> <ul style="list-style-type: none"> <li>• A break area shall be designated by the Contractor and approved by the ECO and Engineer. Limited cooking and eating facilities shall be provided and cooking may only occur within this designated area.</li> <li>• No open cooking fires shall be permitted and only gas may be used for cooking.</li> <li>• Adequate fire-fighting equipment shall be provided in the cooking area.</li> </ul>	
<p><b>6. WORKING HOURS</b></p> <p>Construction activities shall take place between sunrise and sunset from Monday to Saturday.</p>	
<p><b>7. GENERAL STAFF CONDUCT</b></p> <p>The Contractor shall ensure that all contract staff and subcontractors have a regard for the public and environment and adhere to the following:</p> <ul style="list-style-type: none"> <li>• No alcohol or drugs shall be permitted on site;</li> <li>• No fires shall be permitted on site;</li> <li>• No firearms shall be allowed on site unless used by security personnel and authorised by the Engineer;</li> <li>• Noise shall be kept to a minimum;</li> <li>• No pets shall be permitted onto the site;</li> <li>• Contract staff and sub-contractors shall make use of the facilities provided (e.g. the use of the surrounding areas as a toilet is prohibited);</li> <li>• Contract staff and sub-contractors shall be polite and courteous to any members of the public who may pass the site;</li> <li>• No contract staff or sub-contractors shall be permitted to go beyond the boundaries of the construction site to undertake</li> </ul>	

<p>construction work unless authorised by the Engineer in order to fulfil the terms of the construction contract;</p>	
<p><b>8. MATERIALS STORAGE AND HANDLING</b></p> <p>General</p> <ul style="list-style-type: none"> <li>• Bulk storage of materials on site for extended periods of time is not permitted. Materials shall be ordered on an 'as needed' or 'just in time' basis.</li> <li>• Limited material storage areas shall be identified by the Contractor and approved by the ECO and Engineer. The location of storage areas must take into account prevailing winds and general on-site topography.</li> <li>• Adequate fire-fighting equipment shall be provided at material storage areas where there is a risk of fire.</li> <li>• Material stockpiles shall not be higher than 2m unless otherwise permitted by the Engineer. Stockpiles exposed to windy conditions or heavy rain shall be covered by cloth if they have the potential to generate excessive dust and/or sediment.</li> <li>• All stock piles of sand that could erode must be contained by means of a sand bag ring, a ring of building blocks or old scaffold planks around the base of the stock pile to contain it and prevent it from being lost.</li> <li>• A bunded area shall be designated for any concrete batching by the Contractor and approved by the RE with input from the ECO. No water or run-off from this area is permitted to enter the stormwater system. An impermeable sump shall be created for concrete waste that is regularly desludged and the waste disposed off site.</li> </ul> <p>Hazardous Materials, including oils, fuels and greases.</p> <ul style="list-style-type: none"> <li>• Relevant Material Safety Data Sheets (MSDS) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDS's should additionally include information on ecological impacts and measures to minimise negative impacts during accidental releases or escapes.</li> <li>• No bulk storage of fuel or oils (including hydraulic fluids) is permitted on site.</li> <li>• An area shall be assigned for the storage of minor quantities of hazardous substances including fuels and oils by the Contractor and approved by the Engineer in consultation with the ECO. The area shall be clearly demarcated. In assigning a storage area, the proximity to public areas shall be taken into account.</li> <li>• If fuels and oils to be used in the construction process then they are to be stored in 210 litre drums, the drums shall be positioned on drips trays to prevent accidental spillage and</li> </ul>	

<p>pumps shall be used to decant the contents into vehicles or moveable equipment with adequate soil protection sheeting whilst filling machinery.</p> <ul style="list-style-type: none"> <li>• Adequate fire-fighting equipment shall be provided at hazardous materials storage areas.</li> <li>• All plant shall be fuelled at a designed dispensing area, designed to prevent or contain any pollution.</li> <li>• In order to handle an emergency spill, a quantity of a material capable of encapsulating/absorbing a fuel or oil spill shall be available at the fuel storage and dispensing areas. The material shall be capable of handling a spill of at least 200l.</li> <li>• Any fuel or spill of any size shall be reported to the ECO and logged in the Environmental Incident Report File (Section 6.2). Such spills shall be cleaned immediately and the unusable fuel and contaminated soil shall be removed and disposed of to a licensed hazardous waste facility.</li> <li>• Any oil or fuel that cannot be removed shall be treated in situ with an appropriate remedial agent as determined by the ECO.</li> <li>• All spills greater than 200l shall be reported to DAEA (Cedara) and the Department of Water Affairs and Forestry (DWAF).</li> </ul>	
<p><b>9. WASTE MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>• No waste may be buried or burned on site.</li> <li>• An area shall be designated for temporary storage of bulk waste by the Contractor, approved by the Engineer and the ECO. Builder's rubble, earth and stone shall be temporarily sorted in this area. Waste in this area shall be disposed of within two days to an appropriately licensed waste disposal site i.e. bulk waste may not be stored for longer than two days. Waybills shall be obtained and retained on site as proof of safe disposal.</li> <li>• Sufficient weather and vermin proof bins shall be provided for the disposal of general solid waste within the contractors camp and on the construction site;</li> <li>• Bins shall be emptied a minimum of once a week or more frequently if required and the contents disposed of to a licensed waste disposal facility.</li> <li>• The contractors Camp and the construction site shall be kept clear of litter on a daily basis. An active litter prevention and collection programme shall be initiated by the Contractor and monitored by the ECO.</li> <li>• All hazardous wastes, including all spent oils and greases shall be separated from general waste and stored in weather proof drums for disposal to recyclers or an appropriately licensed waste disposal facility. Waybills shall be obtained and retained on site as proof of safe disposal.</li> </ul> <p>Segregation and recycling of waste are encouraged. Receptacles for different types of waste shall be provided and solid waste</p>	

<p>separated into paper, plastic, glass, metal and non-hazardous waste at the designated waste storage area.</p>	
<p><b>10. SIGNAGE, AWARENESS AND COMMUNITY LIASON</b></p> <p><b>10.1 SIGNAGE</b></p> <p>The Contractor shall be responsible for designing and erecting the signage outlined below. Signage shall be weather proof and approved by the ECO and Engineer prior to being erected.</p> <p><b>10.2 INFORMATION BOARDS</b></p> <p>Information boards shall be erected at the entrance to the site. The boards shall detail:</p> <ul style="list-style-type: none"> <li>• What is being constructed and why;</li> <li>• Contact details of the ECO for more information, input or complaints; and,</li> <li>• Contact details for the RE, contractor and emergency services.</li> </ul> <p>The boards shall also indicate that only authorised personnel shall be permitted on site.</p> <p><b>10.3 ACCESS INFORMATION</b></p> <p>A board providing access information shall be erected:</p> <ul style="list-style-type: none"> <li>• One board at the service/construction entrance.</li> </ul> <p>This access information board shall detail:</p> <ul style="list-style-type: none"> <li>• What is occurring and the duration of the construction project;</li> <li>• Access arrangements for the public; and,</li> <li>• Contact details of the ECO for more information, input or complaints.</li> </ul> <p><b>10.4 ADHOC NOTICES:</b></p> <ul style="list-style-type: none"> <li>• Adhoc notice of particularly noisy or dangerous operations must be posted alongside the access information boards as required.</li> </ul>	
<p><b>11. EMPLOYEE CONTRACTOR TRAINING</b></p> <p>The ECO shall be responsible for conducting environmental awareness training of all contractor and sub-contractor staff. The Contractor shall keep a log of all attendees and no staff members shall be permitted to work on the site unless they have undergone such training.</p> <p>The courses shall:</p> <ul style="list-style-type: none"> <li>• Be run as part of the contractors health and safety training programmes to avoid duplication and unnecessary down time for</li> </ul>	

<p>employees;</p> <ul style="list-style-type: none"> <li>• Cover three components:</li> <li>- Basic environmental awareness and good operating practices including Sections 28 – 31 of the National environmental Management Act;</li> <li>- Details of the EMP requirements;</li> <li>- Make use of translators where necessary.</li> </ul>	
<p><b>12. STAKEHOLDER LIASON</b></p> <ul style="list-style-type: none"> <li>• The ECO shall act as the stakeholder liaison officer.</li> <li>• The ECO shall provide a telephone number for the use of the public should they require further information or wish to report a non-compliance.</li> <li>• The ECO shall notify the neighbouring property owners of the commencement of construction and the contact telephone number one week prior to construction commencing.</li> <li>• A stakeholder complaints record shall be maintained at the construction site office detailing all complaints and issues raised by the public and the manner in which problems were resolved. Complaints shall be resolved within a reasonable period of time.</li> </ul>	

### 7.3 ECO MONTHLY CHECKLIST

(After monthly site meeting)

ITEM	SIGN
<p><b>1. ACCESS:</b></p> <ul style="list-style-type: none"> <li>• All construction vehicles shall utilise the access off the farm Road off the main road R403 to town.</li> <li>• All heavy vehicles, including construction and delivery vehicles, shall adhere to municipal speed limits in urban areas and a speed limit of 10km/hr on the construction site. All companies delivering goods and materials shall be made aware of these conditions.</li> <li>• The contractor shall ensure that any vehicles transporting sand, rocks, gravel or any other material capable of falling off the truck, shall employ adequate measures such as netting or sacking over the loads, to prevent the load from falling onto the roads and endangering other road users.</li> <li>• All spillages shall be cleaned up immediately and logged in the Environmental Incident Report File.</li> <li>• A holding area for waiting delivery trucks and plant shall be designated by the Contractor and approved by the Engineer in consultation with the ECO. No trucks shall be permitted to park, or to wait to enter the site in the neighbouring areas outside the designated holding area.</li> <li>• Deliveries shall be timed to avoid disturbance to neighbouring residents in the early morning or late evening.</li> <li>• Vehicles shall be fitted with standard working silencers.</li> <li>• If turning areas for heavy vehicles and plant are required, these shall be designated by the Contractor and approved by the Engineer in consultation with the ECO.</li> </ul>	
<p><b>2. WORKS</b></p> <p><b>2.2 VEGETATION MANAGEMENT</b></p> <p>Vegetation Management on the site shall be undertaken in accordance with conditions of the ROD. A vegetation survey of all key vegetation is to be undertaken and the Record provided to the Compliance, Monitoring and Enforcement component of DAEA, Cedara office.</p> <p><b>2.4 DUST EROSION AND STORMWATER CONTROL</b></p> <p>The existing site is characterised by open areas (modified platform and grassed banks):</p> <ul style="list-style-type: none"> <li>• The duration of time that stripped areas are left open to exposure and wind and water erosion, shall be minimised wherever possible and the full length of the works shall not be stripped unless active construction work is planned.</li> <li>• Areas that have been stripped of vegetation shall be dampened as required, particularly during high wind</li> </ul>	

<p>conditions, to suppress dust.</p> <ul style="list-style-type: none"> <li>• If dust generation is unavoidable, the neighbouring areas shall be monitored to ensure dust does not impact unduly on surrounding residences.</li> <li>• All embankments, unless otherwise indicated by the Engineer shall be protected by a cut off drain to prevent stormwater erosion.</li> <li>• Embankments shall be protected against erosion until sufficiently revegetated.</li> <li>• Stormwater management on site shall be carried out in accordance with the Conditions of the ROD.</li> <li>• Stormwater flow shall be controlled to avoid erosion.</li> <li>• Heavily sedimented stormwater flow from the construction site shall be channelled into detention ponds to capture any sediment prior to release into the stormwater system.</li> </ul> <p><b>2.5 NOISE CONTROL</b></p> <ul style="list-style-type: none"> <li>• Machinery and vehicles shall be kept in good working order to minimise noise nuisance to patrons and residents.</li> <li>• Notice of potentially particularly noisy activities shall be given to owners of adjacent properties and notice of such activities shall be posted as per Section 4.1. Examples of activities which may be of concern include: <ul style="list-style-type: none"> <li>- Noise generated by jackhammers;</li> <li>- Dewatering pumps;</li> <li>- Drilling; and,</li> <li>- Continuous concrete pouring/pumping.</li> </ul> </li> </ul>	
<p><b>3. GENERAL</b></p> <p><b>3.1 WORKSHOP AND GENERAL MAINTENANCE</b></p> <ul style="list-style-type: none"> <li>• Only very limited workshops shall be available on site for very basic repairs and maintenance to construction tools and equipment but not vehicles. Any dismantling of machinery or engines shall take place over drip trays to prevent soil contamination.</li> <li>• Any oil, fuel or grease spills shall be reported to the ECO and the Environmental Incident Report File entry completed.</li> <li>• Only biodegradable degreasers and detergents shall be used on site.</li> <li>• All liquids generated in the maintenance activities shall be stored in weather proof drums and either recycled or disposed of at an appropriately licensed waste disposal facility.</li> <li>• All used oils and greases shall be stored in suitably labelled, weather proof drums for recycling.</li> <li>• All oils and greases shall be stored as specified in Section 3.6.</li> <li>• All spare parts which could contain oils or greases shall be stored in such a manner that the action of rain or wind cannot result in environmental contamination.</li> </ul>	

<ul style="list-style-type: none"> <li>• An area shall be designated for parking vehicles and plant by the Contractor. Any vehicles leaking oils or fuels are to be repaired immediately and the spills reported and cleaned up.</li> <li>• <b>No construction vehicles of any description shall be washed on site.</b></li> </ul>	
<p><b>4. ABLUTION FACILITIES</b></p> <ul style="list-style-type: none"> <li>• The contractor shall provide ablution facilities and temporary chemical toilets for contract staff for the duration of the contract.</li> <li>• An area for such ablution facilities shall be designated by the Contractor and approved by the Engineer. The area shall be located such that potential nuisances on site and to neighbouring residents and the public are minimised. Ablution facilities shall be screened from public view.</li> <li>• The ablution facilities to be provided on site shall be for minor ablutions such as washing of hands, showers and toilets only.</li> <li>• Toilets shall be provided at a ratio of 1 toilet per 15 workers.</li> <li>• Toilets shall be cleaned and, if chemical toilets, maintained regularly by a registered service provider. The condition of the toilets shall be checked daily by the contractor and weekly by the ECO. The contractor to appoint a local worker to clean and sanitise the mobile toilets twice a day over and above the service provided by the toilet rental company to ensure the toilet experience by staff will encourage them to use it rather than the bush.</li> </ul>	
<p><b>5. BREAK AREAS</b></p> <ul style="list-style-type: none"> <li>• A break area shall be designated by the Contractor and approved by the ECO and Engineer. Limited cooking and eating facilities shall be provided and cooking may only occur within this designated area.</li> <li>• No open cooking fires shall be permitted and only gas may be used for cooking.</li> <li>• Adequate fire-fighting equipment shall be provided in the cooking area.</li> </ul>	
<p><b>6. WORKING HOURS</b></p> <p>Construction activities shall take place between sunrise and sunset from Monday to Saturday.</p>	
<p><b>7. GENERAL STAFF CONDUCT</b></p> <p>The Contractor shall ensure that all contract staff and subcontractors have a regard for the public and environment and adhere to the following:</p> <ul style="list-style-type: none"> <li>• No alcohol or drugs shall be permitted on site;</li> <li>• No fires shall be permitted on site;</li> <li>• No firearms shall be allowed on site unless used by security</li> </ul>	

<p>personnel and authorised by the Engineer;</p> <ul style="list-style-type: none"> <li>• Noise shall be kept to a minimum;</li> <li>• No pets shall be permitted onto the site;</li> <li>• Contract staff and sub-contractors shall make use of the facilities provided (e.g. the use of the surrounding areas as a toilet is prohibited);</li> <li>• Contract staff and sub-contractors shall be polite and courteous to any members of the public who may pass the site;</li> <li>• No gathering of indigenous plants or plant parts, trapping of animals or fishing shall be permitted and;</li> <li>• No contract staff or sub-contractors shall be permitted to go beyond the boundaries of the construction site to undertake construction work unless authorised by the Engineer in order to fulfil the terms of the construction contract;</li> </ul>	
<p><b>8. MATERIALS STORAGE AND HANDLING</b></p> <p>General</p> <ul style="list-style-type: none"> <li>• Bulk storage of materials on site for extended periods of time is not permitted. Materials shall be ordered on an 'as needed' or 'just in time' basis.</li> <li>• Limited material storage areas shall be identified by the Contractor and approved by the ECO and Engineer. The location of storage areas must take into account prevailing winds and general on-site topography.</li> <li>• Adequate fire-fighting equipment shall be provided at material storage areas where there is a risk of fire.</li> <li>• Material stockpiles shall not be higher than 2m unless otherwise permitted by the Engineer. Stockpiles exposed to windy conditions or heavy rain shall be covered by cloth if they have the potential to generate excessive dust and/or sediment.</li> <li>• All stock piles of sand that could erode must be contained by means of a sand bag ring, a ring of building blocks or old scaffold planks around the base of the stock pile to contain it and prevent it from being lost.</li> <li>• A bunded area shall be designated for any concrete batching by the Contractor and approved by the RE with input from the ECO. No water or run-off from this area is permitted to enter the stormwater system. An impermeable sump shall be created for concrete waste that is regularly desludged and the waste disposed off site.</li> </ul> <p>Hazardous Materials, including oils, fuels and greases.</p> <ul style="list-style-type: none"> <li>• Relevant Material Safety Data Sheets (MSDS) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDS's should additionally include information on ecological impacts and measures to minimise negative impacts during accidental</li> </ul>	

<p>releases or escapes.</p> <ul style="list-style-type: none"> <li>• No bulk storage of fuel or oils (including hydraulic fluids) is permitted on site.</li> <li>• An area shall be assigned for the storage of minor quantities of hazardous substances including fuels and oils by the Contractor and approved by the Engineer in consultation with the ECO. The area shall be clearly demarcated. In assigning a storage area, the proximity to public areas shall be taken into account.</li> <li>• If fuels and oils to be used in the construction process then they are to be stored in 210 litre drums, the drums shall be positioned on drips trays to prevent accidental spillage and pumps shall be used to decant the contents into vehicles or moveable equipment with adequate soil protection sheeting whilst filling machinery.</li> <li>• Adequate fire-fighting equipment shall be provided at hazardous materials storage areas.</li> <li>• All plant shall be fuelled at a designed dispensing area, designed to prevent or contain any pollution.</li> <li>• In order to handle an emergency spill, a quantity of a material capable of encapsulating/absorbing a fuel or oil spill shall be available at the fuel storage and dispensing areas. The material shall be capable of handling a spill of at least 200l.</li> <li>• Any fuel or spill of any size shall be reported to the ECO and logged in the Environmental Incident Report File (Section 6.2). Such spills shall be cleaned immediately and the unusable fuel and contaminated soil shall be removed and disposed of to a licensed hazardous waste facility.</li> <li>• Any oil or fuel that cannot be removed shall be treated in situ with an appropriate remedial agent as determined by the ECO.</li> <li>• All spills greater than 200l shall be reported to DAEA (Cedara) and the Department of Water Affairs and Forestry (DWAF).</li> </ul>	
<p><b>9. WASTE MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>• No waste may be buried or burned on site.</li> <li>• An area shall be designated for temporary storage of bulk waste by the Contractor, approved by the Engineer and the ECO. Builder's rubble, earth and stone shall be temporarily sorted in this area. Waste in this area shall be disposed of within two days to an appropriately licensed waste disposal site i.e. bulk waste may not be stored for longer than two days. Waybills shall be obtained and retained on site as proof of safe disposal.</li> <li>• Sufficient weather and vermin proof bins shall be provided for the disposal of general solid waste within the contractors camp and on the construction site;</li> <li>• Bins shall be emptied a minimum of once a week or more frequently if required and the contents disposed of to a licensed waste disposal facility.</li> </ul>	

<ul style="list-style-type: none"> <li>• The contractors Camp and the construction site shall be kept clear of litter on a daily basis. An active litter prevention and collection programme shall be initiated by the Contractor and monitored by the ECO.</li> <li>• All hazardous wastes, including all spent oils and greases shall be separated from general waste and stored in weather proof drums for disposal to recyclers or an appropriately licensed waste disposal facility. Waybills shall be obtained and retained on site as proof of safe disposal.</li> </ul> <p>Segregation and recycling of waste are encouraged. Receptacles for different types of waste shall be provided and solid waste separated into paper, plastic, glass, metal and non-hazardous waste at the designated waste storage area.</p>	
<p><b>10. SIGNAGE, AWARENESS AND COMMUNITY LIASON</b></p> <p><b>10.1 SIGNAGE</b></p> <p>The Contractor shall be responsible for designing and erecting the signage outlined below. Signage shall be weather proof and approved by the ECO and Engineer prior to being erected.</p> <p><b>10.2 INFORMATION BOARDS</b></p> <p>Information boards shall be erected at the entrance to the site. The boards shall detail:</p> <ul style="list-style-type: none"> <li>• What is being constructed and why;</li> <li>• Contact details of the ECO for more information, input or complaints; and,</li> <li>• Contact details for the RE, contractor and emergency services.</li> </ul> <p>The boards shall also indicate that only authorised personnel shall be permitted on site.</p> <p><b>10.3 ACCESS INFORMATION</b></p> <p>A board providing access information shall be erected:</p> <ul style="list-style-type: none"> <li>• One board at the service/construction entrance.</li> </ul> <p>This access information board shall detail:</p> <ul style="list-style-type: none"> <li>• What is occurring and the duration of the construction project;</li> <li>• Access arrangements for the public; and,</li> <li>• Contact details of the ECO for more information, input or complaints.</li> </ul> <p><b>10.4 ADHOC NOTICES:</b></p> <ul style="list-style-type: none"> <li>• Adhoc notice of particularly noisy or dangerous operations must</li> </ul>	

be posted alongside the access information boards as required.	
<p><b>11. EMPLOYEE CONTRACTOR TRAINING</b></p> <p>The ECO shall be responsible for conducting environmental awareness training of all contractor and sub-contractor staff. The Contractor shall keep a log of all attendees and no staff members shall be permitted to work on the site unless they have undergone such training.</p> <p>The courses shall:</p> <ul style="list-style-type: none"> <li>• Be run as part of the contractors health and safety training programmes to avoid duplication and unnecessary down time for employees;</li> <li>• Cover three components: <ul style="list-style-type: none"> <li>- Basic environmental awareness and good operating practices including Sections 28 – 31 of the National environmental Management Act;</li> <li>- Details of the EMP requirements;</li> <li>- Make use of translators where necessary.</li> </ul> </li> </ul>	
<p><b>12. STAKEHOLDER LIASON</b></p> <ul style="list-style-type: none"> <li>• The ECO shall act as the stakeholder liaison officer.</li> <li>• The ECO shall provide a telephone number for the use of the public should they require further information or wish to report a non-compliance.</li> <li>• The ECO shall notify the neighbouring property owners of the commencement of construction and the contact telephone number one week prior to construction commencing.</li> <li>• A stakeholder complaints record shall be maintained at the construction site office detailing all complaints and issues raised by the public and the manner in which problems were resolved. Complaints shall be resolved within a reasonable period of time.</li> </ul>	

## 7.4 ECO SITE CLOSURE CHECKLIST

(During and after post construction rehabilitation assessment)

ITEM	SIGN
<p><b>1. CLEAN UP AND REHABILITATION</b> Once construction is complete, the site shall be rehabilitated and landscaped to the satisfaction of the Engineer and Developer.</p> <p><b>1.2 GENERAL</b></p> <ul style="list-style-type: none"> <li>• The construction camp, site office and associated infrastructure shall be removed unless otherwise indicated by the Engineer. Those areas of the site requiring revegetation shall be ripped/scarified and revegetated as per the property owner's requirements.</li> <li>• Fences and barriers associated with the construction shall be removed unless otherwise indicated by the Engineer.</li> <li>• The area shall be inspected for spills of hazardous and other substances (e.g. paint). Any contaminated areas shall be cleaned up.</li> <li>• The site shall be cleared of all litter and rubble. Rubble shall be disposed of at a licensed waste disposal site.</li> <li>• All leftover materials are to be returned to suppliers and depots and removed from the site.</li> <li>• All embankments shall be trimmed and shaped to the Engineers satisfaction and left in a state where erosion will not occur.</li> </ul>	
<p><b>2. REVEGETATION</b></p> <p>The site shall be rehabilitated with indigenous vegetation appropriate to the area as per the rehabilitation plan. The Emeraldene Poultry Farm has accepted responsibility for the ongoing maintenance of the rehabilitated poultry farm surrounds.</p>	