



# ***baboloki geohub***

*Advancement Through Sustainability*

**ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE  
PROPOSED EMACUSINI LAYER FARM  
DEVELOPMENT WITHIN THE JOZINI LOCAL MUNICIPALITY,  
KWAZULU-NATAL**

Prepared for:  
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<sup>1</sup> In terms of Regulation 40(3) potential or registered interested and affected parties, including the Competent Authority, may be provided with an opportunity to comment on the Basic Assessment Report prior to submission of the application but must again be provided an opportunity to comment on such reports once an application has been submitted to the Competent Authority. The Basic Assessment Report released for comment prior to submission of the application is referred to as the "Pre-Application Basic Assessment Report". The Basic Assessment Report made available for comment after submission of the application is referred to as the "Draft Basic Assessment Report". The Basic Assessment Report together with all the comments received on the report which is submitted to the Competent Authority for decision-making is referred to as the "Final Basic Assessment Report".

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## GLOSSARY

<b>Activity</b>	An action either planned or existing that may result in environmental impacts through pollution or resource use. For the purpose of this report, the terms ‘activity’ and ‘development’ are freely interchanged.
<b>Alternatives</b>	Different means of meeting the general purpose and requirements of the activity, which may include site or location alternatives; alternatives to the type of activity being undertaken; the design or layout of the activity; the technology to be used in the activity and the operational aspects of the activity. <i>Note: There are no project alternatives for this development.</i>
<b>Applicant</b>	The project proponent or developer responsible for submitting an environmental application to the relevant environmental authority for environmental authorisation.
<b>Biodiversity</b>	The diversity of animals, plants and other organisms found within and between ecosystems, habitats, and the ecological complexes.
<b>Buffer</b>	A buffer is seen as an area that protects adjacent communities from unfavourable conditions. A buffer is usually an artificially imposed zone included in a management plan.
<b>Construction</b>	The building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.
<b>Cumulative Impact</b>	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.
<b>Decommissioning</b>	The demolition of a building, facility, structure or infrastructure.
<b>Direct Impact</b>	Impacts that are caused directly by the activity and generally occur at the same time and at the same place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally quantifiable.
<b>Ecosystem</b>	A dynamic system of plant, animal (including humans) and micro-organism communities and their non-living physical environment interacting as a functional unit. The basic structural unit of the biosphere, ecosystems are characterised by interdependent interaction between the component species and their physical surroundings. Each ecosystem occupies a space in which macro-scale conditions and interactions are relatively homogenous.
<b>Activity</b>	An action either planned or existing that may result in environmental impacts through pollution or resource use. For the purpose of this report, the terms ‘activity’ and ‘development’ are freely interchanged.
<b>Alternatives</b>	Different means of meeting the general purpose and requirements of the activity, which may include site or location alternatives; alternatives to the type of activity being undertaken; the design or layout of the activity; the technology to be used in the activity and the operational aspects of the activity. <i>Note: There are no project alternatives for this development.</i>

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<b>Biodiversity</b>	The diversity of animals, plants and other organisms found within and between ecosystems, habitats, and the ecological complexes.

## ACRONYMS

BAR	Basic Assessment Report
CBA	Critical Biodiversity Area
DBAR	Draft Basic Assessment Report
CMA	Catchment Management Agency
DALRRD	Department of Agriculture, Land Reform and Rural Development
DHSWS	Department of Human Settlements, Water and Sanitation
EAP	Environmental Assessment Practitioner
KZN EDTEA	KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs
EIA	Environmental Impact Assessment
EKZNW	Ezemvelo KwaZulu-Natal Wildlife
GIS	Geographic Information System
I&AP	Interested and Affected Parties
IDP	Integrated Development Plan
NEMA	National Environmental Management Act [Act No. 107 of 1998] [as amended]
NEM:BA	National Environmental Management Biodiversity Act [Act No. 10 of 2004]
NEM:WA	National Environmental Management Waste Act [Act No. 36 of 1998] [as amended]
NEM:AQA	National Environmental Management Air Quality Act [Act No. 39 of 2004]
NFEPA	National Freshwater Ecosystem Priority Area
NHRA	National Heritage Resources Act
NWA	National Water Act
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Internet System
SANBI	South African National Biodiversity Institute
SAPS	South African Police Services
WMA	Water Management Agency
WUL	Water Use Licence





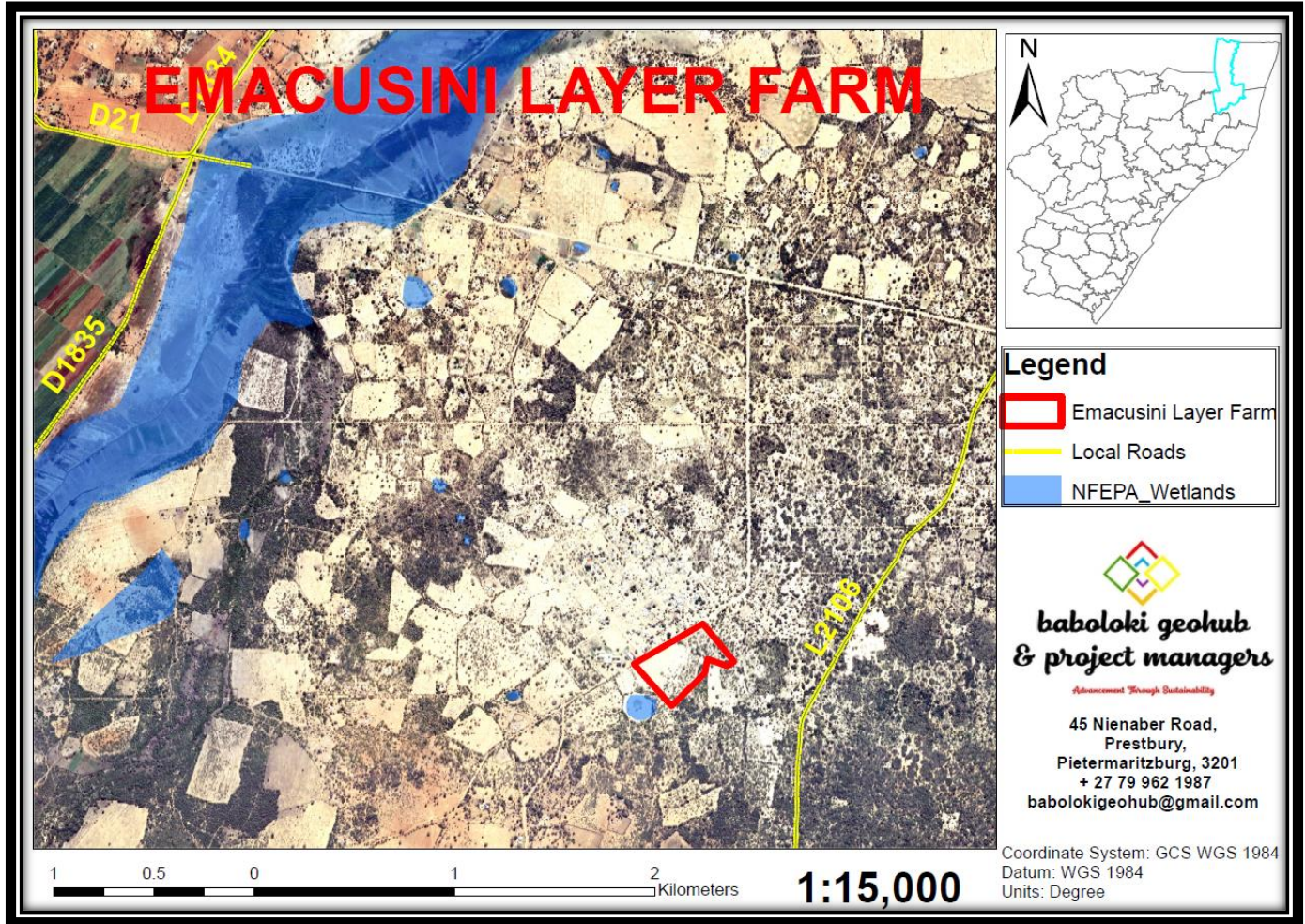


## **1. INTRODUCTION**

### **1.2. Project Background**

The environmental team of Baboloki Geohub & Project Managers [hereafter referred to as Baboloki Geohub] are appointed as the Environmental Assessment Practitioner [EAP] on behalf of Lizohamba (Pty) Ltd. Baboloki Geohub is therefore undertaking the appropriate environmental studies for this proposed project.

The Lizohamba (Pty) Ltd has proposed the development of Emacusini layer farm, a poultry farm located in Biva, falling under Ward 6 of the Jozini Local Municipality. The project entails the construction of 11 buildings each measuring 100m long by 10m wide, housing a total of 439,232 chickens in a one-year cycle. The construction of an administration Block with parking bays, egg collection and grading room, and ablution facilities with 2 septic tanks, guard house and generator room as supporting infrastructure.



**FIGURE 1: LOCALITY MAP SHOWING THE LOCALITY OF THE PROPOSED DEVELOPMENT**

### 1.3. Property Details

#### 1.3.1. Land Use Zoning

**TABLE 1: LAND USE ZONING**

The site is zoned	Agriculture
Is a change of land use or a consent use application required?	No
Must a building plan be submitted to the local authority?	Yes

### 1.3.2. Coordinates

The proposed development of the Emacusini Layer Farm Development, Figure 1 shows the locality Map of the project, and Table 2 provides the coordinates of the proposed infrastructure.

**TABLE 2: COORDINATES**

Point	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec)		
North-west Corner	27	25	45.84	32	12	48.96
South West Corner	27	25	52.68	32	12	55.08
South East Corner 1	27	25	47.28	32	13	0.48
South East Corner 2	27	25	45.12	32	13	0.84
South East Corner 3	27	25	46.20	32	13	4.08
South East Corner 4	27	25	45.50	32	13	5.15
North East Corner	27	25	39.36	32	13	0.12

### 1.3.3. Access / Directions

From Jozini BP Garage, travel east towards the dam wall for 700m, then turn right onto P449 towards Jozini Mall and travel 5.1km. Turn left onto D9 road, and travel 9.6km, then turn right onto D21 Road and travel 3.3km. after the bridge over the Balamhlanga wetland, turn right and travel 2.3km towards Biva Combined School, the Emacusini Layer Farm will be across the Biva combined school.

## 2. SCOPE OF THE EMPR

In accordance with the requirements of the National Environmental Management Act (Act No. 107 of 1998, NEMA), this EMPr is to be implemented by the Developer, as well as any employee, contractor, agent, or sub-contractor appointed to act on behalf of the Developer in the execution of the project, in order to ensure environmental compliance on site.

The specifications outlined in this EMPr are thus applicable to all activities undertaken by the Developer, as well as their appointed contractors and all persons involved in the execution of the works,

including sub-contractors, the workforce, suppliers, and volunteers, for the duration of construction, operation and future maintenance.

Included within the EMPr is guidance for on-going training with respect to the implementation of the conditions included therein, including induction by all new people coming onto site to carry out work, and 'top-up' activities such as regular 'toolbox talks' on specific key issues.

An Environmental Code of Conduct has also been developed that provides a simplified set of rules that must be adhered to by all persons involved with the project at all times. This is to be displayed at strategic points to ensure constant environmental awareness.

The effectiveness of the EMPr is limited by the level of adherence to the conditions set forth in the EMPr by the Developer, the Contractor and Sub-contractors. It is further assumed that compliance with the EMPr will be monitored and audited as set out in this EMPr and contractual clauses.

### **3. OBJECTIVES OF THE EMPr**

The EMPr has the following objectives:

- Ensure compliance with regulatory authority stipulations and guidelines which may be local, provincial, national and/or international.
- To outline mitigation measures and environmental specifications which are required to be implemented for all phases of the project in order to minimise the extent of environmental impacts, and to manage environmental impacts associated with the proposed project.
- To identify measures that could optimise beneficial impacts.
- To establish a method of monitoring and auditing environmental management practices during all phases of development.
- Detail specific actions deemed necessary to assist in mitigating the environmental impact of the project.
- Propose mechanisms for monitoring compliance with the EMPr and reporting thereon.
- Specify time periods within which the measures contemplated in the draft environmental management plan must be implemented, where appropriate.
- Provide rational and practical environmental conditions / requirements to:
  - Minimise disturbance of the natural environment;
  - Ensure water resource protection;
  - Prevent or minimise all forms of pollution;
  - Protect indigenous flora and fauna;
  - Prevent soil and sand erosion and facilitate the re-vegetation of affected areas;
  - Maintenance of newly re-vegetated areas;
  - Restrict noise disturbance; and
  - Ensure compliance with all applicable laws, regulations, standards and guidelines for the protection of the environment.
- Adopt the best practical means available to prevent or minimise adverse environmental impacts.
- Develop waste management practices based on prevention, minimisation, recycling, treatment or disposal of waste.
- Train the Developer, its employees and contractors with regard to their environmental obligations.



## 4. CONTENT OF THE EMPR

A typical EMP takes the planning and design, construction, operational and decommissioning phases of a project into account. The EMP is compiled as part of the Basic Assessment (BA) process and is an annexure to the project report.

The EMPr is based mainly on the finding and recommendations of the BA process. The EMPr, is however considered the live document and must be updated with additional information or actions during the lifetime of the project if and when needed.

The EMPr follows an approach of identifying an over-arching goal and objectives, accompanied by management actions that are aimed at achieving these objectives. The management actions are presented in a table format in order to show the links between the goal and associated objectives, actions, responsibilities, monitoring requirements and targets. The management plans for the design, construction, operation and decommissioning phases consist of the following components:

- ❖ **Impact:** The potential positive or negative impact of the development that needs to be enhanced, mitigated or eliminated.
- ❖ **Objectives:** The objectives necessary in order to meet the goal; these take into account the findings of the specialist studies.
- ❖ **Mitigation/Management Actions:** The actions needed to achieve the objectives, taking into consideration factors such as responsibility, methods, frequency, resources required and prioritisation.
- ❖ **Monitoring:** The key monitoring actions required to check whether the objectives are being achieved, taking into consideration responsibility, frequency, methods and reporting.

### 4.1. Aim of Environmental Management

The overall goal for environmental management for proposed Emacusini Layer Farm Facility project is to construct and operate in a manner that;

- 1) Minimises the ecological footprint of the project on the local environment
- 2) Facilitated harmonious co-existence between the project and other land uses in the area; and
- 3) Contributes to the environmental baseline and understanding of environmental impacts of chicken egg-layer facilities in the South African Context.



## 5. DETAILS OF THE DEVELOPER

TABLE 3: APPLICANT DETAILS

Applicant	Lizohamba (Pty) Ltd
Representative	Mr Blessing Manana
Postal Address	P O BOX 144, JOZINI 3969
Telephone	082 586 9845
E-mail	mcityzn@webmail.co.za

## 6. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

The environmental team of Baboloki Geohub & Project Managers [hereafter referred to as Baboloki Geohub] are appointed as the Environmental Assessment Practitioner [EAP] on behalf of Lizohamba (Pty) Ltd. Baboloki Geohub is therefore undertaking the appropriate environmental studies for this proposed project.

Baboloki Geohub has been involved in and / or managed several environmental assessments in South Africa to date. A specialist area of focus is on assessment of linear developments [national and provincial roads, pipelines and power lines], bulk infrastructure and supply [e.g. wastewater treatment works, pipelines, landfills], electricity generation and transmission, and agriculture based projects. For the detailed experience of the EAP, refer to Appendix G of this dBAR.

TABLE 4: EAP DETAILS<sup>2</sup>

	Detail	Baboloki Geohub
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	<b>Telephone</b>	079 962 1987
	<b>E-mail</b>	<a href="mailto:babolokigeohub@gmail.com">babolokigeohub@gmail.com</a>
	<b>Qualification</b>	MSc International Environmental Management

<sup>2</sup> Full curriculum vitae of the above practitioners can be found in Appendix G of this report. [double-check this – above reference to EAP is Appendix G]

	Detail	Baboloki Geohub
	<b>Affiliations</b>	Environmental Assessment Practitioners Association of South Africa (EAPASA) International Association of Impact Assessment South Africa (IAIAsa) Institute for Waste Management of Southern Africa (IWMSA)
	<b>Experience</b>	10 years

## 7. LEGAL REQUIREMENTS

The following is a summary of the environmental legislation applicable to the proposed project:

TABLE 5: SUMMARY OF THE ENVIRONMENTAL LEGISLATION APPLICABLE

Legislation	Sections	Relates To
<b>The Constitution (No 108 of 1996)</b>	Chapter 2	Bill of Rights.
	Section 24	Environmental rights.
<b>National Environmental Management Act (Act No. 107 of 1998 [as amended])</b>	Section 2	Defines the strategic environmental management goals and objectives of the government. Applies through-out the Republic to the actions of all organs of state that may significantly affect the environment.
	Section 24	Provides for the prohibition, restriction and control of activities which are likely to have a detrimental effect on the environment.
	Section 28	The Developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
<b>EIA Regulations (2017)</b>	GNR327	Activities requiring a Basic Assessment study to be undertaken.
	GNR325	Activities requiring a Scoping and Impact Assessment study to be undertaken.

Legislation	Sections	Relates To
	GNR324	Activities in special geographical areas requiring a Basic Assessment study to be undertaken.
<b>National Waste Act (Act No. 59 of 2008) and List of Waste Activities (November 2013)</b>		Provides for specific waste management measures and the remediation of contaminated land.
<b>Norms and Standards for the Storage of Waste, 2013</b>	GNR 926 – Sections 7 – 20	Provides specific guidelines for the operational procedures for a facility for the storage of waste.
<b>National Heritage Resources Act (Act No. 25 of 1999) and regulations</b>	Section 34	No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
	Section 35	No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site.
	Section 36	No person may, without a permit issued by the South African Heritage Resource Agency (SAHRA) or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority.  "Grave" is widely defined in the Act to include the contents, headstone or other marker of such a place, and any other structure on or associated with such place.
	Section 38	This section provides for Heritage Impact Assessments (HIAs), not already covered under the environmental

Legislation	Sections	Relates To
		law. Where covered under such law the provincial heritage resources authorities must be notified of a proposed project and must be consulted during the HIA process. The HIA is thus approved under the environmental authorisation, which must take into account the provincial heritage resources authorities' comments prior to making a decision on the HIA.
<b>National Environmental Management: Air Quality Act (Act No. 39 of 2004)</b>	Section 34	Control of noise.
	Section 35	Control of offensive odours.
<b>National Dust Control Regulations (GNR 827 of November 2013)</b>		Control of dust.
<b>Occupational Health and Safety Act (Act No. 85 of 1993)</b>	Section 8	General duties of employers to their employees.
	Section 9	General duties of employers and self-employed persons to persons other than their employees.
<b>National Water Act (Act No. 36 of 1998) and regulations</b>	Section 19	Prevention and remedying the effects of pollution.
	Section 20	Control of emergency incidents.
	Section 21	Water uses.
<b>Minerals and Petroleum Resources Development Act (Act No. 28 of 2002)</b>	Section 22	Application for a mining right.
	Section 39	Environmental management programme and environmental management plan.

<b>Legislation</b>	<b>Sections</b>	<b>Relates To</b>
<b>Hazardous Substances Act (Act No. 15 of 1973) and regulations</b>		Provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances.
<b>National Environmental Management: Biodiversity Act (No. 10 of 2004)</b>		Provide for the protection of species and ecosystems that warrant national protection and the sustainable use of indigenous biological resources.
	Section 53	Protection of threatened or protected ecosystems.
	Section 65	Control of alien species.
	Section 71	Control of invasive species.
<b>National Forests Act (Act No. 84 of 1998) and Regulations</b>	Section 7	No person may cut, disturb, damage or destroy any indigenous, living tree in a natural forest, except in terms of a licence issued under section 7(4) or section 23; or an exemption from the provisions of this subsection published by the Minister in the Gazette.
	Sections 12-16	These sections deal with protected trees, with the Minister having the power to declare a particular tree, a group of trees, a particular woodland, or trees belonging to a certain species, to be a protected tree, group of trees, woodland or species. In terms of section 15, no person may cut, disturb, damage, destroy or remove any protected tree; or collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a licence granted by the Minister.
<b>National Road Traffic Act (Act No. 93 of 1996)</b>		Road safety.
<b>Ordinance</b>		Town Planning and Townships Ordinance 15 of 1986.

Legislation	Sections	Relates To
<b>By-laws</b>		Promulgated by-laws: <ul style="list-style-type: none"> <li>▪ Waste Management</li> <li>▪ Property Rates by laws</li> <li>▪ Legal Services</li> <li>▪ Municipal Cemeteries</li> <li>▪ Discharge of Industrial Effluent</li> <li>▪ Electricity Supply</li> </ul>
<b>SANS 10103 (Noise Regulations)</b>		The measurement and rating of environmental noise with respect to annoyance and to speech communication.
<b>KZN Nature Conservation Ordinance (Ordinance 15 of 1974)</b>		Sensitive species are protected under this Ordinance and must be considered.

## **8. ROLES AND RESPONSIBILITIES**

For the purpose of the EMP, the generic roles that need to be defined are those of the:

### **8.2. The Project Proponent / Project Manager**

- Ensure that the Site Manager/Engineer and the Contractor/Operator are aware of all specifications, legal constraints, standards and procedures pertaining to the project specifically with regard to the environment;
- Ensure that all stipulations within the EMPr are communicated and adhered to by the Site Manager/Engineer and the Contractor/Operator;
- Monitor the implementation of the EMPr throughout the project by means of regular site visits and meetings; and
- Order the removal of any person(s) and/or equipment in contravention of the specifications of the EMPr.

The Project Manager should be fully conversant with the EMPr for the project, as well as all applicable environmental legislation.

### **8.3. The Site Manager/ Engineer**

- Be fully conversant with the EMPr;
- Be fully conversant with all environmental legislation and ensure compliance;
- Have overall responsibility for the implementation of the EMPr;
- Liaise with the Project Manager and Contractor/Operator on matters concerning the environment;
- Prevent actions that will harm or may cause harm to the environment, and take steps to prevent pollution on the site;
- Implement remedial measures in the event of pollution incidents or environmental impacts;
- Monitor and verify that environmental impacts are kept to a minimum;
- Review and approve construction methods where necessary; and
- Order the removal of any person(s) and/or equipment in contravention of the specifications of the EMPr. Disturbed

## **8.4. The Contractor**

- Be fully conversant with the EMPr;
- Be fully conversant with all environmental legislation and ensure compliance;
- Ensure that all the environmental specifications contained within this EMPr are adhered to at the site;
- Regularly liaise with the Site Manager on matters relating to the environment; and
- Confine activities to the demarcated construction site.

The above responsibilities listed for the Contractor will also apply to any appointed sub-consultants.

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

- Be fully conversant with the EMPr;
- Be fully conversant with all environmental legislation and ensure compliance;
- Ensure that all the environmental specifications contained within this EMPr are adhered to the site;
- Regularly liaise with the Site Manager on matters relating to the environment; and
- Compile monthly reports as to the progress of the construction phases and report to all parties involved (Site Manager, Project Proponent).

## **9. COMPLIANCE WITH THE ENVIRONMENTAL SPECIFICATION**

In terms of legal requirement, a crucial objective of the EMPr is to satisfy the requirements of National Environmental Management Act (NEMA) EIA Regulations published in GNR 324, 325 and 327 and on the 7 April 2017 Government Gazette Number 40772. These regulations regulate and prescribe the content of the EMPr and specify the type of supporting information that must accompany the submission of the report to the authorities. An overview of where the requirements are addressed in this Draft EMPr is presented in Table 6.



**TABLE 6: COMPLIANCE WITH SECTION 33 OF THE EIA REGULATIONS 2014 AND SECTION 24N OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO. 107 OF 1998).**

Requirements of Section 24N of NEMA	Where is it included in this EMPr?
<p>2) The environmental management programme must contain-</p> <p>a) information on any proposed management, mitigation, protection or remedial measures that will be undertaken to address the environmental impacts that have been identified in a report contemplated in subsection 24(1A), including environmental impacts or objectives in respect of:</p> <p>(i) planning and design;</p> <p>(ii) pre-construction and construction activities;</p> <p>(iii) the operation or undertaking of the activity in question;</p> <p>(iv) the rehabilitation of the environment; and</p> <p>(v) closure, if applicable.</p>	<p>Section 11 to 14 and the columns detailing the impact description, mitigation and management objectives, and mitigation and management actions.</p>
<p>b) details of-</p> <p>(i) the person who prepared the environmental management programme; and</p> <p>(ii) the expertise of that person to prepare an environmental management programme;</p>	<p>Appendices G of the Draft BA Report to which this EMPr is attached.</p>
<p>c) a detailed description of the aspects of the activity that are covered by the environmental management programme;</p>	<p>Section 1</p>
<p>d) information identifying the persons who will be responsible for the implementation of the measures contemplated in paragraph (a);</p>	<p>Columns in Section 11 to 14 of the EMPr regarding the monitoring responsibility, including the requirements for monitoring and reporting on compliance and the responsible parties noted in Section 3.</p>
<p>e) information in respect of the mechanisms proposed for monitoring compliance with the environmental management programme and for reporting on the compliance;</p>	<p>The columns detailing the mitigation and management actions, and the monitoring methodology, frequency and responsibility in Sections 11 to 14 of this EMPr.</p>
<p>f) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of any listed activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and</p>	<p>Sections 11 to 14 of this EMPr, as applicable to the post-construction, rehabilitation phase and the decommissioning phase.</p>

<p>g) a description of the manner in which it intends to-</p> <ul style="list-style-type: none"> <li>(i) modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;</li> <li>(ii) remedy the cause of pollution or degradation and migration of pollutants; and</li> <li>(iii) comply with any prescribed environmental management standards or practices.</li> </ul>	<p>The columns detailing the mitigation and management objectives, mitigation and management actions, and the monitoring methodology, frequency and responsibility in Sections 11 to 14 of this EMPr.</p>
<p>3) The environmental management programme must, where appropriate-</p> <ul style="list-style-type: none"> <li>a) set out time periods within which the measures contemplated in the environmental management programme must be implemented;</li> <li>b) contain measures regulating responsibilities for any environmental damage, pollution, pumping and treatment of polluted or extraneous water or ecological degradation which may occur inside and outside the boundaries of the operations in question; and</li> <li>c) develop an environmental awareness plan describing the manner in which-             <ul style="list-style-type: none"> <li>(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and</li> <li>(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment.</li> </ul> </li> </ul>	<p>The columns detailing the mitigation and management actions, and the monitoring methodology, frequency and responsibility in Sections 11 to 14 of this EMPr.</p>
<p>7) The holder and any person issued with an environmental authorisation-</p> <ul style="list-style-type: none"> <li>a) must at all times give effect to the general objectives of integrated environmental management laid down in section 23;</li> <li>b) must consider, investigate, assess and communicate the impact of his or her prospecting or mining on the environment;</li> <li>c) must manage all environmental impacts             <ul style="list-style-type: none"> <li>(i) in accordance with his or her approved environmental management programme, where appropriate; and</li> <li>(ii) as an integral part of the prospecting or mining, exploration or production operation, unless the Minister responsible for mineral resources directs otherwise;</li> </ul> </li> <li>d) must monitor and audit compliance with the requirements of the environmental management programme;</li> <li>e) must, as far as is reasonably practicable, rehabilitate the environment affected by the prospecting or mining operations to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and</li> </ul>	<p>Throughout the EMPr</p>

f) is responsible for any environmental damage, pollution, pumping and treatment of polluted or extraneous water or ecological degradation as a result of his or her operations to which such right, permit or environmental authorisation relates.	
8) Notwithstanding the Companies Act, 2008 (Act No. 71 of 2008), or the Close Corporations Act, 1984 (Act No. 69 of 1984), the directors of a company or members of a close corporation are jointly and severally liable for any negative impact on the environment, whether advertently or inadvertently caused by the company or close corporation which they represent, including damage, degradation or pollution.	Section 5 details the responsibility of the Project Applicant.

## **10. EMPR FOR THE DEVELOPMENT OF THE EMACUSINI LAYER FARM DEVELOPMENT**

The EMPr specifies the minimum requirements to be implemented by the Developer as per the scope of works and scope of the EA, in order to minimise and manage the potential environmental impacts and ensure sound environmental management practices. It also provides the framework for environmental monitoring throughout the construction phases.

The provisions of this EMPr are binding on the Developer during the life of the project. The EMPr must be binding to Lizohamba (Pty) Ltd or any authority to which responsibility for the construction activities has been delegated to, until such time that the EDTEA or applicable environmental authority has formally absolved the Developer from its responsibilities in terms of this EMPr.

It is essential that the EMPr requirements be carefully studied, understood, implemented, and adhered to at all time.

To simplify the EMPr requirements, each aspect related to the EMPr has been addressed in the table below. Each action within the EMPr is supported by the priority of when the specific action will need to be implemented.

The proceeding tables constitute the EMPr for the development of the Emacusini Layer Farm Development, together with the preceding sections, which are legally binding to the Developer and associated appointed Contractors / employees.

## 11. MANAGEMENT ACTIONS FOR THE PLANNING AND DESIGN PHASE

The aim of managing tasks associated with planning and design phase of the chicken egg-layer facility is to ensure that potential environmental impacts identified during the Basic Assessment (BA) Process are effectively used to inform project design. This promotes the use of pre-emptive measures that serve to minimise the potential environmental impacts that may otherwise require mitigation at a later stage in the process. The potential impacts resulting from development of the preferred sites during planning and design phase of the activity are provided below.

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<b>11.2. Authorisations, Permits and Licences and other General Considerations</b>		
All necessary authorisations, permits and licences must be obtained by the Developer prior to the commencement of construction.	Developer	<b>Once-off</b>
All activities must comply with the EA, EMPr and all permits/licences.		
The activity which is authorised may only be carried out at the premises listed in the authorisation.		
Construction activities must comply with the Final Layout Drawings.		
A written notice must be given to the EDTEA prior to the commencement of construction. The notice must include site preparation activities, as well as a date on which it is anticipated that the activity will commence.		
Impact on and disturbance to existing infrastructure (roads, stormwater pipelines)		
<b>11.3. Appointment of Contractor</b>		
The Developer must ensure that this EMPr forms part of any contractual agreements with a Contractor(s) and sub-contractors for the execution of the proposed project. The Contractor must make adequate provision in their budgets for the implementation of the EMPr.	Developer & Contractor	<b>Once-off and On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>The Principal Contractor (including sub-contractors and suppliers) must comply with the relevant provisions of the EMPr, applicable environmental legislation, by-laws and associated regulations promulgated in terms of these laws.</p> <p>Tender documents must include statements to include the use of local communities or local community organisation in supplying services and labour to the construction activities.</p> <p>Local labourers must be used for such methods.</p> <p>All Contractor employees must receive regular basic environmental awareness training and must be educated on the requirements of the EMPr and specialist studies.</p> <p>A copy of the EMPr, containing the mitigation and management procedures for working within terrestrial habitats, will need to be made available at the construction site offices/site camp at all times.</p> <p>It is vital that all personnel are adequately trained to perform their designated tasks to the accepted standards.</p>		
<p><b>11.4. Appointment of ECO</b></p>		
<p>An Independent ECO must be appointed, at the developers cost, to monitor the implementation of the EMPr.</p> <p>The nomination of the ECO must be given, in writing, at least fourteen days before the start of any work, clearly setting out reasons for the nomination, and with sufficient detail to enable the developer to make a decision. The developer will, within seven days of receiving the request, approve, reject or call for more information on the nomination.</p>	<p>Developer</p>	<p><b>Once-off</b></p>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>Once a nominated representative of the developer has been approved he/she will be the ECO and must undertake site inspections as per EA for the duration of appointment and provide monthly audit reports for the duration of the construction and rehabilitation phases. Each audit report must contain the results of the full audit. These audit results report must be agreed upon between developer, ECO and competent authority in terms of content and structure.</p>	<p>ECO</p>	<p><b>Bi-Monthly or as specified in the EA</b></p>
<p><b>11.5. Reporting Procedures and Site Environmental File (SEF)</b></p>		
<p>The following documentation must be kept on-site in order to record compliance with the EMPr:                      An Environmental File must be maintained by the Contractor which includes:</p> <ul style="list-style-type: none"> <li>▪ Environmental Authorisation once issued by the EDTEA;</li> <li>▪ A copy of the Water Use Licence or General Authorisation;</li> <li>▪ The Final BAR;</li> <li>▪ Copy of the approved EMPr;</li> <li>▪ Copy of all other licences/permits (including DAFF and Ezemvelo KZN Wildlife permits);</li> <li>▪ Copy of all rehabilitation plans;</li> <li>▪ Copy of the Storm water Management Plan;</li> <li>▪ Environmental Policy of the Main Contractor;</li> <li>▪ Environmental Method statements compiled by the Contractor;</li> <li>▪ Non-conformance Reports;</li> <li>▪ Environmental register;</li> <li>▪ The Developer, together with the Contractor, must put in place a Complaints Register.</li> </ul>	<p>Developer</p>	<p><b>Once-off and On-going</b></p>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>A Non-Conformance Report (NCR) will be issued to the Contractor as a final step towards rectifying a failure in complying with a requirement of the EMPr. This will be issued by the ECO to the Contractor in writing. Preceding the issuing of an NCR, the Contractor must be given an opportunity to rectify the issue.</p> <p>Should the ECO assess an incident or issue and find it to be significant (e.g. non-repairable damage to the environment), it will be reported to the relevant authorities and immediately escalated to the level of a NCR. The following information must be recorded in the NCR:</p> <ul style="list-style-type: none"> <li>▪ Details of non-conformance;</li> <li>▪ Any plant or equipment involved;</li> <li>▪ Any chemicals or hazardous substances involved;</li> <li>▪ Work procedures not followed;</li> <li>▪ Any other physical aspects.</li> <li>▪ Nature of the risk.</li> <li>▪ Actions agreed to by all parties following consultation to adequately address the non-conformance in terms of specific control measures and must take the hierarchy of controls into account.</li> <li>▪ Agreed timeframe by which the actions documented in the NCR must be carried out.</li> </ul> <p>The ECO must verify that the agreed actions have taken place by the agreed completion date, when completed satisfactorily; the ECO and Contractor must sign the Close-Out portion of the Non-Conformance Form and file it with the contract documentation.</p>		
<p><b>11.6. Environmental Training and Awareness</b></p>		
<p>Construction staff must be adequately educated by the ECO, and the SHE Officer, as to the provisions included in the EMPr and general environmentally friendly practice.</p>		



ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>The EA and EMPr forms part of the formal site induction for all contractors, sub-contractors and casual labourers, preferably in their native language. The induction training will, as a minimum, include the following:</p> <ul style="list-style-type: none"> <li>▪ the importance of conformance with all environmental policies;</li> <li>▪ the environmental impacts, actual or potential, of their work activities;</li> <li>▪ the environmental benefits of improved personal performance;</li> <li>▪ their roles and responsibilities in achieving conformance with the environmental policy and procedures and with the requirement of the Consultant’s environmental management systems, including emergency preparedness and response requirements; and</li> <li>▪ the mitigation measures required to be implemented when carrying out their work activities.</li> </ul> <p>All contractors, sub-contractors and casual labourers must acknowledge their understanding of the EMPr and environmental responsibilities by signing an induction attendance record.</p> <p>The Contractor is expected to have “tool box” talks. These talks must be in accordance with the risks and trends associated with the project. All records of environmental induction and training (including toolbox talks) must be kept on-site within the Site Environmental File (SEF).</p> <p>All operators of excavation equipment must be made aware of the possibility of the occurrence of sub--surface heritage and paleontological features and the following procedures should they be encountered.</p>	<p>ECO Contractor</p>	<p><b>On-going</b></p>
<p><b>11.7. Site Preparation</b></p>		
<p>Prior to the establishment of the site area, the Contractor must produce a site layout plan showing the positions of all equipment storage, waste stockpiling, fuel storage areas and other infrastructure for consideration of the ECO and Developer. Choice of location for construction item storage must take into account location of local residents and environmentally sensitive areas (no-go areas) where applicable.</p>	<p>Contractor</p>	<p><b>Once-off and On-going</b></p>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>The construction area must be clearly demarcated on the layout plan, and all other areas must be considered no-go areas for the construction personnel. All sensitive areas such as the wetlands must be protected by appropriate temporary fencing and 'no-go' signage during construction, and vehicular access into these sensitive areas must be restricted.</p>		
<p>No-go areas identified in the BAR and Environmental Authorisation must be communicated to the Developer prior to construction.</p>		
<p>Adequate signage must be placed in the area where construction will take place informing the public of the activities taking place.</p>		
<p>The site camp must be secured.</p>		
<p>All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Contractor must provide the following equipment for dealing with spills on site:</p> <ul style="list-style-type: none"> <li>▪ Spill kits; and</li> <li>▪ Drip trays;</li> </ul>		
<p>The Contractor must take responsibility for the site to conform to all contractual aspects and environmental standards applicable.</p>		
<p>Vegetation removed for any additional construction camp establishment must to be kept to a minimum. No trees are to be removed with the exception of alien weeds and invader plants identified and approved by the EO and ECO.</p>		
<p>No persons, other than a night-watchman / security guard, may stay overnight at the construction camp.</p>		
<p>The size of the construction camp must be minimised.</p>		
<p>Adequate yet not extensive parking must be provided for site staff and visitors at the Construction camp with the intention to disturb as little grassland as possible.</p>		
<p>The Contractor must provide adequate refuse bins that must be cleaned / emptied and the waste removed from site on a regular basis.</p>		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<b>11.8. Ablution / Sanitation</b>		
Where waterborne sewerage is not available, temporary chemical toilets must be provided by a company that has been approved by the Developer. Such toilets must be available for all site staff, both at the construction camp, and on-site as agreed by the Developer.	Contractor	<b>Once-off and On-going</b>
The SHE Officer and ECO must be consulted on the location of any temporary chemical toilets.		
Temporary toilets must be located outside of the 1:100-year flood line and at least 50m away from the streams and any other tributaries.		
In cases where facilities are linked to existing sewage structures, all necessary regulatory requirements concerning construction and maintenance must be adhered to.		
<b>11.9. Access</b>		
The Contractor is only permitted to make use of the existing road entrances to the site, as well as those agreed to with by the relevant authorities prior to construction commencing.	Contractor, Engineer & Developer	<b>On-going</b>
The construction-site must have strict access control to reduce the risks associated with vehicular transportation and pedestrian access on the site.		
<b>11.10. Equipment, Vehicles and Storage Areas</b>		
Washing of vehicles on-site is prohibited.	Contractor	<b>On-going</b>
Note that vehicle maintenance is not permitted on-site. If emergency repairs are required to vehicles or construction plant then the conditions as specified below must be implemented.		
Fire prevention facilities must be present at all storage facilities.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>Material Safety Data Sheets (MSDSs) must be readily available on-site for all chemicals and hazardous substances to be used on-site. Where possible and available, MSDSs must additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or escapes.</p>		
<p>Plant and equipment must be adequately maintained to prevent spillage of oil, diesel, fuel or hydraulic fluid. The Contractor must repair or withdrawn equipment or machinery from use if they consider these to be polluting and irreparable.</p>		
<p>Suitably covered receptacles must be available at all times and conveniently placed for the disposal of waste oils and greases. All used oils, grease or hydraulic fluids must be placed therein and these receptacles must be removed from the construction camps on a regular basis for recycling.</p>		
<p>A procedure for the management of oils spills must be introduced. This must address the cleaning of spillage from hard surfaces, utilising environmentally friendly cleaning materials, as well as the removal and disposal of polluted sand.</p>		
<p>Fuel must be stored in tanks with lids, which will be kept firmly shut and under lock and key at all times, within a secondary containment facility.</p>		
<p>Fuel decanting and refuelling must take place within the construction camp. 50 kg of hydrocarbon absorbent to be placed at the construction camp.</p>		
<p><b>11.11. Waste Disposal Facilities</b></p>		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>General waste produced on-site includes:</p> <ul style="list-style-type: none"> <li>▪ Office waste (e.g. food, waste, paper, plastic);</li> <li>▪ Operational waste (clean steel, wood, glass); and</li> <li>▪ General domestic waste (food, cardboards, paper, bottles, tins).</li> </ul> <p>An adequate number of general waste receptacles, including bins must be arranged around the Construction area, on-site to collect all domestic refuse, and to minimise littering.</p> <p>Different waste bins, for different waste streams must be provided to ensure correct waste separation and subsequent recycling, where applicable.</p> <p>Bins must be clearly marked and lined for efficient control and safe disposal of waste.</p> <p>A fenced area must be allocated for waste sorting and disposal on the site.</p>	Contractor	<b>On-going</b>

<p>Wastes from the contractor's site camp.</p> <p>To prevent any pollution of any sort from the contractor's site camp, the following must be adhered to:</p> <ul style="list-style-type: none"> <li>• The camp may not be within 100 m of any wetland or watercourse.</li> <li>• Unless the camp is placed in an existing workshop area the upper 150 mm of topsoil must be removed and stockpiled for use when the camp is closed down and rehabilitated.</li> <li>• The camp must be enclosed within a security fence.</li> <li>• All toxic substances, including hydrocarbons, must be stored in bunded spaces with a volume of least 110% of the substance stored within it.</li> <li>• A Hazmat kit must be on hand at all times to deal with any spills of hazardous substances.</li> <li>• Vehicle servicing or workshop areas must be under a roof and must have an impermeable floor. Drums must be provided for used oils and other materials such as oil-soaked rags. The drums may only be emptied at an approved disposal facility. Waybills must be obtained as proof of proper disposal.</li> <li>• Drums with lids must be on hand at all times to provide for temporary storage of contaminated soil or similar materials prior to removal to an approved disposal facility. Waybills must be obtained as proof of proper disposal.</li> <li>• Ideally no personnel other than security guards will stay on the premises overnight.</li> </ul> <p>Toilets for the personnel must be provided. Pit toilets may not be used, and so chemical toilets are called for. These must be serviced frequently and regularly by a registered contractor.</p> <ul style="list-style-type: none"> <li>• On site toilets must be at least 50 m away from any wetland or watercourse. They must be chemical toilets and must be serviced frequently and regularly by a registered contractor.</li> <li>• Skips must be provided for bulky wastes.</li> <li>• Domestic and smaller wastes may be collected in bins which have lids.</li> <li>• All waste containers must be emptied regularly and timeously. The contents must go to appropriate approved disposal sites and waybills must be obtained and be filed in the camp office.</li> <li>• No wastes of any sort may be burned in the camp or elsewhere.</li> </ul>		
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ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<ul style="list-style-type: none"> <li>Provision must be made for closure of the camp at the end of the project, and for rehabilitation of the site in a manner that is compatible with its earlier condition.</li> </ul>		
<p><b>11.12. Security and Safety</b></p>		
A security guard must be appointed for guard the site at all times.	Contractor	On-going
Potentially hazardous areas such as trenches are to be demarcated and clearly marked.		
Lighting on-site is to be set out to provide maximum security and to enable easier policing of the site, without creating a visual nuisance to local residents or businesses.		
Material stockpiles or stacks, such as pipes, must be stable and well secured to avoid collapse and possible injury to site workers/ local residents.		
Flammable materials must be stored as far as possible from adjacent residents/ businesses.		
Firefighting equipment must be present on-site at all times.		
<p><b>11.13. General and Hazardous Substances and Materials</b></p>		
Storage areas must not be within any watercourses or within 100 m of any drainage lines.	Contractor	On-going
Storage areas must be designated, demarcated and fenced. Storage areas must be secure, under lock and key, so as to minimise the risk of crime.		
Fire prevention facilities must be present at all storage facilities.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>Proper storage facilities for the storage of oils, paints, grease, fuels, chemicals and any hazardous materials to be used must be provided to prevent the migration of spillage into the ground and groundwater regime around the storage area(s). These pollution prevention measures for storage must include a bund wall high enough to contain at least 110% of any stored volume. Such a facility must be on an impervious surface. The storage area must be securely fenced and all hazardous substances such as fuel, oils, chemicals, etc., must be stored therein. Drip trays, a thin concrete slab or a facility with PVC lining, must be installed in such storage areas with a view to prevent soil and water pollution.</p>		
<p>All fuel storage tanks and associated facilities must be designed and installed in accordance with the relevant oil industry standards, SANS codes and other relevant requirements.</p>		
<p>Symbolic safety signs depicting “No Smoking”, “No Naked Flames” and “Danger” are to be prominently displayed in and around the fuel storage area.</p>		
<p>The capacity of the tank must be clearly displayed and the product contained within the tank clearly identified.</p>		
<p>Only empty and externally clean tanks may be stored on the bare ground. All empty and externally dirty tanks must be sealed and stored in an area where the ground has been protected.</p>		
<p>If fuel is dispensed from 200 litre drums, the proper dispensing equipment must be used.</p>		
<p>MSDSs must be readily available on-site for all chemicals and hazardous substances to be used on-site. Where possible the available, MSDSs must additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or spillages.</p>		
<p>Staff dealing with these materials / substances must be aware of their potential impacts and follow the appropriate safety measures.</p>		



## 12. MANAGEMENT PLAN FOR CONSTRUCTION PHASE

The overall goal of the construction phase is to undertake all the relevant construction activities in a way that ensures proper management of environmental aspects and impacts; and to minimise disruptions to other land use activities in the area, traffic and farming activities that occur elsewhere in and around the farm. The potential impacts resulting from development of the preferred site during the construction phase of the activity are provided below.

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI-CABLE	PRIORITY
<b>12.1. Worker Conduct on Site</b>		
<p>A general regard for the social and ecological wellbeing of the site and adjacent areas is expected of the site staff. Workers need to be made aware of the following general rules:</p> <ul style="list-style-type: none"> <li>▪ No alcohol / drugs to be present on the site.</li> <li>▪ No firearms allowed on-site or in vehicles transporting staff to and from site, unless used by security personnel.</li> <li>▪ Prevent excessive noise.</li> <li>▪ Prevent unsocial behaviour.</li> <li>▪ Bringing pets onto the site is forbidden.</li> <li>▪ No harvesting of firewood from the site or from the areas adjacent to it.</li> <li>▪ Construction staff are to make use of the facilities provided for them, as opposed to adhoc alternatives (e.g. fires for cooking, the use of surrounding bush for toilet facilities).</li> <li>▪ Trespassing on private properties adjoining the site is forbidden.</li> <li>▪ Driving under the influence of alcohol is prohibited.</li> </ul>	Contractor	<b>On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<b>12.2. Health and Safety</b>		
All Procedures and equipment must be in accordance with the Occupational Health and Safety Regulations (OHSA) of South Africa, Act No. 85 of 1993.	Contractor	<b>On-going</b>
The Contractor must familiarise himself and his employees with the contents of the aforementioned legislation.		
First Aid kits must be on hand at all times.		
The Contractor must implement adequate and mandatory safety precautions relating to all aspects of the deconstruction. Such safety measures and work procedures / instructions must be communicated to construction workers.		
The wearing of Personal Protective Equipment (PPE) on-site is mandatory for all personnel and construction team members. Minimum requirements must include the wearing of an approved safety helmet, safety boots, safety eyewear, safety reflective jackets and dust masks, ear plugs, etc. where appropriate.		
PPE signs must be erected on-site at the areas where it is required and the integrity and availability of the signs must be maintained.		
No person is to be allowed on-site unless they are wearing approved safety equipment.		
Workers' right to refuse work in unsafe conditions must be respected.		
All personnel must be trained in basic site safety procedures.		
<b>12.3. Traffic and Safety</b>		
Implement proper road signs to warn motorists of construction activities ahead.	Contractor	<b>On-going</b>
Construction routes must be clearly defined.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
Disruption to the peak traffic periods 06h00 – 09h00 and 15h00 – 18h00 to be minimised or if possible avoided. For any planned night closures, the community must be notified a minimum of three days in advance. Pedestrians to be protected from construction activities at all times. Pedestrian conflict with site access and construction vehicles to be managed by a traffic officer. The active construction areas within the site must remain fenced (where needed) for the entire maintenance period.		
<b>12.4. Fires</b>		
No open fires or uncontrolled fires will be permitted on-site. Firefighting measures such as fire extinguishers must be located on-site. No open fires to be permitted within the construction footprint. Ensure that no refuse waste is burnt on the site or on surrounding premises. Ensure that all workers on site are aware of the proper procedure in case of a fire occurring on site. Ensure adequate fire-fighting equipment is available and train workers on how to use it. The workforce must be made aware of fire prevention and firefighting measures.	Contractor	<b>On-going</b>
<b>12.5. Pollution Control Measures</b>		
Cement / concrete must not be mixed directly on the ground. Mixing trays and impermeable sumps must be used at all mixing and supply points. Unused cement bags are to be stored so as not to be affected by rain or run-off events. The washing of ready-mix concrete trucks on-site is prohibited.	Contractor	<b>On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
Used cement bags must be stored in weatherproof containers to prevent windblown cement dust and water contamination. Used cement bags must be disposed of on a regular basis via the solid waste management system, and must not be used for any other purpose.		
All visible remains of excess concrete must be physically removed on completion of the plaster or concrete pour section and disposed of.		
Washing the remains into the ground is not acceptable as groundwater contamination could occur.		
Concrete mixing must be confined to as few areas as possible and ad hoc mixing is to be avoided.		
Concrete mixing is to be undertaken on an impervious surface.		
Areas where concrete was mixed must be cleaned up after use.		
No paint products may be disposed of on-site.		
Storage areas must not be located within any watercourses or buffer areas.		
Any spill incident, which may occur, must be investigated and immediate action must be taken.		
This must also be reported to the ECO and SHE Officer.		
In the case of a spill of hydrocarbons, chemicals or bituminous material in the construction camp or on the construction-site / bunding area, the spill must be contained and cleaned up and the material together with any contaminated soil collected and disposed of as hazardous waste to minimize pollution risk and reduce bunding capacity.		
Contractor must provide drip trays and these must be utilised at all dispensing areas.		
No vehicles transporting concrete, asphalt or any other bituminous product may be washed on-site.		
Vehicle maintenance must not take place on-site unless a specific bunded area is constructed for such a purpose.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
<p>Ensure that transport, storage, handling and disposal of hazardous substances is adequately controlled and managed.</p> <p>Correct emergency procedures and cleaning up operations must be implemented in the event of accidental spillage.</p> <p>An emergency spill response procedure must be formulated and staff are to be trained in spill response. Spills must be cleaned up immediately and contaminated soil/material disposed of appropriately at a registered site, 210 litre drums must be kept on-site to collect contaminated soil. These must be disposed of at a registered hazardous waste site.</p>		
<b>12.6. Noise</b>		
<p>Neighbouring landowners must be notified about construction activities three days in advance.</p> <p>All construction vehicles and equipment are to be kept in good repair and must be fitted with standard silencers prior to construction.</p> <p>Construction activities, and particularly the noisy ones, are to be contained to reasonable hours (between 07h00 and 17h00 only).</p> <p>In general, operations must meet the noise standard requirements of the Occupational Health and Safety Act (Act No 85 of 1993).</p> <p>Noisy operations must be combined so that they occur where possible at the same time.</p> <p>Noise from labourers must be controlled.</p> <p>Noise suppression measures must be applied to all construction equipment. Construction equipment must be kept in good working order and where appropriate fitted with silencers which are kept in good working order. Should the vehicles or equipment not be in good working order, the Contractor may be instructed to remove the offending vehicle or machinery from site.</p>	Contractor	<b>On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
The Contractor must take measures to discourage labourers from loitering in the area and causing noise disturbance. Where possible labour must be transported to and from the site by the Contractor or his sub-contractors by the contractors own transport.		
Construction activities are to be contained to reasonable hours during normal working hours (between 07h00 and 17h00 only).		
Neighbours are to be given at least three days warning prior to any blasting, piling or other 'noisy' activities.		
<b>12.7. Air Quality</b>		
Any oil containing equipment or containers must be managed in a manner to avoid oil exposure to atmosphere to limit evaporation of volatiles to atmosphere.	Contractor	<b>On-going</b>
Odours from chemical toilets and waste must be managed. Removal and disposal of litter and debris must be undertaken during periods of high ventilation. Chemical toilets must be cleared and cleaned at least weekly.		
No fires are to be allowed on site.		
Vehicles must be maintained to avoid excessive emissions and smoke. Similarly, equipment must be serviced.		
Water for dust suppression must not be sourced from the watercourse on site without a Water Use Licence.		
In areas where there is a large potential for dust liberation (high wind days) wet suppression using a light spray must be applied to the areas in question.		
A dust suppression register, as well as a complaint register needs to be kept.		
All complaints received need to be investigated with remedial action taken communicated to the affected party within 14 days.		
<b>12.8. Clearing and Protection of Fauna and Flora</b>		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
No natural vegetation is to be collected for use as firewood.	Contractor	<b>On-going</b>
All alien invasive found must be immediately removed and disposed of responsibly in accordance with the requirements of the ECO. No artificial plants are permitted to be brought to site.		
Alien plant invaders must be removed from disturbed or damaged areas or from the vicinity of these areas regularly during the construction phase.		
All bare surfaces across the construction-site must be checked for alien invasive plants at the end of every month and alien plants removed by hand pulling/uprooting and adequately disposed.		
Herbicides must be utilised where hand pulling/uprooting is not possible. ONLY herbicides which have been certified safe for use in wetlands by independent testing authority to be used. The ECO must be consulted in this regard.		
Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas.		
Where alien plants have been introduced on to the site during clearing and infilling, they must be removed.		
The Contractor must develop an Action Plan for the removal of alien invasive species and submit it to the ECO for approval.		
Invader species and weeds must be removed and disposed of in accordance with existing legislation on a regular basis.		
The removal of indigenous/endemic shrubs and small trees must be kept to a minimum and only be removed if absolutely necessary and where authorisation has been received where applicable.		
Any fauna directly threatened by the construction activities must be removed to a safe location by the ECO or qualified Ecologist.		
<b>12.9. Heritage</b>		
If an artefact on site is uncovered, work in the immediate vicinity must be stopped immediately.	Contractor	<b>On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
<p>The contractor must take reasonable precautions to prevent any person from removing or damaging any such article and must immediately, upon discovery thereof, inform the Construction Engineer of such discovery which in turn must contact a registered archaeologist and AMAFA.</p> <p>Work may only resume once clearance is given in writing by the archaeologist and AMAFA.</p> <p>All of the sites should have a minimum of a 20m buffer between the edge of the site and the edge of the development footprint. The sites need to be clearly demarcated before construction begins. In addition to this there needs to be a 5m demarcated buffer from the edge of a human grave. These buffers are to ensure that heritage sites are no inadvertently damaged during construction. The 5m buffer for graves is for possible post-depositional slumping within the grave.</p> <p>In the event of obvious human remains the South African Police Services (SAPS) should be notified.</p> <p>Mitigation measures (such as refilling etc.) should not be attempted.</p> <p>Any graves are uncovered during the course of construction, and they occur within the 50m sensitivity boundary, are probably older than 60 years in age. The developer will need to contact an archaeologist specialised in grave removals to handle the rest of the project. An emergency permit may be requested so that the project is not delayed.</p>		
<b>12.10. Topsoil</b>		
<p>The Contractor must strip and stockpile all topsoil within the work area for subsequent use at a later stage.</p> <p>The removal of any topsoil from site is prohibited and this must be stockpiled and used solely in the rehabilitation of the works area.</p> <p>The topsoil and spoil material must be used to create storm water attenuation berms and contour the topography accordingly, where required, rather than be spoiled.</p>	Contractor	<b>On-going</b>



ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
<p>If pollution of any surface or groundwater occurs, it must immediately be reported to the EDTEA and appropriate mitigation measures must be employed.</p> <p>Management of Stockpile on site:</p> <ul style="list-style-type: none"> <li>▪ No soil stockpile areas must be located within 50m of any watercourse (includes delineated riparian areas or rivers/streams).</li> <li>▪ Erosion/sediment control measures such as silt fences, concrete blocks and/or sand bags must be placed around soil/material stockpiles to limit sediment runoff from stockpiles.</li> <li>▪ Stockpiled soils are to be kept free of weeds and are not to be compacted. The stockpiled topsoil must be kept moist and this can be achieved through irrigation of topsoil stockpiles on a weekly basis.</li> <li>▪ The slope and height of stockpiles must be limited to 2m and are not be sloped more than 1:2 to avoid collapse.</li> <li>▪ Spoil material must be hauled to a designated spoil site or landfill site. No spoil material must be pushed down slope or discarded on site.</li> </ul>		
<b>12.11. Spoil</b>		
<p>Litter and general waste is to be removed from the topsoil and spoil material before stockpiling.</p> <p>Spoil sites must be shaped to fit the natural topography.</p> <p>Erosion/sediment control measures such as silt fences, low soil berms or wooden shutter boards must be placed around the stockpiles to limit sediment run-off from stockpiles.</p> <p>Subsoil and topsoil is to be stockpiled separately. Stockpiled soil must be replaced in the reverse order as to which it was removed (subsoil first followed by topsoil).</p> <p>Stockpiles of construction materials must be clearly separated from soil stockpiles in order to limit any contamination of soils.</p>	Contractor	<b>On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>The stockpiles may only be placed within demarcated stockpile areas, which must fall within the demarcated construction area. The Contractor must, where possible, avoid stockpiling materials in vegetated areas that will not be cleared.</p> <p>Stockpiled soils are to be kept free of weeds and are not to be compacted. The stockpiled soil must be kept moist using some form of spray irrigation on a regular basis as appropriate and according to weather conditions.</p> <p>The slope and height of stockpiles must be limited to 2m to avoid collapse.</p>		
<b>12.12. Soil Erosion</b>		
<p>Soil erosion on site must be prevented at all times, i.e. pre, during and post construction activities.</p> <p>Suitable erosion control measures must be implemented in areas sensitive to erosion such as near water supply points and edges of slopes. These measures could include:</p> <ul style="list-style-type: none"> <li>▪ The suitable use of sand bags or Hessian sheets.</li> <li>▪ The prompt rehabilitation of exposed soil areas with indigenous vegetation to ensure that soil is protected from the elements.</li> <li>▪ The removal of vegetation, only as it becomes necessary for work to proceed.</li> <li>▪ Preventing the unnecessary removal of vegetation especially on steep areas. Taking necessary precautions in terms of design and construction and earthworks, cuts and fills must be taken.</li> </ul>	Contractor	<b>On-going</b>
<b>12.13. General Waste Management</b>		
<p>General waste produced on-site is to be collected in skips for disposal at a registered landfill site.</p> <p>Hazardous waste is not to be mixed or combined with general waste earmarked for disposal at the municipal landfill site.</p>	Contractor	<b>On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
Under no circumstances is waste to be burnt or buried on-site.		
The excavation and use of rubbish pits on-site is forbidden.		
Waste bins must be cleaned out on a regular basis (weekly) to prevent any windblown waste and/or visual disturbance.		
All general waste must be removed from the construction areas on a daily basis and disposed of in suitable waste receptacles.		
No general waste is to be disposed of on-site.		
Eating areas must not be located within 15m of the channel and/or riparian habitats.		
Provide adequate rubbish bins and waste disposal facilities on-site and educate/encourage workers not to litter or dispose of solid waste in the natural environment but to use available facilities for waste disposal.		
Clear and completely remove from site all general waste, constructional plant, equipment, surplus rock and other foreign materials once construction has been completed.		
Recycling/re-use of waste is to be encouraged.		
Litter generated by the construction crew must be collected in rubbish bins and disposed of weekly at registered sites by a registered waste management company.		
No litter, refuse, wastes, rubbish, rubble, debris and builders' wastes generated on the premises be placed, dumped or deposited on adjacent/surrounding properties during or after the construction period, but disposed of at an approved site. The construction site must be kept clean and tidy and free from rubbish.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
<p>Management of construction material/building rubble:</p> <ul style="list-style-type: none"> <li>▪ No building material, soils or rubble is to be disposed of within any watercourse, including rivers, streams and riparian habitats.</li> <li>▪ Once loaded onto the truck, the rubble must be taken to a landfill site and a waybill must be retained as proof of safe disposal.</li> <li>▪ Should rubble be required as a raw material for the construction, it must be taken to a designated stockpile area – which must be approved by the ECO and located outside of sensitive wetland/river areas designated as ‘No-Go’ areas.</li> </ul> <p>Any form of waste material and rubble generated during construction must be removed from the site and disposed of at a facility registered in terms of section 20(b) of the NEM:WA (Act No. 59 of 2008), if it cannot be responsibly reused or recycled on-site.</p> <p>No waste material may be buried (for the sole purpose of final disposal) or burnt.</p> <p>The Contractor is responsible for the removal of the rubble and waste must supply the applicant with a certificate indicating safe disposal.</p>		
<b>12.14. Hazardous and Industrial Waste Management</b>		
<p>Hazardous waste produced on-site includes:</p> <ul style="list-style-type: none"> <li>▪ Oil and other lubricants, diesel, paints, solvent;</li> <li>▪ Containers that contained chemicals, oils or greases; and</li> <li>▪ Equipment, steel, other material (rags), soils, gravel and water contaminated by hazardous substances (oil, fuel, grease, chemicals or bitumen).</li> </ul> <p>Hazardous waste is to be disposed of at a licenced hazardous waste landfill site.</p> <p>The ECO must approve a licenced waste disposal site at the inception of the project.</p>	Contractor	<b>On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
Hazardous waste bins must be clearly marked, stored in a contained area (or have a drip tray) and covered (either stored under a roof or the top of the container must be covered with a lid). Safe disposal Certificates (SDCs) must be obtained from the waste removal company as evidence of correct disposal and kept on-site within the Site Environmental File (SEF).		
<b>12.15. Wastewater</b>		
All wastewater generated at the proposed development must be disposed of in a suitable manner so as not to cause any surface or subsurface water pollution or health hazard.	Contractor	<b>On-going</b>
Wastewater, including cement-contaminated water, must not enter any water course or the sea and must be managed by the site manager to ensure that the existing water resources on and off site are not polluted by activities emanating from the above development.		
Contaminated wastewater including cement-contaminated water must not enter any watercourse and must be managed by the Contractor to ensure that the existing water resources on and off site are not polluted by activities emanating from the above development.		
Used oil and wastewater must be disposed of to a registered facility. A Safe Disposal Certificate (SDC) is to be obtained by the Contractor and kept on-site within the SEF.		
Water containing waste must not under any condition be discharged into the natural environment. Measures to contain water containing waste and safe disposal of such must be implemented.		
<b>12.16. Watercourse and Wetland Management</b>		
The following must be implemented when constructing through watercourses: Erosion and sediments control techniques must apply where deemed required;	Contractor	<b>On-going</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
Compacted soils must be loosened by hand;		
The extent of the proposed development by be located outside of the wetland boundaries and zone of regulations;		
Work servitude must kept as narrow as possible near wetland boundaries;		
The stormwater must be directed into the wetland so as to sustain the wetland recharge mechanism. In addition, the stormwater must be channelled and deposited into the wetland in diffuse manner so as to avoid soil erosion and formation gullies on such areas;		
All waste generated during construction activities must be disposed of as per waste classification and management recommendation and the washing of machinery, tools and containers that have been contaminated with cement or chemicals adjacent to or within the wetland areas must be strictly prohibited;		
Portable toilets must be placed outside of any drainage channels and 30m away from temporary boundary of the wetland areas;		
Construction camps or depot for any substance must not located within 100m of wetlands or any water courses;		
All spillages of hydrocarbons or potentially harmful chemicals must be cleaned up immediately and contaminants properly drained and disposed of using proper hazardous waste facilities (not to be disposed of within the natural environment). Any contaminated soil must be removed and affected area rehabilitated immediately – consult with a wetland/ aquatic specialist if spills occur.		
An Alien Invasive Management Programme must be incorporated into the Environmental Management Programme;		
Eradication of alien invasive species within the areas to be developed and particularly in the disturbed wetland areas must an ongoing process.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
<p>All areas deemed to be sensitive to erosion such as edge of slopes, water supply points, etc must be adequately protected from erosion. The erosion control measures include but limited to sand bags, silt fences, replacement of vegetation and hessian sheets</p>		
<p>All disturbed areas must be rehabilitated as soon as construction is complete or near complete and not left until the end of the project to be rehabilitated. (Note: rehabilitation on this site must be an ongoing process due to topographical setting of this site which is prone to soil erosion);</p>		
<p>Vegetation clearing within 50m of any of the delineated wetlands, must only be undertaken when construction activity is actually being undertaken at this point and such areas must be rehabilitated within immediately.</p>		
<p>Uncured cement or concrete entering the aquatic environment.</p> <p>Cement and concrete are toxic to aquatic organisms while still uncured. The following must be adhered to:</p> <ul style="list-style-type: none"> <li>• Cement must be stored well away from any wetland or watercourse prior to being used. Ideally it will only be held in the contractor’s site camp.</li> <li>• No mixing of cement or concrete may be done within 8 m of any wetland or watercourse. Mixing must be done on a board or other impermeable surface.</li> <li>• Where cement or concrete are placed in any place they must be protected by a temporary berm if there is any chance of them being wetted and washed away.</li> <li>• Empty cement bags may not be burned or otherwise disposed of anywhere at the project site but they must instead be removed to an approved disposal site.</li> </ul>		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
<ul style="list-style-type: none"> <li>▪ The site camp, hydrocarbon stores, and all pollution and waste must be appropriately stored outside of all the watercourses (preferably outside of the one hundred (100) year flood line area or at least 100 metres away from the watercourse) with roofing and bunding to be used as required by the EMPr.</li> <li>▪ Over clearing of the development area, specifically those areas associated with any watercourses and wetland buffers must be prevented, with all permitted development areas to be clearly demarcated prior to stripping.</li> </ul>		
<ul style="list-style-type: none"> <li>▪ Rehabilitation of the watercourse and all terrestrial areas impacted upon must be undertaken, with the completed landscaping mirroring the surrounding vegetation, or be improved upon from the vegetal state, prior to construction occurring. Rock boulders and revetments must be used to stabilise the embankments and river channel.</li> <li>▪ Specialist recommendations must be incorporated and any deviation from the recommendation must be motivated via supporting documents for approval by an aquatic specialist and Environmental Control Officer (ECO).</li> </ul>		
<p>Wherever possible, the temporary chutes/berms must not be aligned perpendicular to the slope.</p>		
<p>Outlet erosion protection structures must be designed to reduce outflows to energy levels that do not pose an erosion risk to downslope soils.</p>		
<p>Outlet erosion structures must be properly installed along the grade and elevation of the slope.</p>		
<p>Under no circumstances must the structures be placed higher than the ground surface thereby creating a drop off that may cause erosion.</p>		
<p>Temporary storm water management facilities / silt fences and traps are to be formalised prior to bulk earthworks commencing. These attenuation ponds / silt traps can help considerably with storm water attenuation, as well as sediment trapping and erosion prevention during the construction phase.</p>		



ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
Designs for the site development in general must avoid concentration of storm water run-off both spatially and in time and may be required to provide for on-site attenuation of storm water run-off to limit peak flows to pre-development levels.		
Detailed plans to control and prevent erosion by water must be agreed prior to the commencement of any works, including site clearance, on any portion of the site.		
Removal of vegetation cover must be carried out with care and attention to the effect, whether temporary or long-term, that this removal will have an erosion potential.		
Precautions must be taken at all times on building sites to contain soil erosion and prevent any eroded material from being removed from the site.		
Landscaping and re-vegetation of areas not occupied by buildings or paving must be programmed to proceed immediately after building works have been completed, or have reached a stage where newly established ground cover is not at risk from the construction works.		

### 13. POST CONSTRUCTION AND REHABILITATION

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
<b>13.2. Construction areas</b>		
All structures comprising the construction affected areas are to be removed from the site and surrounding areas.	Contractor/Developer	<b>Post-Construction</b>
The area that previously housed the construction materials is to be checked for spills of substances such as oil, paint, diesel, etc. and these must be cleaned up.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
All hardened surfaces within the construction affected area must be ripped, all imported materials removed, and the area must be top soiled and re-grassed accordingly with indigenous species.		
The Contractor must arrange the cancellation of any temporary services.		
<b>13.3. Disturbed Areas</b>		
All areas that have been disturbed by construction activities (including the construction affected areas) must be cleared of alien vegetation.	Contractor	<b>Post-Construction</b>
All vegetation that has been cleared during construction is to be removed from site or used as mulch, (except for vegetation which may result in inadvertently seeding alien vegetation).		
Moderately steep and steep slopes should be covered with wide mesh hessian to prevent soil erosion and allow the planted grass seeds to germinate and develop.		
If plant invaders cannot be removed physically, they must be cut just above ground level and then poisoned with the specific poison for the particular plant invader.		
<b>13.4. Waste Management</b>		
The site must be kept void of litter.	Contractor/Applicant	<b>Post-Construction</b>
Solid waste must be removed from the aquatic, wetland and riparian environments and damaged, smothered vegetation will have to be replaced.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<p>Waste management at the site should subscribe to the principles of sustainable waste management.</p> <p>This includes:</p> <ul style="list-style-type: none"> <li>▪ Waste prevention - the prevention and avoidance of the production of waste at source;</li> <li>▪ Waste reduction - the reduction of the volume or hazardous nature of the waste during production;</li> <li>▪ Resource recovery - recycling or re-use of the waste;</li> <li>▪ Waste treatment - the treatment of waste to reduce volume or risk to human and environmental safety and health to reduce the degree of hazard when waste is disposed of in a landfill or discharged into a water source; and</li> <li>▪ Waste disposal - the environmentally acceptable and safe disposal or discharge of waste, (e.g. encapsulation, incineration, landfill or discharge to a water source).</li> </ul> <p>These principles must be practiced to the greatest extent</p>		
<b>13.5. Materials and Infrastructure</b>		
<p>All residual stockpiles must be removed to spoil or spread on-site as directed by the Developer and/ or Engineer.</p> <p>All leftover building materials must be returned to the depot or removed from the site.</p> <p>The Contractor must repair any damage that the construction works has caused to neighbouring properties.</p> <p>Fences, barriers and demarcations associated with the construction phase are to be removed from the site unless stipulated otherwise by the Developer.</p>	Contractor/Applicant	<b>Post-Construction</b>
<b>13.6. Rehabilitation</b>		
<p>At the end of the construction phase, the site and vicinity of the development should be thoroughly checked for invader plants, especially the nearby wetlands. Any invader plants that are found must be destroyed.</p>	Contractor/Applicant	<b>Post-Construction</b>

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLI- CABLE	PRIORITY
Any alien plant invaders in and near the damaged wetlands should be removed and destroyed. The soil substrate of the nearby wetlands should be repaired and then the following wetland plants which are present in the area should be planted		
Existing wetland plant species can be used for rehabilitating damaged wetland habitat.		
<b>13.7. Ablution / Sanitation</b>		
Where waterborne sewerage is not available, temporary chemical toilets must be provided by a company that has been approved by the Developer. Such toilets must be available for all site staff, both at the construction camp, and on-site as agreed by the Developer.	Contractor/Applicant	<b>Post-Construction</b>
The SHE Officer and ECO must be consulted on the location of any temporary chemical toilets.		
Temporary toilets must be located outside of the 1:100 year flood line and at a suitable buffer away from the river and any other watercourses.		
In cases where facilities are linked to existing sewage structures, all necessary regulatory requirements concerning construction and maintenance must be adhered to.		
<b>13.8. End of Contractor Services</b>		
A meeting is to be held on-site between the Developer and the ECO to approve all remediation activities and ensure that the site has been restored to a condition acceptable to the ECO and the Developer.	Contractor/Applicant	<b>On-going</b>
A site close-out audit is to be undertaken by the ECO prior to handover of the site by the Contractor.		

## 14. MANAGEMENT PLAN OF OPERATIONAL PHASE

The objective for managing the operational phase of the chicken egg-layer facility project is to ensure that the daily operations do not have unforeseen impacts on the environment; to ensure that all the potential impacts are monitored and that the necessary corrective action are undertaken in a timeous manner. The potential impacts resulting from development of the potential sites during the operational phase of the activity are provided below.

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
<b>14.1. Safety, Health and Environment</b>		
Ensure that excrement, carcasses, feed, and other operational waste and hazardous materials are appropriately and effectively contained and disposed of without detriment to the environment.	Applicant	<b>Operational</b>
Odours produced from manure and urine in chicken egg-layer facilities can be reduced by scraping up and removing manure from the facility and washing down using low-volume high-pressure sprays		
Manure should be collected daily and stored in vermin-proof containers at the waste storage facility.		
Ensure that carcasses and feed, and other operational waste are appropriately and effectively contained and disposed of without detriment to the environment.		
Ensure that the development are designed and lined with impermeable substances (concrete) in accordance with advice from international best practice norms.		
Establish appropriate emergency procedures for accidental contamination of the surroundings. Waste recycling should be incorporated into the facility's operations as far as possible. Designate a secured, access restricted, sign posted room for the storage of potentially hazardous substances such as herbicides, pesticides, dips and medications.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
Chicken Manure should be stored in sufficient 12kg waste bags and skips (or similar. bags and skips should be covered with suitable material and correctly labelled. Chicken manure should be removed every 6 weeks.		
Waste storage site should be constructed with concrete, block work and earth to avoid contamination into the soil or groundwater.		
Segregation of hazardous waste from general waste to be in place.		
Ensure that the is kept clean at all times and that operational personnel are made aware of correct waste disposal methods.		
No solid waste may be burned or buried on site.		
Waste amounts shall be recorded on a monthly basis.		
Ensure that the proposed project is operated in such a manner whereby potential odours are minimised.		
A suitable stormwater/ surface water quality monitoring programme should be established and implemented.		
Regular inspections of stormwater infrastructure should be undertaken to ensure that it is kept clear of all debris and weeds.		
Detect and control pest infestations before they become a problem through frequent and careful cleaning, monitoring and control.		

ENVIRONMENTAL MEASURES AND ACTION PLANS	AREA APPLICABLE	PRIORITY
Encourage the use of energy saving equipment (such as low voltage lights and low pressure taps) and promote recycling. Operational personnel must be made aware of energy conservation practices as part of the environmental awareness training programme.		
Designate smoking areas where the fire hazard could be regarded as insignificant.		
Open fires must be prohibited. Appropriate fire safety training should also be provided to staff that are to be on site for the duration of the operational phase.		
Fire-fighting equipment must be made available at various appropriate locations.		
Enhance the use of local labour and local skills as far as reasonably possible.		
Where the required skills do not occur locally, and where appropriate and applicable, ensure that relevant local individuals are trained.		
Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible.		
Ensure that the proposed project has secured local buyers.		

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## **15. ENVIRONMENTAL CODE OF CONDUCT**

One of the objectives of the EMPr is to ensure that all the workforce, contractors, sub-contractors and construction staff have an understanding of environmental issues and potential impacts on site activities. This environmental code of conduct provides the basic rules that should be strictly adhered to. It is the responsibility of the Contractor to ensure that each contractor, sub-contractor and workforce understand and adhere to the Code of Conduct.