



**APPLICATION FOR AUTHORIZATION SUPREME  
POULTRY, REMAINDER OF FARM BELGIE 1285, FREE  
STATE PROVINCE**

**SUPREME POULTRY: ENVIRONMENTAL MANAGEMENT  
PLAN**

May 2019

**Prepared for:**




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Today's Impact | Tomorrow's Legacy

	Issue 1	Revision 1
<b>Issue/Revision Name</b>	SUPREME POULTRY ENVIRONMENTAL MANAGEMENT PLAN	SUPREME POULTRY ENVIRONMENTAL MANAGEMENT PLAN
<b>Report prepared/revised by:</b>	Marius Venter	Christoff du Plessis
<b>Date:</b>	May 2019	May 2019
<b>Signature:</b>		

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## List of Acronyms and Abbreviations

<b>AIA</b>	Archaeological Impact Assessment
<b>DEA</b>	Department of Environmental Affairs
<b>DEO</b>	Designated Environmental Officer
<b>DWA</b>	Department of Water Affairs
<b>ECO</b>	Environmental Control Officer
<b>EIA</b>	Environmental Impact Assessment
<b>EIR</b>	Environmental Impact Report
<b>EMPr</b>	Environmental Management Program
<b>GIS</b>	Geographic Information System
<b>HIA</b>	Heritage Impact Assessment
<b>I&amp;APs</b>	Interested and Affected Parties
<b>IDP</b>	Integrated Development Plan
<b>NEMA</b>	National Environmental Management Act, 1998 (Act No. 107 of 1998)
<b>NEMBA</b>	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
<b>NHRA</b>	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
<b>NSBA</b>	National Spatial Biodiversity Assessment
<b>NWA</b>	National Water Act, 1998 (Act No. 36 of 1998)
<b>PHRA</b>	Provincial Heritage Resources Agency
<b>PSSA</b>	Paleontological Society of South Africa
<b>PPP</b>	Public Participation Process
<b>SAHRA</b>	South African Heritage Resources Agency
<b>SANBI</b>	South African National Biodiversity Institute
<b>SDF</b>	Spatial Development Framework
<b>SECO</b>	Site Environmental Control Officer

## GLOSSARY OF TERMS

**Alien species:** A plant or animal species introduced from elsewhere: neither endemic nor indigenous.

**Applicant:** Any person who applies for an authorisation to undertake an activity or undertake an Environmental Process in terms of the Environmental Impact Assessment Regulations – National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) as contemplated in the scheduled activities listed in Government Notice (GN) No R. 983, 984 and 985 of 2014.

**Arable potential:** Land with soil, slope and climate components where the production of cultivated crops is economical and practical.

**Archaeological resources:** This includes:

- material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years including artefacts, human and hominid remains and artificial features and structures;
- rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;
- wrecks, being any vessel or aircraft, or any part thereof which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation; features, structures and artefacts associated with military history which are older than 75 years and the site on which they are found.

**Alluvial:** Resulting from the action of rivers, whereby sedimentary deposits are laid down in river channels, floodplains, lakes, depressions etc

**Biodiversity:** The variety of life in an area, including the number of different species, the genetic wealth within each species, and the natural areas where they are found.

**Cultural significance:** This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance

**Cumulative Impact:** In relation to an activity, cumulative impact means the impact of an activity that in itself may not be significant, but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

**Ecology:** The study of the interrelationships between organisms and their environments.

**Environment:** All physical, chemical and biological factors and conditions that influence an object.

**Environmental Impact Assessment:** In relation to an application, to which Scoping must be applied, means the process of collecting, organising, analysing, interpreting and communicating information that is relevant to the consideration of the application.

**Environmental Impact Report:** In-depth assessment of impacts associated with a development. This forms the second phase of an Environmental Impact Assessment and follows on from the Scoping Report.

**Environmental Management Programme:** A legally binding working document, which stipulates environmental and socio-economic mitigation measures that must be implemented by several responsible parties throughout the duration of the project.

**Heritage resources:** This means any place or object of cultural significance. See also archaeological resources above

**Hydromorphic / hydric soil:** Soil that in its undrained condition is saturated or flooded long enough during the growing season to develop anaerobic conditions favouring growth and regeneration of hydrophytic vegetation. These soils are found in and associated with wetlands.

**Local relief:** The difference between the highest and lowest points in a landscape. For this study, it is based on 1:50 000 scale.

**Precipitation:** Any form of water, such as rain, snow, sleet, or hail that falls to the earth's surface.

**Red Data species:** All those species included in the categories of endangered, vulnerable or rare, as defined by the International Union for the Conservation of Nature and Natural Resources.

**Riparian:** The area of land adjacent to a stream or river that is influenced by stream induced or related processes.

**Soil compaction:** Soil becoming dense by blows, vehicle passage or other type of loading. Wet soils compact easier than moist or dry soils.

## 1 INTRODUCTION

This Environmental Management Programme (EMPr), amongst others, describes the mitigation measures and identifies the specific people that will be responsible for implementation of the mitigation measures, in order to ensure that impacts on the environment are minimised during the operational and decommissioning phases for the project on remainder of the Farm Belgie 1285, Mangaung, Free State Province. As the construction was already done, this part will not be included in this document.

This EMPr must form part of the contractual agreement between the relevant contractor(s) and the developer.

### NEMA Regulation 19(4) Report Compliance

Regulation 19(4) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) Environmental Impact Assessment (EIA) Regulations of 2017 provides the content requirements for Environmental Management Programmes. The table below lists the relevant requirements, indicates whether the relevant information is included in this report or not, and provides cross-references as to where the relevant information can be found in this report.

**Table 1: Environmental Management Programme requirements in terms of the EIA Regulations of 2017.**

Reg.	EMPr Content	Included (Yes, No or N/A)	Report Section Reference
(a)	(1) An EMPr must comply with section 24N of the Act and include- (a) details of -  (i) the EAP who prepared the EMPr; and	Yes	Chapter 2
	(ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae	Yes	Chapter 2
(b)	a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Yes	Chapter 9
(c)	a map at an appropriate scale which superimposes the activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;	Yes	Refer to S24G



Reg.	EMPr Content	Included (Yes, No or N/A)	Report Section Reference
(d)	a description of the impact management objectives, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-	Yes	Refer to S24G Application Form
	(i) planning and design;	No	Chapter 8
	(ii) pre-construction and construction activities;	No	Chapter 8
	(iii) construction activities;	No	Chapter 8
	(iv) rehabilitation of the environment after construction and where applicable post closure; and	No	Chapter 8
	(v) where relevant, operation activities;	Yes	Chapter 8
(e)	<b>Item 1(1)(e) deleted by Government Notice 326 in Government Gazette 40772 dated 7 April 2017</b>		
(f)	a description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (d) and (e) will be achieved, and must, where applicable, include actions to -	Yes	Chapter 8
	(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;	Yes	Chapter 8
	(ii) comply with any prescribed environmental management standards or practices;	Yes	Chapter 8
	(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and	Yes	Chapter 8
	(iv) comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;	Yes	Chapter 8
(g)	the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Yes	Chapter 6 and 8
(h)	the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Yes	Chapter 8
(i)	an indication of the persons who will be responsible for the implementation of the impact management actions;	Yes	Chapter 8
(j)	the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	Yes	Chapter 8

Reg.	EMPr Content	Included (Yes, No or N/A)	Report Section Reference
(k)	the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Yes	Chapter 8
(l)	a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;	Yes	Chapter 8
(m)	an environmental awareness plan describing the manner in which-		
	(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and	Yes	Chapter 7
	(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and	Yes	Chapter 7
(n)	any specific information that may be required by the competent authority.		

### Report Layout

The table below summarises the content layout of this report.

**Table 2: Summary of report content layout.**

Chapter	Chapter Heading	Content Summary
1	Introduction	Provides a brief background to the project, and explains the compliance of this report with regards to Regulation 19(4) of the NEMA.
2	Environmental Assessment Practitioner	Provides details of the EAP who prepared this EMPr, and provides information on the expertise of the EAP.
3	Project Description and Listed Activities Covered by this EMPr	Provides a brief project description, and describes the relevant project phases and the NEMA Listed Activities triggered.
4	Persons Responsible for Implementing this EMPr	Provides information on the project team members who will be responsible for implementing this EMPr, and explains requirements with regards to on-site communication, site

Chapter	Chapter Heading	Content Summary
		instruction entries, method statements, and record keeping.
5	Monitoring, Performance Assessment and Reporting on EMPr Compliance	Provides information on monitoring, performance assessment and reporting on EMPr Compliance, ECO site inspection reports, and photographs.
6	Environmental Awareness Plan	Provides information on environmental awareness and risk training, and basic rules of conduct.
7	Impacts and Mitigation Measures	Provides EMPrs for the relevant project phases.
8	Emergency Response Plan	Provides information on the emergency response plan.
9	Incident Register	Stipulates the content requirements for incident registers.
10	Rehabilitation Measures	Provides relevant rehabilitation measures.
11	Prevent Triggering of Further Listed Activities	Warns the Developer not to contravene the NEMA by engaging in unauthorised NEMA Listed Activities.
12	References	Lists all references referred to in this EMPr.
Appendix 1: Extract from the Phase 1 Archaeological Impact Assessment		The appendix provides descriptions of each archaeological site and recommended mitigation.

## 2 ENVIRONMENTAL ASSESSMENT PRACTITIONER

This EMPr was prepared by Marius Venter from Enviroworks, the Environmental Assessment Practitioner (EAP). The sections below provide the details of the EAP, and explain the EAP’s expertise to prepare this EMPr.

### Details of the Environmental Assessment Practitioner

#### I. DETAILS OF THE SPECIALIST



<b>Name:</b>	Marius
<b>Surname:</b>	Venter

<b>Highest qualification:</b>	BSc Conservation Ecology and Entomology (SU)
<b>IAIA registered:</b>	No. 10458590
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**Relevant qualifications**

- BSc Conservation Ecology and Entomology (SU)

**Work experience**

- January 2017- July 2017: Research assistant, University of the Free State (UFS)
- July 2018- current: Environmental Consultant and legal assistant at Enviroworks

**Key project experience**

- I am currently completing my MSc in Environmental Management at the University of the Free State (2017-2018).
- Experience in 1) Compilation of documentation and report writing 2) Legal compliance and notices 3) Conducting ecological studies and reviews 4) Environmental Audits 5) Environmental Authorisations

**Ecological Impact Assessment Specialist Report Experience**

- Ecological impact assessment: The proposed development of an oil recycling plant, near Lakeview, Mangaung, Free State
- Ecological impact assessment: Supreme Poultry, Bloemfontein, Free State

- Review Ecological Studies: 8 Ecological Studies reviewed for establishment of borrow pits for road construction by SANRAL

### **Wetland Delineation**

Wetland delineation and risk assessment for water use license application for the proposed Zachtvelei dam and bulk conveyance infrastructure, Lady Grey, Eastern Cape.

### **Legal Queries and Site Inspections**

- The construction of a 9 km steel pipeline for irrigation at Witbank, Namakwa District Municipality, Northern Cape
- Proposed development of a waste water treatment works and associated pipeline on the remaining extent of erf no 424, Britstown, Northern Cape Province
- Request for conformation that the existing carpe diem farm operations is lawful / or not and if a section 24g rectification application will be required, Northern Cape Province
- Environmental subservices for the improvement of national route 7 section 2 between Roidraai (km 7.49) and Moorreesburg (km 33.90)
- Environmental subservices for the improvement of national route 7 section 3 between Piketberg (km 31.53) and Piekenierskloof pass (km 65.3)
- The construction of a pipeline to pump water from a river into two dams at the Krugers post farm
- Proposed development of a security village and associated infrastructure on erf 3952 & 3975, Hartswater, Northern Cape Province
- 8 (eight) development option reports for Phunga Consulting Engineers in the Northern Cape Province

### **ECO - Environmental audits**

- Mission Point Mine – Free State province
- The construction of a 132kv powerline between Tweespruit and Driedorp, Free State Province

### **3 PROJECT DESCRIPTION AND LISTED ACTIVITIES COVERED BY THIS EMPR**

#### **Brief Project Description**

Supreme Poultry (PTY) Ltd. (The Applicant) appointed Enviroworks, an Independent Environmental Assessment Practitioner (EAP), to undertake the Section 24G application process for the unlawful commencement of the development of facilities which includes the development of a hatchery (Nov 1999), concentration of animals (Breeder farm) (Poultry) (Jan 2005) as well as construction of a store, workshop, chemical store and 3 (three) housing units on the remainder of the farm Belgie 1285, Bloemfontein, Mangaung Metropolitan Municipality.

#### **Project Description**

The current activity entails the following:

##### **Design**

##### **Belgie Hatchery:**

The hatchery accommodates 2 651 600 eggs a month which, after hatching, is sold and transported to contract growers. The eggs are supplied from the breeding Farm and hatches after 21 days. The hatchery footprint covers an area of approximately 2.7 hectares with an approximate length of 196 meters and width of approximately 140 meters. The developed hatchery as situated adjacent to the Northern border of the farm and established in 1999. The distances between the nearest breeder house and hatchery is roughly 373 metres.

##### **Current operational activities**

- Loading and offloading of eggs
- Storage of water
- Pumping of water from the borehole (in cases of emergency)
- Hatching of eggs
- Storing of vaccination equipment and hazardous wastes
- Hatchery debris (Egg shells, water)
- Operation of the biosecurity system.
- Transport of day old chicks
- General maintenance
- Separation dams

##### **Breeders farm:**

##### **Belgie Breeders:**

The Breeder site accommodates roughly 156 000 chickens. The chickens are brought in from 1 (one) day old. These chickens start laying eggs on day 178 (One hundred seventy-eight) to day 448 (four hundred forty-eight) and is sold as cull chickens thereafter (on day 448). The eggs are sent to the hatchery. This area consists of 4 (four) areas of 6 (six) chicken houses each. Each chicken house accommodates roughly 6500 chickens. The breeding site covers an area of approximately 2.5 hectares each with an approximate width of 115 meters and length of 230 meters. These houses are cleaned every 23 weeks in rearing and 40 weeks in laying. The cleaning of houses accumulates the bedding material, food (pellets) and manure from the houses and is collected and removed from the farm by a contractor. The construction of these activities was established on previously cultivated land. These chicken houses' have heatco's (warm air system) and fans that are used to regulate the heat in order to speed up their process of growing and to keep temperatures as constant as possible within the houses itself. The cleaning of houses include water and Immunovet chemicals (Appendix H).

### **Current operational activities**

- Transport of eggs and chickens
- Loading and offloading of chickens
- Storage of chicken feed and water
- Pumping of water from the borehole (emergencies)
- Housing of chickens for 64 week cycle
- Cleaning and disinfecting of houses and equipment following each cycle
- Loading and transporting of manure and ash before collected from the farm
- Disposing of dead chicken/ chicken carcasses
- Operation of the biosecurity system.
- Ash currently used for roads and rodent control
- General Maintenance

### **Manure**

The manure produced from the chicken lay houses (breeder farm) is strictly chicken manure and bedding material that are used in the houses. The chicken manure and bedding are being scraped out during the cleaning process where after the houses are washed. The remaining water within the chicken houses are pushed onto the bare soil in front of the houses; hence the development of a storm management plan would be of good purpose on site, in order to avoid any infiltration that will result negatively on the groundwater and other plans. It should however, be noted that the quantity of water pushed out of the houses is minimal. Approximately thousand (1000) tons of manure is removed every four (4) months from each house and removed by a contractor.

### **Mortality**

Much care is given to the overall well-being of the chickens throughout each production cycle. Strict disease control measures are already implemented during the operation of both the hatchery and breeder houses. The mortalities are estimated to be 6 chickens per day, which are stored in a fridge and collected by a lion farmer twice a week and given to lions for feeding. No carcasses are incinerated on the farm, if deemed necessary the carcasses will be transported to a registered induction facility (in cases of disease outbreak).

### **Disease Control**

Visitors and cars entering the farm are disinfected at the gate. Visitors are limited to the office premises. All personnel entering the chicken houses are disinfected and provided with the safety clothes after showering themselves. The houses are kept clean and thoroughly cleaned and disinfected at the end of each production cycle. Houses are approximately 20 metres apart to prevent contact between chickens from different houses. Cleaners are disinfected as they move from one house to the other. The chemical matrix of disinfectants used for both the breeders and hatchery are attached as well as a gap management system.

### **Water Use**

The farm is dependent on municipal water while two boreholes are in use for cases of emergency and three existing boreholes are not in use. The total water usage for the hatchery amounts to an average of 3560.25m<sup>3</sup> per month while the average water usage of the breeder's facility is 42 996.8m<sup>3</sup> per month.

### **Electricity and Heating**

Eskom electricity is currently used for the purpose of both cooling and heating with an average consumption of 197 264.25 kWh per month for the hatchery and 101 428 kWh for the breeder's farm. Generators are also used for emergencies and 24 Bosman Dryers (coal operated) and (one at the hatchery together with LP gas heating) are used for temperature regulation within the breeder houses. The ash generated from the heatcos are currently used on the farm to prevent rodents from entering the chicken houses. Also, a brick maker use the ash, received from Supreme, for brick making. Ash from the heatcos; however, will need to be tested in order to establish what the management process revolving this will be. Either to be used on the farm to fix roads, prevent rodents from entering the chicken houses etc. Or to be removed to a hazardous waste disposal site.

### **Waste**



Various wastes are removed from the farm by either other farmers or contractors rather than stored on the premises. Chicken manure is taken away by contractors. Chicken carcasses are stored in freezers until collected by a lion farmer. Egg debris is removed by a contractor while general wastes are taken to the local landfill site. Medical waste (vaccination of chickens) and egg debris are removed by a waste removal company.

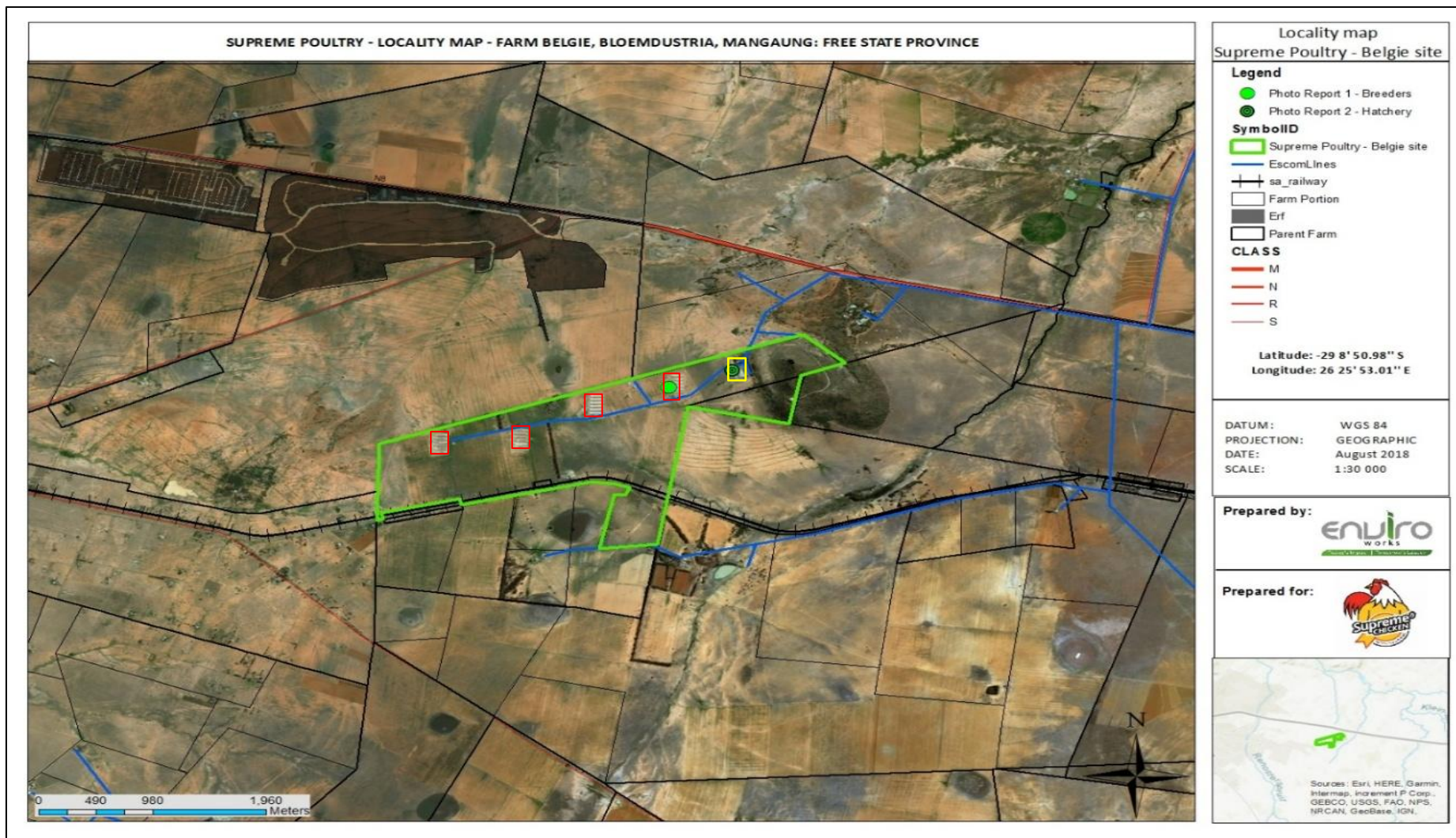


Figure 1 - Locality map - Chicken Breeder houses outlined in red and Hatchery in yellow.

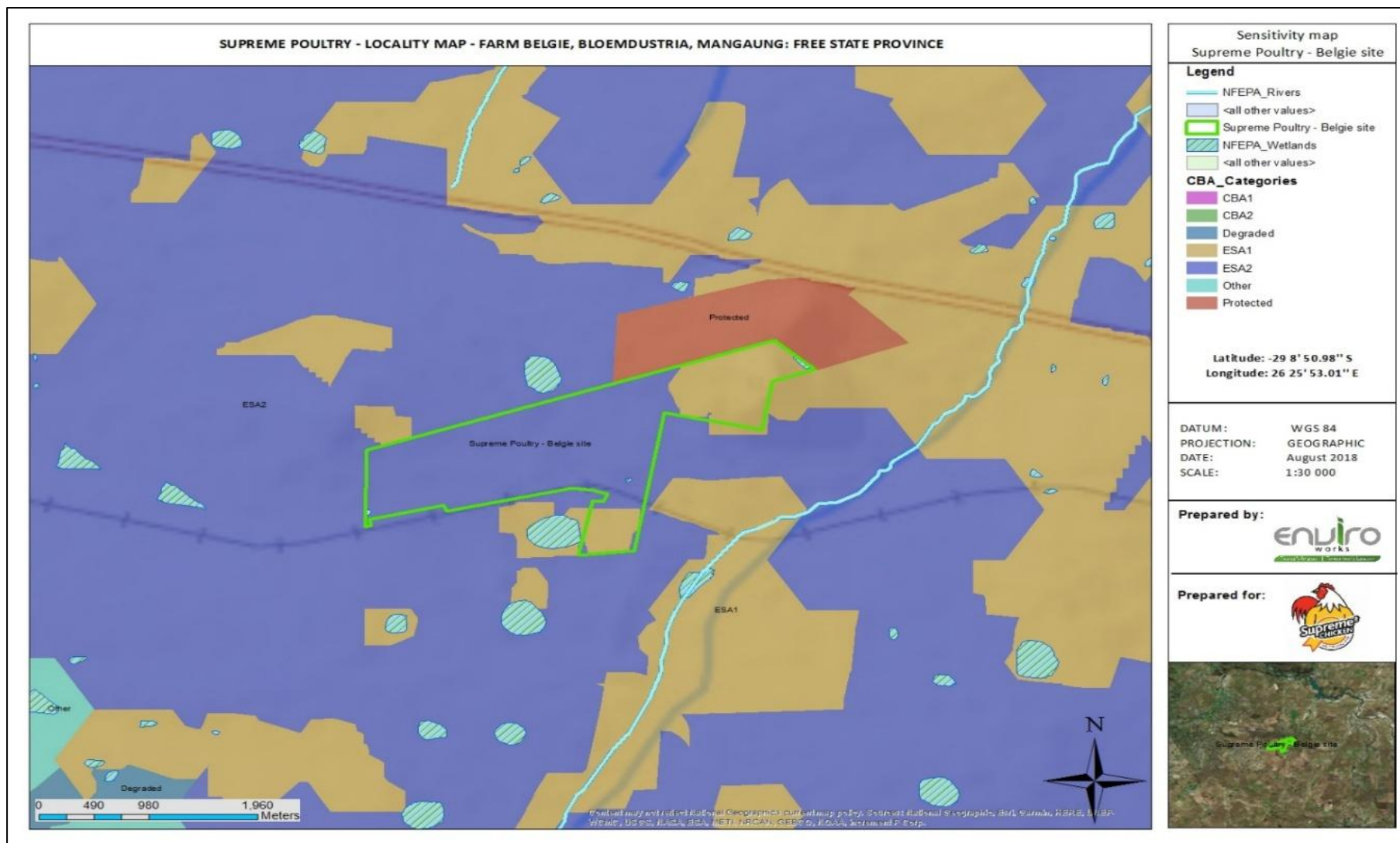


Figure 2 - Sensitivity map of Belgie Breeders and Hatchery.

### NEMA Listed Activities Triggered

The unlawful commencement of these developments is listed activities in terms of Sections 24(2) and 24(d) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) (as amended in April 2017). The Environmental Impact Assessment (EIA) Regulations, 2017 promulgated in terms of Chapter 5 of the NEMA provide for the control of certain activities that are listed in Government Notice Regulations No. (GN R) No. R327, R325 and R324. Activities listed in these notices must comply with the regulatory requirements listed in GN R No. R326, which prohibits such activities until written authorisation is obtained from the Competent Authority. Such Environmental Authorisation, which may be granted subject to conditions, will only be considered once there has been compliance with the EIA regulations, 2017. GN R No. 326 sets out the procedure and documentation that need to be compiled with undertaking a Basic Assessment Report (Section 24G Report). Other relevant legislation as listed activities triggered include the EIA Regulations promulgated in terms of the ECA, Act No 73 of 1989 - GNR 1182 & 1183.

The project constitutes the following listed activities in terms of the NEMA:

**Table 2: Listed Activities applicable to this application.**

Listed Activity	Project Activity / Component
<p><b>ECA, Act No 73 of 1989 - GNR 1182 &amp; 1183</b></p> <p><b><u>Between 1 April 1998 and 09 May 2002:</u></b></p>	
<p><b>Activity 2 (d)</b> (Belgie - Hatchery):</p>	<p>The change of land use for grazing to any other form of agricultural use</p>
<p><b><u>ECA EIA Contraventions : Between 10 May 2002 and before end of day 02 July 2006</u></b></p>	
<p><b>Activity 3</b> (Belgie - Breeders) -</p>	<p>The concentration of livestock, aquatic organisms, poultry, and game in a confined structure for the purpose of commercial production, including aquaculture and mariculture.</p>
<p><b><u>NEMA EIA Regulations of 2014, as amended 2017: (GNR 327 / Listing Notice 1)</u></b></p>	
<p><b>Activity 5:</b></p>	<p>The development and related operation of facilities or infrastructure for the concentration of –</p> <p>(ii) More than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days</p>

	(v) More than 25 000 chicks younger than 20 days per facility situated outside an urban area
<b>Activity 8:</b>	The development and related operation of hatcheries or agri-industrial facilities outside industrial complexes where the development footprint covers an area of 2000 square metres or more.

### Project Phases

Since the project is already functioning, the main phase which will be focused on is the operational phase. Because of the former, the construction phase was left out.

- Operational Phase
- Decommissioning

### Design

The breeder's facility houses will have a coverage of approximately 5.9 hectares for the entire facility and a coverage of approximately 1,145m<sup>2</sup> per house with an average carriage capacity of 10,200 chickens per house.

## 4 EXISTING ENVIRONMENTAL AND IMPACT ASSESSMENT SUMMARY

The sections below summarise the existing environment, and the outcome of the impact assessment that was undertaken for this project.



IMPACTS	Preferred Layout Alternative		No-Go Alternative
	Before Mitigation	After Mitigation	
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Handling of general waste materials on the development site.	<b>Activity:</b> Waste are generated on site, if not disposed of correctly it will become a nuisance within the area.		No impact will occur as the development activities will not take place.
<b>Significance rating:</b>	Medium (M)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Traffic impacts associated with the movement of vehicles within the area.	<b>Activity:</b> The regular movement of workers and business clients within the area increases traffic flow and impede vehicle movement.		No impact will occur as the development activities will not take place.
<b>Significance rating:</b>	Medium (M)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Surface and groundwater contamination from the Hatchery and breeder Facilities as well as the stores and housing facilities.	<b>Activity:</b> Surface and groundwater can become contaminated due to operation of the hatchery and breeders facilities.		No impact will occur as the development activities will not take place.
<b>Significance rating:</b>	Medium-high (MH)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Soil Compaction	<b>Activity:</b> Erosion and degradation of soil surrounding the breeders and Hatchery facilities as well as the stores.		No impact will occur as the development

IMPACTS	Preferred Layout Alternative		No-Go Alternative
	Before Mitigation	After Mitigation	
			activities will not take place.
<b>Significance rating:</b>	Medium (M)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Increased risk of veld fires.	<b>Activity:</b> Due to the presence of personnel and machinery in natural areas, fires can occur if not managed to the correct standard.		No impact will occur as the development activities will not take place.
<b>Significance rating:</b>	Medium (M)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Infestation of the area with Alien and Invasive Species  Direct impact on Fauna and Flora as a result of vegetation clearance.	<b>Activity:</b> Implementation of an Alien and Invasive Management Plan in order to control and eradicate Alien and Invasive Species.		No impact will occur as the development activities will not take place.
<b>Significance rating:</b>	Medium (M)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Operation Activities may have a positive impact on the local and regional socio economic conditions.	<b>Activity:</b> The operational phase of the development creates employment opportunities for individuals from the Local Community.		No impact will occur as the development activities will not take place.
<b>Significance rating:</b>	+ Medium (M)	+ Medium (M)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			

IMPACTS	Preferred Layout Alternative		No-Go Alternative
	Before Mitigation	After Mitigation	
<b>Nature of impact:</b> Occupational Health and Safety.	<b>Activity:</b> During the operation phase, accidents, occupational diseases, ill health and damage to property can occur if pre-cautionary measures are not taken. Increased movement of vehicles may lead to increased accidents among local communities, construction workers and vehicle operators.		No impact will occur as the development activities will not take place. Cultural and Historical features of the development site will remain unaffected.
<b>Significance rating:</b>	Medium (M)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Air Emissions	<b>Activity:</b> The operational phase of the development creates Air Emissions by burning coal and gas by using Heatcos and LP Gas heaters.		No impact will occur as the development activities will not take place. Cultural and Historical features of the development site will remain unaffected.
<b>Significance rating:</b>	Medium (M)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Noise nuisance generated by site operations.	<b>Activity:</b> Noise nuisance that may be created by the operation and maintenance work.		No impact will occur as the development activities will not take place. Noise features of the development site will remain unaffected.
<b>Significance rating:</b>	Low (L)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			



IMPACTS	Preferred Layout Alternative		No-Go Alternative
	Before Mitigation	After Mitigation	
<b>Nature of impact:</b> Dust Generation	<b>Activity:</b> Dust Generation		No impact will occur as the development activities will not take place.
<b>Significance rating:</b>	Low (L)	Low (L)	-
<b>Cumulative impact:</b>	-	-	-
<b>POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:</b>			
<b>Nature of impact:</b> Disease Control	<b>Activity:</b> Disease control		No impact will occur as the development activities will not take place.
<b>Significance rating:</b>	Medium-high (MH)	Low (L)	
<b>Cumulative impact:</b>	-	-	

## 5 PERSONS RESPONSIBLE FOR IMPLEMENTING THIS EMPr

Please note that ECO work will be applicable to any further construction on site as the construction phase for this project was already done. Also, when site audits are applicable.

The “Responsibility” columns in the impact and mitigation tables provided below indicate which team member(s) are responsible for implementation of the identified mitigation measures; these team members include the following:

- Operational Manager(s);
- Applicant /land owner; and the
- Designated Environmental Officer (DEO)

The sections below list further supplementary measures, which should also be implemented by the relevant team members.

During the **operational phase**, the **operational manager** will:

- Be responsible to have the EMPr available on site at all times;
- Ensure this EMPr is implemented and adhered to;
- Ensure that all problems identified during environmental inspections, are addressed and rectified as soon as reasonably possible;
- Maintain all facilities and infrastructure in good working order to effectively fulfil its intended purpose and to prevent negative environmental impacts;

During the **operational phase** the **applicant/ land owner**, will be responsible for:

- Setting aside a budget for maintenance;
- Overall legal compliance in terms of NEMA, NEMWA and NWA;
- Not construct any additional buildings, infrastructure, etc. contrary to the Environmental Authorisation, without performing an environmental impact assessment where listed activities of the 2014 NEMA EIA Regulations (as amended) are triggered;
- To immediately remedy any aspects that contribute to negative environmental impacts;
- Implementation of monitoring programmes; and
- Ensure annual audits are carried out as required.

During the **operational phase** the **DEO**, will be responsible for:

- Inspections and compliance according to this EMPr;
- Keeping and updating the complaints register;
- Reporting of finds to the operational manager;
- Implementing remedial actions on non-compliance’s;

## **On-site Communication**

The following sections describe the site communication measures that will need to be implemented.

### **5.1.1 Site Instruction Entries**

The Site Instruction book should be used for the recording of general site instructions as they relate to the works on site. It should also be used for the issuing of **stop work orders** for the purposes of immediately halting any particular activities of the contractor in lieu of the environmental risk that they may pose.

### **5.1.2 Method Statements**

Method statements from the Contractor will be required for specific sensitive actions on request by the authorities or the ECO.

A method statement forms the baseline information on which work in sensitive environments takes place and is a “live document” allowing for modifications to be negotiated between the Contractor and ECO / Engineer, as circumstances unfold.

A method statement describes the scope of the intended work, step-by-step, in order for the ECO and Engineer to understand the Contractor’s intentions. This will enable them to assist in devising any mitigation measures, which would minimise environmental impact during these tasks. For each instance wherein, it is requested that Supreme submit a method statement to the satisfaction of the ECO, the format should clearly indicate the following:

- **What** - a brief description of the work to be undertaken;
- **How** - a detailed description of the process of work, methods and materials;
- **Where** - a description/sketch map of the locality of work (if applicable); and
- **When** - the sequencing of actions with due commencement dates and completion date estimates.

All method statements will form part of the EMPr documentation and are subject to all terms and conditions contained within the EMPr main document.

The Contractor must submit the method statement to the ECO before any particular construction activity is due to start. Work may not commence until the method statement has been approved by the ECO.

## **Record Keeping**

All records related to the implementation of this EMPr (e.g. site instruction book, method statements) must be kept together in an office where it is safe and can be retrieved easily. These records should be kept for two years and should at any time be available for scrutiny by any relevant authorities.

## **6 PERFORMANCE ASSESSMENT AND REPORTING ON EMPr COMPLIANCE**

Please note that ECO work will be applicable to any further construction on site as the construction phase for this project was already done. Also, when site audits are applicable.

### **Performance Assessment and Reporting on EMPr Compliance**

A suitably-qualified Environmental Control Officer (ECO) should be appointed by the Applicant / Developer to oversee the implementation of the operational phase mitigation measures described in this EMPr, as well as the conditions of authorisation as described in the Environmental Authorisation.

The ECO should have at least 5 years' experience as an ECO, or be supported by a qualified ECO. He/she may not be someone appointed by the contractor, engineer or other party involved with this project, other than the Applicant / Developer.

The following applies, amongst others, to the ECO's role:

- **The ECO should undertake quarterly site visits during the operational phase**
- The ECO must **report to** the Applicant/ developer only.
- The ECO should present an **environmental site induction / awareness training session** to all personnel.

The ECO has the authority to stop works if in his/her opinion there is a serious threat to, or impact on the environment, caused directly from the operations. This authority is to be limited to emergency situations where consultation with the engineer or applicant is not immediately available. In all such work stoppage situations the ECO is to inform the engineer and applicant of the reasons for the stoppage as soon as possible.

Upon failure by the contractor or his employee(s) to show adequate consideration to the environmental aspects of this contract, the ECO may recommend to the engineer to have the contractor's representative or any employee(s) removed from the site or work suspended until the matter is remedied. No extension of time will be considered in the case of such suspensions and all costs will be borne by the contractor.

#### **6.1.1 ECO Site Inspection Reports**

The ECO site inspection reports (also called "ECO checklists") will report on the compliance of the operational phase mitigation measures contained in the EMPr, as well as the conditions of approval

described in the Environmental Authorisation. The report should be submitted to the applicant, within five (5) days of the ECO site inspection, and should also be made available to the developer. Copies of the inspection reports should be kept on site.

The contractor's meeting minutes must reflect environmental queries, agreed actions and dates of eventual compliance. These minutes form part of the official environmental record.

### **6.1.2 Photographs**

It is recommended that photographs are taken during and immediately after construction (should Supreme build) as a visual reference. These photographs should be stored with other records related to this EMPr. If captured in digital format, hard copies, in colour, must be kept with all other records relevant to the implementation of this EMPr.

## **7 ENVIRONMENTAL AWARENESS PLAN**

### **Environmental Awareness and Risk Training**

All contractor team members involved in work on site are to be briefed on their obligations towards environmental controls and methodologies in terms of this EMPr, prior to work commencing. The briefing will usually take the form of an on-site talk and demonstration by the ECO. The education / awareness programme should be aimed at all levels of management within the contractor team. See "basic rules of conduct" below.

### **7.1.1 Basic Rules of Conduct**

The following list represents the basic *Do's* and *Don'ts* towards environmental awareness, which all participants in this project must consider whilst carrying out their tasks. These are not exhaustive and serve as a quick reference aid. **NOTE: ALL new site personnel must** attend an environmental awareness/induction presentation. Please inform your foreman or manager if you have not attended such a presentation or contact the ECO.

#### **DO:**

- Clear your work areas of litter and building rubble at the end of each day – use the waste bins provided and prevent litter from being blown away by wind.
- Report all fuel or oil spills immediately and stop the spill from continuing.
- Dispose of cigarettes and matches carefully, so to prevent veld fires (arson and littering is an offence).
- Confine work and storage of equipment to within the immediate work area.

- Use all safety equipment and comply with all safety procedures.
- Ensure a working fire extinguisher is immediately at hand if any “HOT WORK” is undertaken e.g. welding, grinding, gas cutting etc.
- Prevent excessive dust and noise.

**DO NOT:**

- Do not litter - report dirty or full facilities, i.e. full dustbins and dirty or blocked toilets.
- Do not make any fires.
- Do not enter any fenced off or demarcated areas.
- Do not allow waste, litter, oils or foreign materials into any storm water channels or drains or watercourses.
- Do not litter or leave food lying around.

## **8 IMPACTS AND MITIGATION MEASURES**

A number of potential environmental impacts that may arise during the farming activities have been identified. These are outlined in the table below, and mitigation measures are provided.

The table below pertain to the operational phase of the farming activities which is already functioning.

**Decommissioning has not been included as it is not foreseen that the development will be decommissioned, but rather that it will be upgraded and maintained.** However, in the event that the site is decommissioned, the construction phase impact and mitigation measures will be sufficient to mitigate impacts associated with this phase.

The Contractor must familiarise himself with the requirements of the EMPr, keeping in mind that other site-specific requirements as outlined in the Environmental Authorisation must also be complied with.

**OPERATIONAL PHASE**

The intention, of providing an EMPr for the operational phase, is merely to provide Management with guidelines to be used in the management of the hatchery and breeding facility.

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	<u>MONITORING:</u> Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
<b>1. ACTIVITY: BELGIE HATCHERY, STORES AND WATER SEPARATION DAMS</b>				
1.1	<p><b>Aspects:</b> Surface water and/or existing storm water systems</p> <p><b>Impact:</b> Degradation of water resources</p> <p><b>Objective:</b> Ensure the proper working status of all storm water channels.</p> <p><b>Target:</b> No pollution of water courses</p>	Operational Manager	<p><b><u>Monitoring Action:</u></b></p> <p>Surface and Groundwater monitoring records</p>	
	<p><b><u>Mitigation/Management Measures:</u></b></p> <ol style="list-style-type: none"> <li>1. Manage and maintain all storm water systems to keep them in working condition,</li> <li>2. Water samples must be taken from the nearest borehole and be tested for any pollution (every 3 months).</li> <li>3. Storm water handling to be done in order to prevent erosion,</li> <li>4. Measures have to be implemented to prevent the contamination of clean run-off water and to contain run-off from the hatchery in order to protect the degradation of water resources.</li> <li>5. Water used during cleaning of the hatchery must be disposed into the existing infrastructure leading waste water to the separation dams as already established before irrigated onto the premises.</li> </ol>		<p><b><u>Responsible Person/Party:</u></b></p> <p>Operational Manager ECO</p> <p><b><u>Monitoring Frequency:</u></b></p> <p>Throughout the live span of the hatchery</p>	
1.2	<p><b>Aspects:</b> Soil Compaction</p> <p><b>Impact:</b> Erosion and degradation of soil surrounding the hatchery</p>	Operational Manager	<p><b><u>Monitoring Action:</u></b></p> <p>Inspection for soil</p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<p><b>Objective:</b> Prevention soil erosion.</p> <p><b>Target:</b> No soil erosion on site or in direct vicinity thereof.</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Ensure proper storm water drainage,</li> <li>2. The layout of the area should be optimised to limit the erosion potential,</li> <li>3. Rehabilitate denuded areas especially slopes with appropriate species and erosion protection measures i.e. geotextiles, rocks: topsoil mixtures as per specifications.</li> <li>4. Conduct integrity test on surrounding hatchery surface layers (if erosion might become a problem on site);</li> <li>5. Existing irrigation operations should be maintained.</li> <li>6. The impact from irrigation with treated water on soils should be monitored and evaluated.</li> </ol>		<p>erosion and photographic evidence.</p> <p><b>Responsible Person/Party:</b> Operational Manager</p> <p><b>Monitoring Frequency:</b> Throughout the live span of the activity</p>	
1.3	<p><b>Aspects:</b> Weed and invader plant control</p> <p><b>Impact:</b> Deterioration of the area due to the invasion of weed and/or invader plants</p> <p><b>Objective:</b> To avoid the invasion of problem plants.</p> <p><b>Target:</b> No weed or invader plants will be present at the site.</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. A weed and invader control program needs to be implemented (when invasive species on site becomes a big problem).</li> <li>2. Management must familiarise themselves with the Alien Invasive Species Regulations of 2016, and send selected personnel to training on how to identify, control and eradicate listed species.</li> </ol>	Operational Manager	<p><b>Monitoring Action:</b> Management of Alien Invasive Plants</p> <p><b>Responsible Person/Party:</b> Operational Manager</p> <p><b>Monitoring Frequency:</b></p>	



OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	3. Avoid planting exotic plant species and only make use of indigenous species.		Throughout the live span of the activity	
1.4	<p><b>Aspects:</b> Waste Handling</p> <p><b>Impact:</b> Pollution of environment with waste materials</p> <p><b>Objective:</b> Appropriate management of waste</p> <p><b>Target:</b> To avoid pollution of environment with waste materials.</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Provide adequate waste bins on-site equipped with a lid to ensure no pollution,</li> <li>2. General waste must be collected in containers disposed of regularly at the nearest permitted Municipal landfill site.</li> <li>3. Recyclable waste must be recovered for recycling purposes.</li> <li>4. All hazardous waste must be stored in sealed containers on an impermeable surface and disposed of at permitted landfill site.</li> <li>5. Egg debris, once a week, where the chickens are confined in high densities or on hard stand for extended periods, should be scraped up and removed as necessary – Envirotech (waste removal company).</li> <li>6. Hachery must be cleaned after every cycle.</li> <li>7. All staff must be trained/ educated on waste management and what to do in an emergency situation.</li> </ol>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of Waste Management Plan and implementation thereof</p> <p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p>ECO</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	
1.5	<p><b>Aspects:</b> Traffic.</p> <p><b>Impact:</b> Impact on traffic.</p> <p><b>Objective:</b> Minimise the disruption of road users.</p>	Operational Manager		

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<p><b>Target:</b> Minimal disruption of road users.</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. All vehicles must be road-worthy and drivers must be qualified, made aware of the potential road safety issues, and need for strict speed limits;</li> <li>2. Construction vehicles may not leave the designated roads and tracks and turnaround points must be limited to specific sites (when applicable);</li> <li>3. Vehicles used for transport of materials must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces (for example coal);</li> <li>4. Abnormal loads should not be transported after dark (when applicable);</li> <li>5. Abnormal loads should be timed to avoid times of year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods (when applicable);</li> <li>6. Transport of materials should be limited to the least number of trips possible; and</li> <li>7. Safety and traffic signs must be utilised.</li> </ol>		<p><b>Monitoring Action:</b></p> <p>Monitoring of traffic on site.</p> <p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p>ECO</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	
1.6	<p><b>Aspects:</b> Access Road</p> <p><b>Impact:</b> Erosion and dilapidation of the access route</p> <p><b>Objective:</b> Prevent erosion and the dilapidation of the access road.</p> <p><b>Target:</b> The access road is in an acceptable condition</p>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of access road condition and</p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<p><b><u>Mitigation/Management Measures:</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure that only authorised roads and access routes are used,</li> <li>2. Vehicles may not leave the designated roads and tracks and turnaround points needs to be limited to specific sites,</li> <li>3. Maintain the access road adequately in order to minimise erosion and undue surface damage,</li> <li>4. Repair rutting and potholing and maintain stormwater drainage canals.</li> </ol>		<p>access road maintenance plan.</p> <p><b><u>Responsible Person/Party:</u></b> Operational Manager</p> <p><b><u>Monitoring Frequency:</u></b> Throughout the live span of the activity</p>	
1.7	<p><b><u>Aspects:</u></b> Dust Generation and Visual Impact.</p> <p><b><u>Impact:</u></b> Dust nuisance from site operations and visual impact of site operations on surrounding land owners.</p> <p><b><u>Objective:</u></b> To avoid dust from excavated materials and operational activity and unnecessary visual impact caused by site operations.</p> <p><b><u>Target:</u></b> Minimise the incidence of dust generation and visual impact.</p> <hr/> <p><b><u>Mitigation/Management Measures:</u></b></p> <ol style="list-style-type: none"> <li>1. Implement dust suppression measures by watering (or acceptable methods) areas to be cleared as well as already exposed surfaces with damaged soil particles, particularly during dry, windy periods (when dust emissions becomes a problem);</li> <li>2. Ensure all vehicles remain on designated roads;</li> </ol>	Operational Manager	<p><b><u>Monitoring Action:</u></b> Monitoring of Dust Generation and Visual Impact.</p> <p><b><u>Responsible Person/Party:</u></b> Operational Manager</p> <p><b><u>Monitoring Frequency:</u></b></p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<ol style="list-style-type: none"> <li>3. Dust masks are to be supplied to workers;</li> <li>4. The transfer of soil or aggregate should be done over the shortest possible distance (when applicable);</li> <li>5. Access roads are to be kept clean;</li> <li>6. Lay-down area(s), only when applicable, should be screened with shade cloth in an earth tone or other appropriate neutral colour;</li> <li>7. Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact.</li> <li>8. Avoid shiny materials in structures. Where possible shiny metal structures should be darkened or screened to prevent glare; and</li> <li>9. Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact.</li> </ol>		Throughout the live span of the activity	
1.8	<p><b>Aspects:</b> NO2 and SO2 emissions from heatcos'</p> <p><b>Impact:</b> odour and air pollution</p> <p><b>Objective:</b> To avoid excessive emission of NO2 and SO2 into the environment</p> <p><b>Target:</b> Minimal emissions produced</p>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of NO2 and SO2 emissions from the heatcos</p> <p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p><b>Monitoring Frequency:</b></p>	
	<p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Ash contents need to be tested to determine if the ash can be used for reparation purposes on the farm, if it is hazardous, it should be taken to a hazardous waste facility, otherwise it may be used on the farm as with current operations.</li> <li>2. Coal ash may be given to the brick making industries where they can be refined for further use (already done by Supreme).</li> <li>3. To prevent leaching in to the soil and ground water, fly ash should be stored on a bunded area.</li> <li>4. Stockpiled coal should be watered, enclosed or covered to prevent from being blown by wind.</li> </ol>			

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	5. For coal fired heatcos, dry scrubber should be used to reduce the amount of sulphur content		Throughout the live span of the activity	
1.9	<p><b>Aspects:</b> Disease control</p> <p><b>Impact:</b> Disease monitoring (See appendix H – Gap Management System for this section)</p> <p><b>Objective:</b> To minimise the spreading of pathogens associated with condemned material</p> <p><b>Target:</b> No occurrence of disease outbreak</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Ensure proper water drainage around facility.</li> <li>2. Facility must be cleaned regularly.</li> <li>3. Concrete floors must remain sealed to limit the pooling of water.</li> <li>4. Adequate ventilation must be ensured for the flooring.</li> <li>5. Pest control measures must be taxon-specific.</li> </ol>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of Disease control.</p> <p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	
1.10	<p><b>Aspects:</b> Noise Generation</p> <p><b>Impact:</b> Noise nuisance from maintenance work.</p> <p><b>Objective:</b> To avoid excessive noise generation from maintenance work.</p> <p><b>Target:</b> Minimise noise generation</p>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of Noise Generation.</p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<p><b><u>Mitigation/Management Measures:</u></b></p> <ol style="list-style-type: none"> <li>1. Should multiple activities result in the excessive generation of noise, it must be strived to coordinate the incidence of these at the same time;</li> <li>2. Fit machinery with silencers (When applicable);</li> <li>3. All stationary noisy equipment such as compressors and pumps must be contained behind acoustic covers, screens or sheds where possible;</li> <li>4. The regular inspection and maintenance of equipment must be undertaken to ensure that all components function optimally;</li> <li>5. Where recurrent use of machinery is frequent, machines must be shut down during intermediate periods;</li> <li>6. Normal working hours will apply (i.e. from 07H00–18H00, Mondays to Fridays);</li> <li>7. No loud music is permitted;</li> <li>8. Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during working hours and after hours; and,</li> <li>9. Vehicles are to abide by speed restrictions on access roads and limit trip generation so as to minimise disturbance to surrounding land users.</li> </ol>		<p><b><u>Responsible Person/Party:</u></b> Operational Manager</p> <p><b><u>Monitoring Frequency:</u></b> Throughout the live span of the activity</p>	
1.11	<p><b>Aspects:</b> Biodiversity.</p> <p><b>Impact:</b> Change of ecosystem by potential leakage of leachate and runoff.</p> <p><b>Objective:</b> Ensure the minimal disturbance to the ecosystem.</p> <p><b>Target:</b> Minimise disturbance to biodiversity</p>	Operational Manager	<p><b><u>Monitoring Action:</u></b> Monitoring of Biodiversity</p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<p><b><u>Mitigation/Management Measures:</u></b></p> <p>1. Any landscaping implemented in the development must make use of indigenous vegetation in order to limit or eliminate the introduction of Alien and/or invasive species;</p>		<p><b><u>Responsible Person/Party:</u></b> Operational Manager</p> <p><b><u>Monitoring Frequency:</u></b> Throughout the live span of the activity</p>	
1.12	<p><b>Aspects:</b> Soil and water contamination due to operational activities such as the use of effluent on site.</p> <p><b>Impact:</b> Pollution of soil and water contamination by hazardous waste.</p> <p><b>Objective:</b> Provide facilities for appropriate collection and disposal of hazardous waste and treatment of water effluent.</p> <p><b>Target:</b> Minimise hazardous waste storage and treatment of effluent from the Hatchery facility</p>	Operational Manager	<p><b><u>Monitoring Action:</u></b> Monitoring of Soil and water contamination due to operational</p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<p><b><u>Mitigation/Management Measures:</u></b></p> <ol style="list-style-type: none"> <li>1. It should be ensured that all associated infrastructure (sewerage pipes) operate within their design measure. Should it happen that a pipe is blocked/leaking it must be reported to ensure that effluent does not drain into the natural environment;</li> <li>2. Stormwater Management should be designed to ensure no dirty water is released into the natural environment;</li> <li>3. Where vegetation has been utilised as part of the stormwater management system, it is important to ensure that the vegetation is maintained for effective infiltration;</li> <li>4. Drip trays should be placed beneath all stationary equipment in order to ensure no spillage occur;</li> <li>5. All Hazardous Materials should be stored within a bund area capable of storing 110% of the volume stored within;</li> <li>6. A spillkit must be present on site, on spills must be properly cleaned as listed in Section 10 of the report; and,</li> <li>7. Stormwater practises should allow for clean water to be diverted away from the hatchery to ensure that it does not become contaminated.</li> </ol>		<p>activities such as the use of effluent on site.</p> <p><b><u>Responsible Person/Party:</u></b> Operational Manager</p> <p><b><u>Monitoring Frequency:</u></b> Throughout the live span of the activity</p>	
1.13	<p><b>Aspects:</b> Odours</p> <p><b>Impact:</b> Spread of odour and gas emanating from the site.</p> <p><b>Objective:</b> Limited odour emanating from the farm in order not to disturb surrounding landowners.</p> <p><b>Target:</b> Minimise odours produced on site</p>	Operational Manager	<b><u>Monitoring Action:</u></b> Monitoring of odours on the site.	



OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Emission rates must be reduced by limiting the extent of uncapped areas on non-operational areas of the site;</li> <li>2. Accidental fires on premises where burning is not permitted must be extinguished immediately. Appropriate operational procedures involving the spreading and smothering of burning waste, rather than the application of water, must be implemented;</li> <li>3. On site, windbreaks can be utilised to limit pollution on surrounding areas of the farming site;</li> <li>4. No open fires will be permitted on site, and designated smoking areas must be available to all staff members on site.</li> </ol>		<p><b>Responsible Person/Party:</b> Operational Manager</p> <p><b>Monitoring Frequency:</b> Throughout the live span of the activity</p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
<b>2. ACTIVITY: BELGIE BREEDERS</b>				
2.1	<p><b>Aspects:</b> Surface water and/or existing storm water systems</p> <p><b>Impact:</b> Degradation of water resources</p> <p><b>Objective:</b> Ensure the proper working status of all storm water channels.</p>	Operational Manager	<p><b>Monitoring Action:</b> Surface and</p>	

<b>OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd</b>		<b>RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)</b>	<b>MONITORING: Action, responsible person/party and frequency</b>	<b>COMPLIANT? (for use by eco)</b>
	<b>Target:</b> No pollution of water courses		Groundwater monitoring records	
	<p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Manage and maintain all storm water systems to keep them in working condition,</li> <li>2. Water samples must be taken from the nearest borehole and be tested for any pollution (every 3 months).</li> <li>3. Storm water handling to be done in order to prevent erosion,</li> <li>4. Measures have to be implemented to prevent the contamination of clean run-off water and to contain run-off from the breeder farm in order to protect the degradation of water resources.</li> <li>5. Water used during cleaning of the Breeder houses must be disposed into the existing infrastructure leading waste water to the separation dams as already established before irrigated onto the premises (if required by department).</li> <li>6. A Stormwater Management Plan must be implemented. This plan must provide for the water used for cleaning to lead into the already existing water separation dams (if required by department).</li> <li>7. The system needs to be tested before and after a cleaning regime to determine the effectiveness of the cleaning regime.</li> <li>8. Boreholes can be used for human consumption after being treated by filtration and chlorination or UV and must be monitored.</li> </ol>		<p><b>Responsible Person/Party:</b> Operational Manager ECO</p> <p><b>Monitoring Frequency:</b> Throughout the live span of the hatchery</p>	
2.2	<p><b>Aspects:</b> Soil Compaction</p> <p><b>Impact:</b> Erosion and degradation of soil surrounding the hatchery</p>	Operational Manager	<p><b>Monitoring Action:</b> Inspection for soil</p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<p><b>Objective:</b> Prevention soil erosion.</p> <p><b>Target:</b> No soil erosion on site or in direct vicinity thereof.</p>		erosion and photographic evidence.	
	<p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Ensure proper storm water drainage,</li> <li>2. The layout of the area should be optimised to limit the erosion potential,</li> <li>3. Rehabilitate denuded areas especially slopes with appropriate species and erosion protection measures i.e. geotextiles, rocks: topsoil mixtures as per specifications.</li> <li>4. Conduct integrity test on surrounding breeding surface layers (if erosion might be a problem on site);</li> </ol>		<p><b>Responsible Person/Party:</b> Operational Manager</p> <p><b>Monitoring Frequency:</b> Throughout the live span of the activity</p>	
2.3	<p><b>Aspects:</b> Weed and invader plant control</p> <p><b>Impact:</b> Deterioration of the area due to the invasion of weed and/or invader plants</p> <p><b>Objective:</b> To avoid the invasion of problem plants.</p> <p><b>Target:</b> No weed or invader plants will be present at the site.</p>		<p><b>Monitoring Action:</b> Management of Alien Invasive Plants</p>	
	<p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. A weed and invader control program needs to be implemented (when alien invasives become a problem on site).</li> <li>2. Management must familiarise themselves with the Alien Invasive Species Regulations of 2016, and send selected personnel to training on how to identify, control and eradicate listed species.</li> <li>3. If necessary, only indigenous plant species must be used, the use of exotic species is prohibited.</li> </ol>	Operational Manager	<p><b>Responsible Person/Party:</b> Operational Manager</p> <p><b>Monitoring Frequency:</b> Throughout the live span of the activity</p>	

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2.4	<p><b>Aspects:</b> Waste/Manure Handling</p> <p><b>Impact:</b> Pollution of environment with waste materials</p> <p><b>Objective:</b> Appropriate management of waste</p> <p><b>Target:</b> To avoid pollution of environment with waste materials.</p>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of Waste Management Plan and implementation thereof</p>	
<p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Provide adequate waste bins on-site equipped with a lid to ensure no pollution,</li> <li>2. General waste must be collected in containers disposed of on a regular basis at the nearest permitted Municipal landfill site.</li> <li>3. Recyclable waste must be recovered for recycling purposes.</li> <li>4. Hazardous waste must be stored in sealed containers and disposed of at a permitted landfill site.</li> <li>5. Manure from the Breeder farm, where the chickens are confined in high densities or on hard stand for extended periods, should be scraped up and removed as necessary.</li> <li>6. The frequency with which the hatchery is cleaned will depend on factors such as the stocking density and the size of the chickens,</li> <li>7. Effluent from cleaning should be lead to a Stormwater pipeline and not pushed out onto bare soils (if stormwater management plan is required by department);</li> <li>8. Manure should be stored in a stockpile on an impervious surface where water from rain, sprinklers or surface drainage cannot access the manure, until removed by contractors or farmers.</li> <li>9. Low moisture content in the manure will minimise odour and generation of leachate, i.e. don't water</li> </ol>			<p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p>ECO</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	

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	10. Chicken carcasses must be stored in cold-rooms and removed by lion farmers.			
2.5	<p><b>Aspects:</b> Traffic.</p> <p><b>Impact:</b> Impact on traffic.</p> <p><b>Objective:</b> Minimise the disruption of road users.</p> <p><b>Target:</b> Minimal disruption of road users.</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. All vehicles must be road-worthy and drivers must be qualified, made aware of the potential road safety issues, and need for strict speed limits;</li> <li>2. Construction vehicles may not leave the designated roads and tracks and turnaround points must be limited to specific sites (when applicable);</li> <li>3. Vehicles used for transport of materials must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces (for example coal);</li> <li>4. Abnormal loads should not be transported after dark (when applicable);</li> <li>5. Transport of materials should be limited to the least number of trips possible.</li> </ol>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of traffic on site.</p> <p><b>Responsible Person/Party:</b></p> <p>Operational Manager ECO</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	
2.6	<p><b>Aspects:</b> Access Road</p> <p><b>Impact:</b> Erosion and dilapidation of the access route</p> <p><b>Objective:</b> Prevent erosion and the dilapidation of the access road.</p> <p><b>Target:</b> The access road is in an acceptable condition</p> <p><b>Mitigation/Management Measures:</b></p>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of access road condition and</p>	

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	<ol style="list-style-type: none"> <li>1. Ensure that only authorised roads and access routes are used,</li> <li>2. Vehicles may not leave the designated roads and tracks and turnaround points needs to be limited to specific sites,</li> <li>3. Maintain the access road adequately in order to minimise erosion and undue surface damage,</li> <li>4. Repair rutting and potholing and maintain stormwater drainage canals.</li> </ol>		access road maintenance plan.  <u>Responsible Person/Party:</u> Operational Manager  <u>Monitoring Frequency:</u> Throughout the live span of the activity	
2.7	<p><b>Aspects:</b> Dust Generation and Visual Impact.</p> <p><b>Impact:</b> Dust nuisance from site operations and visual impact of site operations on surrounding land owners.</p> <p><b>Objective:</b> To avoid dust from excavated materials and operational activity and unnecessary visual impact caused by site operations.</p> <p><b>Target:</b> Minimise the incidence of dust generation and visual impact.</p> <hr/> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Implement dust suppression measures by watering (or acceptable methods) areas to be cleared as well as already exposed surfaces with damaged soil particles, particularly during dry, windy periods (when dust emissions becomes a problem);</li> <li>2. Ensure all vehicles remain on designated roads;</li> </ol>	Operational Manager	<p><b>Monitoring Action:</b> Monitoring of Dust Generation and visual impact.</p> <p><b>Responsible Person/Party:</b> Operational Manager</p> <p><b>Monitoring Frequency:</b></p>	

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	<ul style="list-style-type: none"> <li>3. Dust masks are to be supplied to workers;</li> <li>4. Access roads are to be kept clean;</li> <li>5. Lay-down area(s), only when applicable, should be screened with shade cloth in an earth tone or other appropriate neutral colour;</li> <li>6. Litter should be strictly controlled, as the spread thereof through wind could have a very negative visual impact.</li> </ul>		Throughout the live span of the activity	
2.8	<p><b>Aspects:</b> NH3 and ( NO2 and SO2) emissions from the manure and heatcos</p> <p><b>Impact:</b> odour and air pollution</p> <p><b>Objective:</b> To avoid excessive emission of NH3 and (NO2 and SO2) into the environment</p> <p><b>Target:</b> Minimal emissions produced</p>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of NH3 and (NO2 and SO2) emissions from the manure and heatcos</p> <p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	
	<p><b>Mitigation/Management Measures:</b></p> <ul style="list-style-type: none"> <li>1. Keep the manure as dry as possible.</li> <li>2. Avoid conduct of the manure with water</li> <li>3. Ensure that no rain water has contact with the manure</li> <li>4. In a case where the manure is loaded, packed and transported (no storage on site) for a longer period, ventilation should be controlled to prevent accumulation of moisture.</li> <li>5. Ash contents need to be tested to determine if the ash can be used for reparation purposes on the farm, if it is hazardous, it should be taken to a hazardous waste facility, otherwise it may be used on the farm as with current operations.</li> </ul>			

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	<p>6. Coal ash may be given to the brick making industries where they can be refined for further use (already done by Supreme).</p> <p>7. To prevent leaching in to the soil and ground water, fly ash should be stored on a bunded area.</p> <p>8. Stockpiled coal should be watered, enclosed or covered to prevent from being blown by wind.</p> <p>9. For coal fired heatcos, dry scrubber should be used to reduce the amount of sulphur content</p>			
2.9	<p><b>Aspects:</b> Disease control</p> <p><b>Impact:</b> Disease monitoring (See appendix H – Gap Management System for this section)</p> <p><b>Objective:</b> To minimise the spreading of pathogens associated with condemned material</p> <p><b>Target:</b> No occurrence of disease outbreak</p>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of Disease control</p>	
	<p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Ensure proper water drainage around facility.</li> <li>2. Facility must be cleaned regularly.</li> <li>3. Concrete floors must remain sealed to limit the pooling of water.</li> <li>4. Adequate ventilation must be ensured for the flooring, bedding and feed.</li> <li>5. Pest control measures must be taxon-specific.</li> <li>6. Areas surrounding the breeding farm must be kept clear of litter and spilled manure.</li> <li>7. Rodents controlled must be ensured at all times.</li> <li>8. Prohibit the introduction of any other animals into the breeding facility.</li> <li>9. Abide to the already existing AI control plan of Supreme (Gap management plan)</li> </ol>		<p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	



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2.10	<p><b>Aspects:</b> Noise Generation</p> <p><b>Impact:</b> Noise nuisance from maintenance work.</p> <p><b>Objective:</b> To avoid excessive noise generation from maintenance work.</p> <p><b>Target:</b> Minimise noise generation</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>1. Should multiple activities result in the excessive generation of noise, it must be strived to coordinate the incidence of these at the same time;</li> <li>2. Fit machinery with silencers;</li> <li>3. All stationary noisy equipment such as compressors and pumps must be contained behind acoustic covers, screens or sheds where possible;</li> <li>4. The regular inspection and maintenance of equipment must be undertaken to ensure that all components function optimally;</li> <li>5. Where recurrent use of machinery is frequent, machines must be shut down during intermediate periods;</li> <li>6. Normal working hours will apply (i.e. from 07H00–18H00, Mondays to Fridays);</li> <li>7. No loud music is permitted;</li> <li>8. Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during working hours and after hours; and,</li> <li>9. Vehicles are to abide by speed restrictions on access roads and limit trip generation so as to minimise disturbance to surrounding land users.</li> </ol>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of Noise generation.</p> <p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	

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2.11	<p><b>Aspects:</b> Biodiversity.</p> <p><b>Impact:</b> Change of ecosystem by potential leakage of leachate and runoff.</p> <p><b>Objective:</b> Ensure the minimal disturbance to the ecosystem.</p> <p><b>Target:</b> To minimise the disturbance to Biodiversity</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>Any landscaping implemented in the development must make use of indigenous vegetation in order to limit or eliminate the introduction of Alien and/or invasive species;</li> <li>Refer to ecological report for mitigation measures</li> </ol>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of Biodiversity.</p> <p><b>Responsible Person/Party:</b></p> <p>Operational Manager</p> <p><b>Monitoring Frequency:</b></p> <p>Throughout the live span of the activity</p>	
2.12	<p><b>Aspects:</b> Soil and water contamination due to operational activities such as the use of effluent on site.</p> <p><b>Impact:</b> Pollution of soil and water contamination by hazardous waste.</p> <p><b>Objective:</b> Provide facilities for appropriate collection and disposal of hazardous waste.</p> <p><b>Target:</b> Minimise hazardous waste storage and treatment of effluent from the Breeders facility</p> <p><b>Mitigation/Management Measures:</b></p> <ol style="list-style-type: none"> <li>It should be ensured that all associated infrastructure (sewerage pipes) operate within their design measure. Should it happen that a pipe is blocked/leaking it must be reported to ensure that effluent does not drain into the natural environment;</li> </ol>	Operational Manager	<p><b>Monitoring Action:</b></p> <p>Monitoring of Soil and water contamination due to operational activities such as the use of effluent on site.</p>	

OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd		RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)	MONITORING: Action, responsible person/party and frequency	COMPLIANT? (for use by eco)
	<ol style="list-style-type: none"> <li>2. Stormwater Management should be designed to ensure no dirty water is released into the natural environment (if required by department);</li> <li>3. Where vegetation has been utilised as part of the stormwater management system, it is important to ensure that the vegetation is maintained for effective infiltration;</li> <li>4. Drip trays should be placed beneath all stationary equipment in order to ensure no spillage occur;</li> <li>5. All Hazardous Materials should be stored within a bund area capable of storing 110% of the volume stored within;</li> <li>6. A spillkit must be present on site, on spills must be properly cleaned as listed in Section 10 of the report; and,</li> <li>7. Stormwater practises should allow for clean water to be diverted away from the chicken houses and hatchery to ensure that it does not become contaminated.</li> </ol>		<p><b><u>Responsible Person/Party:</u></b> Operational Manager</p> <p><b><u>Monitoring Frequency:</u></b> Throughout the live span of the activity</p>	
2.13	<p><b>Aspects:</b> Odours  <b>Impact:</b> Spread of odour from the site.  <b>Objective:</b> Limited odour emanating from the farm in order not to disturb surrounding landowners.  <b>Target:</b> Minimise odours produced on site</p> <p><b><u>Mitigation/Management Measures:</u></b></p> <ol style="list-style-type: none"> <li>1. Emission rates must be reduced by limiting the extent of uncapped areas on non-operational areas of the site;</li> <li>2. Accidental fires on premises where burning is not permitted must be extinguished immediately. Appropriate operational procedures involving the spreading and smothering of burning waste, rather than the application of water, must be implemented;</li> <li>3. On site, windbreaks can be utilised to limit pollution on surrounding areas of the farming site;</li> </ol>	Operational Manager	<p><b><u>Monitoring Action:</u></b> Monitoring of odours.</p> <p><b><u>Responsible Person/Party:</u></b> Operational Manager</p> <p><b><u>Monitoring Frequency:</u></b> Throughout the live span of the activity</p>	

<b>OPERATIONAL PHASE: SUPREME CHICKEN (Pty) Ltd</b>		<b>RESPONSIBLE PARTY/PERSON (implementation of mitigation measures)</b>	<b><u>MONITORING:</u> Action, responsible person/party and frequency</b>	<b>COMPLIANT? (for use by eco)</b>
	4. No open fires will be permitted on site, and designated smoking areas must be available to all staff members on site.			

## 9 DECOMMISSIONING

The activity will not be decommissioned in the future and therefore the proposed impacts thereof were not assessed.

## 10 EMERGENCY RESPONSE PLAN

The objective of this section is to provide a brief summary of options available to the manager. The details of the design will reside with the designers, but cognizance should be taken of the design philosophy and key aspects given in the guidelines to problem solving given below.

A Service Provider (e.g. HazMat Services) will be contracted to undertake clean-up of large accidental spills on site. The spills size will be determined by the discretion of a competent SECO (Site Environmental Control Officer), who will determine the size of the spill accordingly to the spill substance.

If Supreme Poultry chooses not to make use of a Hazmat Service, they must ensure that they are compliant according to SANS standards and relevant legislation to transport the hazardous waste. If Supreme does not appoint a HazMat Service provider they must ensure that employees are trained and competent to perform HazMat tasks.

Smaller spills will be treated in-house by using appropriate spill absorbent kits and materials in accordance to a Spill Response Plan (please refer to Waste Management Plan for disposal options). Staff using spill absorbent kits and materials will be trained in the application of the various products and the use of the products should a spill occur.

The following preventative measures will be undertaken:

- All sensitive sites will be identified such as rivers and wetlands and procedures developed to ensure proper handling of oil/fuel or chemical spillages in these areas.
- It will be ensured that all employees are aware of the procedure to be followed in case of accidental spills and leaks.
- It will be ensured that the necessary materials and equipment for dealing with spills and leaks is available on site at all times.

**All hazardous substances on site must be accompanied by their relevant MSDS (Material Safety Data Sheet) training must be given to people working with these substances according to the MSDS.**

### **Response Method:**

The responsible must act as quickly as possible to locate the source and, if possible, to neutralize the spread of the liquid product.

- Be careful – do not take any action if there is imminent danger. (if toxic fumes or gases are present, or if there is any risk of explosion, wait for the response team to arrive)
- If appropriate, approach the site carefully, with the wind at your back
- Close taps or valves
- Make temporary repairs to containers and temporarily seal all cracks

The response steps mentioned will be applicable to all spills on site and in a water body or wetlands.

**Spill on the ground:**

To contain such spills, use appropriate spill absorbents from the spill kit. The material will be stored in a designated bunded area. This will be disposed of at an approved licensed facility.

**Spill into water body or wetland:**

Regardless of the size of the spill, the following will apply to all spills occurring near or into a stream, wetland or other water body:

- **For a spill into standing water the following must be used:**

Floating booms, floating barriers or absorbent socks. Holding tanks will be used by the contractor to recover and contain released materials on the surface of the water.

- **For spills threatening a water body the following must be done:**

Berms and or trenches must be constructed to contain the spill before it reaches the water body. It may necessary to deploy booms and absorbent materials if the spill reaches the water body. The spill will be collected (by any of the above mentioned) and cleaned up in accordance with legislation.

- **For spills into a wetland the following must be done:**

The contaminated soil in the wetland must be excavated and placed on and covered by plastic sheeting. This must be stored in a designated area at least 100m away from the wetland system. The contaminated soil will be disposed of as soon as possible in accordance with legislation.

It is important to remember that when a major spill occurs that the relevant Environmental Authorities are contacted.

**Methods and materials for containment and clean up:**

Small spills:

- Stop leak if without risk.
- Move containers from spill area.
- Dilute with water and mop up if water-soluble. Alternatively if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container.
- Use spark-proof tools (non-spark tool) and explosion-proof equipment.
- Dispose of via a licensed waste disposal contractor or at a licensed facility.

Large spills:

- Stop leak if without risk.
- Move containers from spill area.
- Approach the release from upwind. Prevent entry into sewers, water courses or confined areas.
- Proceed as follows:
  - Contain and collect spillage with non-combustible, absorbent material e.g. absorbents from spill kit, and place in container for disposal according to local regulations.
  - Use spark-proof tools and explosion-proof equipment.
- Dispose of via a licensed waste disposal contractor or at a licensed facility.
- If spillage is too large then a HazMat team must be contacted.

**Accidental release measures:**

No action shall be taken involving any personal risk or without suitable training.

Steps to be followed:

- Evacuate surrounding areas.
- Keep unnecessary and unprotected personnel from entering.
- Do not touch or walk through spilt material.
- Shut off all ignition sources.
- Avoid breathing vapour or mist.
- Provide adequate ventilation.
- Wear appropriate respirator when ventilation is inadequate.
- Put on appropriate personal protective equipment.

**Environmental precautions:**

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**10.1 Fire Emergency Procedures**

'No smoking' signs will be displayed at areas of high fire risk throughout the site e.g. the workshop, feed store and fuel storage areas. Smoking will only be allowed at designated area to be established by Site Environmental Control Officer (SECO).

Supreme shall ensure that all their fire equipment to be used on site will comply with the following:

- Extinguishers shall be placed in positions to ensure fast and easy access is maintained at all times.

- Placement of all extinguishers shall be depicted with the required pictograms.
- Extinguishers shall be serviced once annually, and after discharge or visible signs of depressurization.
- Supreme shall ensure a person is appointed to inspect the extinguishers on a monthly basis and the results of which are to be entered into a register designed for that purpose.

Supreme will provide training for Fire Extinguisher usage and only trained employees will attempt to use these site Fire Extinguishers.

**Upon discovery of a fire/hearing explosion:**

- Sound the alarm (if available) and attempt to put out the fire with an extinguisher if you have been trained to do so – do not place yourself at any risk of injury;
- Inform your Supervisor immediately;
- Call the fire services if required;
- Leave the site and assemble at the assembly point;
- Receive and work with the emergency services;
- Take measures to prevent a repetition.

**Upon hearing the fire alarm:**

- Vacate the works area;
- Report to the assembly point;
- Do not return to the works area until given the all clear by Management.

**Resources:**

- Presence of first aid kit and fire extinguishers;
- Presence of communications equipment;
- Presence of alarm card with important telephone numbers;
- Presence of assembly point.

**Testing Emergency Procedures**

Procedures will be tested during the works at appropriate intervals. Roll Call registers will be completed after every emergency procedure performed on site.

**10.2 First Aid Emergency Procedures**



Supreme shall ensure that all working areas and remote work locations are adequately provided with first aiders and first aid boxes/equipment, as necessary and in accordance with legal requirements. Supreme must ensure medical treatment for its workforce including emergency evacuation.

Supreme shall ensure that all working areas and remote work locations are adequately provided with first aiders and first aid boxes/equipment, as necessary and in accordance with legal requirements.

The following first aid/medical treatment is recommended to be available:

- Treatment for vector borne disease such as malaria;
- Treatment for burns/scalds and sunburn;
- Eye Injuries;
- Treatment for sprains and broken bones;
- Treatment for serious cuts;
- Treatment for Bilharzia;
- Treatment for cholera; and,
- Treatment for local climate factors:
  - Heat stress/ exhaustion/stroke;
  - Dehydration;
  - Insect bites/stings, spider and scorpion bites;
  - Be aware where anti-venom is available for snake bites.

The First Aid attendant shall be trained in accordance with the requirements set out in the OHSA with recognized and accredited service providers.

Proof of training attended (certificate, registers) shall be attached to the written acceptance of appointment. It will be the first aid attendant's responsibility to ensure the contents of the first aid boxes are monitored and inspections recorded on the contents of the first aid box register.

Each first aid box shall be clearly marked "FIRST AID".

**Procedure in the event of an accident:**

All incidents where an employee is injured on duty to the extent that he/she:

- Dies;
- becomes unconscious; and,
- loses a limb or part of a limb.

OR where:

- a major incident occurred;

- the health or safety of any person was endangered;
- where a dangerous substance was spilled; and,
- machinery ran out of control.

Procedure:

- Assess the situation and ensure it is safe before proceeding;
- Contact First Aider and/or emergency services; and,
- Do not move the person unless there is a life or death situation.

Such incidents shall be reported as follow:

- Within 2 hours telephonically;
- Preliminary report within 48 hours;
- Final report within 7 days.

Reports and statistics (if required) will be submitted to the Manager at the end of each month on all accidents/incidents involving any person, material or equipment that was injured, damaged or lost.

### **10.3 Roles in an Emergency**

The following is an outline of roles and responsibilities for all workers during an emergency. The Emergency Management Team or responsible people has specifically assigned roles during an emergency

#### **All Workers**

All workers should:

- FOLLOW all instructions in the Emergency Management Procedures including heading to assembly point for roll call and waiting for emergency to be declared over
- FOLLOW all instructions given to the by the Emergency Management Team and be where they should be.

#### **Manager**

The Manager is the overall in charge of the site and shall delegate duties as required by the Emergency Management Procedures and shall empower the SHE Officer to lead the Emergency Management Team. He shall also approve and facilitate for all resources required for use in the emergency.

#### **SHE Officer/ ECO Officer/ Responsible Person**

Responsibilities include:

- Take steps deemed necessary to ensure the safety of all workers and other individuals in the implementation of Emergency Management Procedures
- Determine whether to implement Emergency Procedures (evacuation; reverse evacuation; shelter in place; severe weather/safe area; drop, cover and hold; lockdown)
- Activate the Emergency Management Team or responsible people.
- Arrange for transfer of workers and other individuals when safety is threatened by a disaster.
- Work with emergency service personnel
- Maintain a line of communication with the emergency agencies, Relevant Government Agencies, Project Site Manager.
- Declare the emergency over when all has been done to secure the site
- Initiate investigation procedures

**Health and Safety Committee (If Applicable)**

Health and Safety Committee shall be responsible for assisting the overall direction of the emergency procedures at the site. Responsibilities may include the following:

- Take steps deemed necessary to ensure the safety of workers, and other individuals in the implementation of Emergency Management Protocols.
- Render first aid if necessary.
- Assist in the transfer of workers, staff and other individuals when their safety is threatened by a disaster.
- Help coordinate the activities of emergency service personnel.
- Maintain a line of communication with the Emergency Management Team leader.
- Assist as directed by the SHE Officer/Responsible person.

The following table is provided to assist the ECO and Manager with remedial work options and problem solving:

Observation or Event	Action by Inspector or Observer	Action by Site Manager
<p>Spillage of diesel or hydrocarbons on soil</p>	<p>Report to Site Manager and continue observations.</p> <p>Also check:</p> <ul style="list-style-type: none"> <li>➤ That the source causing the spillage has ceased, and that the affected area is isolated to prevent spreading of the hazardous substance, where after it should be rehabilitated.</li> </ul>	<p>Action will be required ASAP by following the next steps:</p> <ul style="list-style-type: none"> <li>➤ Dig down into the soil to see how far down the pollution penetrated,</li> <li>➤ If less than 300mm penetrated:                             <ul style="list-style-type: none"> <li>a. Turn the soil over to expose it to the air.</li> <li>b. Apply Mono Ammonium Phosphate (MAP) at a rate of 58gr/m<sup>2</sup> to the overturned soil.</li> <li>c. Water enough to keep the soil moist.</li> </ul> </li> <li>➤ If penetration is greater than 300mm:                             <ul style="list-style-type: none"> <li>a. Remove the affected soil and spread in a layer not more than 300mm thick.</li> <li>b. Apply MAP at a rate of 50gr/m<sup>2</sup>.</li> <li>c. Water enough to keep the soil moist.</li> </ul> </li> <li>➤ Repeat the above steps every 6 weeks or until the soil is clean.</li> </ul>
<p>Erosion</p>	<p>Report to Site Manager and continue observations.</p> <p>Also check:</p> <ul style="list-style-type: none"> <li>➤ That all vehicular movement is restricted to existing access routes to prevent crisscrossing of tracks through undisturbed areas.</li> </ul>	<p>Action will be required ASAP:</p> <ul style="list-style-type: none"> <li>➤ Implement erosion protection works at identified problem areas.</li> <li>➤ Implement remedial works at affected areas in order to restore the area to its previous or better status.</li> </ul>

### 11 INCIDENT REGISTER

INCIDENT REGISTER						
NAME OF PERSON REPORTING THE INCIDENT	Incident Number (e.g. 001)	INCIDENT	DATE OF INCIDENT IDENTIFIED	HOW WAS INCIDENT ADDRESSED?	DATE OF RECTIFICATION	SIGNATURE

## 12 REHABILITATION MEASURES

The rehabilitation phase follows completion of the operational phase and entails site clean-up and site rehabilitation. The underlying aim of rehabilitation is the process of returning land within the site boundary to some degree of its former natural state.

Key aspects within this process include the:

- Removal of structures and infrastructure;
- Handling of inert waste and rubble;
- Handling of hazardous waste and pollution control;
- Final shaping of the terrain;
- Topsoil replacement and soil amelioration;
- Ripping and scarifying of surfaces;
- Planting of indigenous occurring vegetation (if deemed necessary); and
- Maintenance.

### Rehabilitation Measures

#### Removal of structures and infrastructure

- On completion of a section of works, the area must be rehabilitated by suitable landscaping, levelling, topsoil dressing, land preparation, alien plant eradication and where ascribed for by the ECO, vegetation establishment;
- Clear and completely remove from site all operational structures and temporary infrastructure;
- All permanent infrastructures must be returned to a useable state.

#### Topsoil replacement and soil amelioration

- The reinstatement of disturbed areas must follow immediately after the removal of structures and temporary infrastructure;
- Topsoil backfilling must be undertaken when the soil is dry, and not following any recent rainfall events;
- All stockpiled topsoil together with herbaceous vegetation should be replaced and redistributed over a disturbed area such as temporary access roads;
- Topsoil must be returned to the same site from where it was stripped;
- When insufficient topsoil remains, soil of a similar quality can be obtained from a nearby area within the site area which was disturbed;
- Once topsoil has been returned to the ground, stripped vegetation should be randomly spread by hand over the area.

#### **Inert waste**

- Domestic waste must be completely removed from the site and disposed of at a landfill site.

#### **Maintenance**

- All re-growth of invasive vegetative material will be monitored by the Developer for one year;
- All areas under rehabilitation are to be treated as no-go areas using danger tape and steel droppers/fencing and cordoned off, to prevent vehicular, pedestrian and livestock access.
- Any re-vegetation must be done using plant species in occurrence on site;
- Control invasive plant species and weeds using approved methods of manual or chemical intervention;
- The reestablishment of vegetation should be allowed several rainy seasons, given the arid nature of the climate and region.