

ENVIRONMENTAL MANAGEMENT PROGRAMME

October 2022

THE EXPANSION OF THE SHEEP FEEDLOT ON
PORTION 2 OF THE FARM RIETFONTEIN NO.
173 NEAR STEYNSRUS, FREE STATE PROVINCE



ENVIRONAMICS

PROJECT DETAIL

Reference No: To be obtained

Project Title: **The Expansion of the Sheep Feedlot on Portion 2 of the farm Rietfontein No. 173 near Steynsrus, Free State Province.**

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LIST OF ABBREVIATIONS

DESTEA	Department of Economic Small Business Development, Tourism and Environmental Affairs
DFFE	Department of Forestry, Fisheries and the Environment
DM	District Municipality
DMRE	Department of Mineral Resources and Energy
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMPr	Environmental Management Programme
EP	Equator Principles
Environmental impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.
GNR	Government Notice Regulation
I&AP	Interested and affected party
IDP	Integrated Development Plan
MLM	Moqhaka Local Municipality
Mitigate	Activities designed to compensate for unavoidable environmental damage.
NEMA	National Environmental Management Act No. 107 of 1998
NERSA	National Energy Regulator of South Africa
NWA	National Water Act No. 36 of 1998
OHSA	Occupational Health and Safety Act (Act 85 of 1993)
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SDF	Spatial Development Framework
SHE	Safety, Health and Environment

1 INTRODUCTION

The purpose of the Environmental Management Programme (EMPr) is to ensure that the potential social and environmental impacts, risks and liabilities identified during the Environmental Impact Assessment process is effectively managed during the construction and operational phases of the Tlios (Pty) Ltd sheep feedlot. The EMPr specifies the mitigation and management measures to which the Developer is committed in relation to the expansion of the sheep feedlot and its associated infrastructure and shows how the project will mobilise organizational capacity and resources to implement these measures.

In order to comply with the requirements of GN R 326 (23), an EMPr has been compiled as part of the Environmental Impact Report (EIR). The content of the EMPr is structured in such a way as to comply with the requirements of Appendix 4 to GN R 326.

1.1 BACKGROUND

This EMPr has been compiled for the Expansion of the Sheep Feedlot on Portion 2 of the farm Rietfontein No. 173 near Steynsrus, Free State Province . This feedlot facility is proposed to involve the following:

- Site clearing and preparation;
- Civil works;
- Fencing; and
- Construction of a stormwater management system.

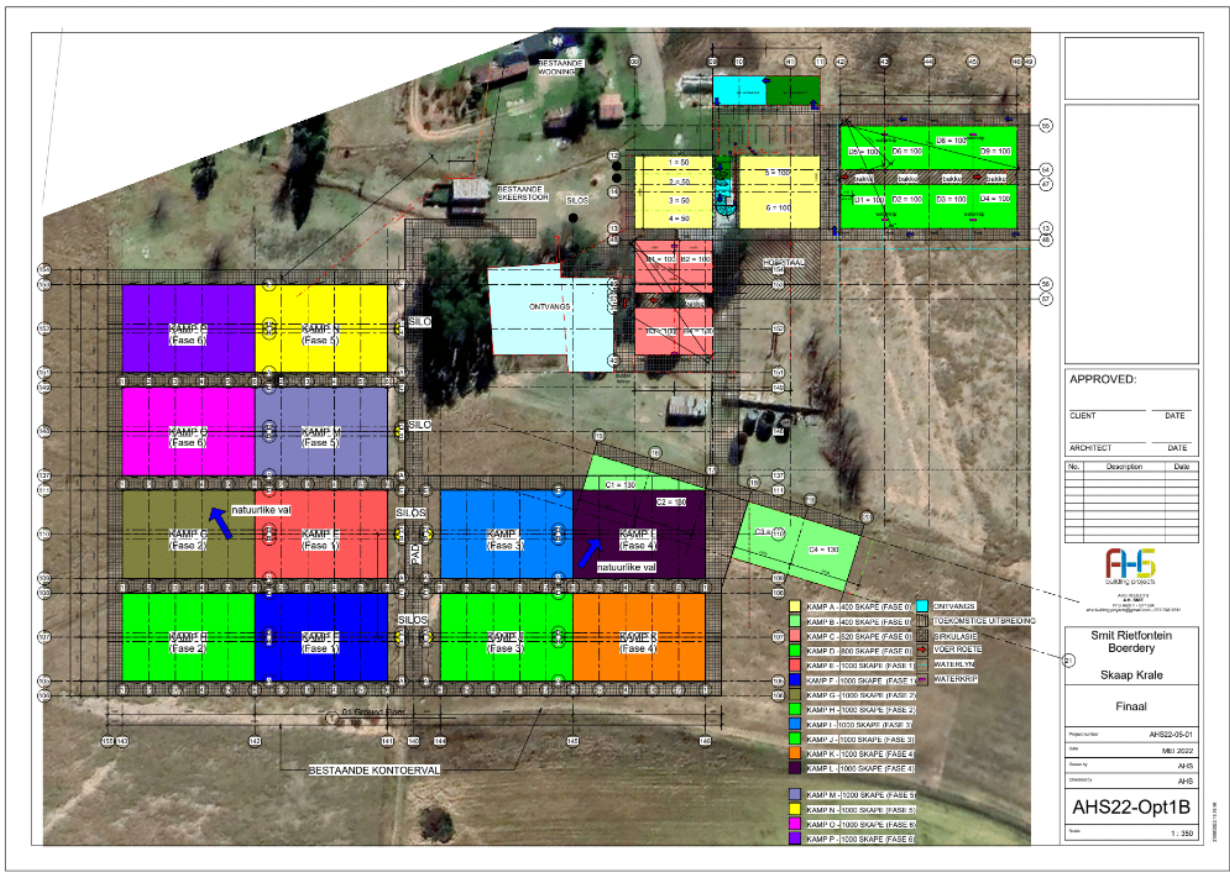


Figure 1: Layout plan indicating site boundary, plant boundary and internal roads – Option 1

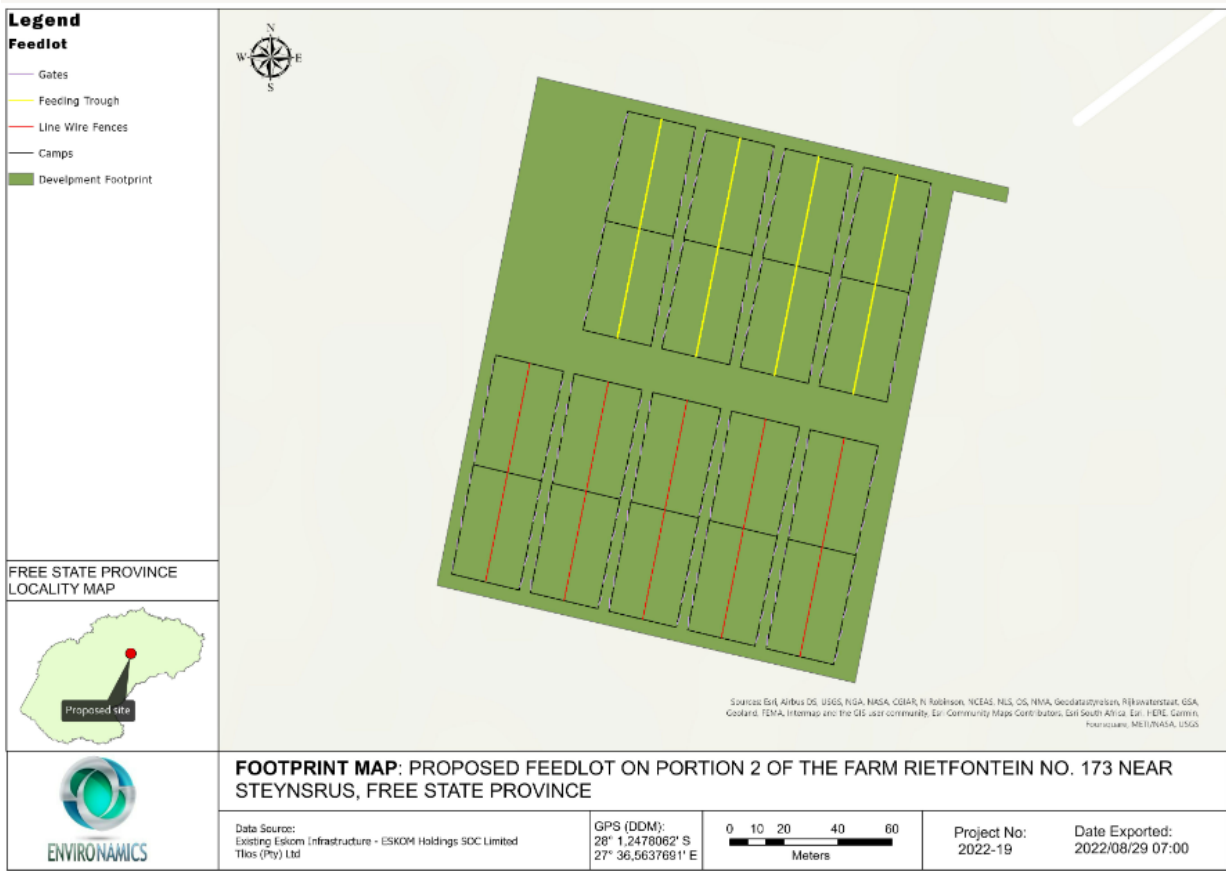


Figure 2: Development Footprint Map indicating feedlot camps

1.2 OBJECTIVES OF THE EMPr

The key objectives of the EMPr are to:

- Formalise and disclose the programme for environmental and social management;
- Ensure that appropriate management and mitigation measures and requirements are implemented from the start of the project;
- Ensure compliance to environmental legislation;
- Manage identified impacts;
- Ensure precautions against damage and claims arising from damage are taken timeously;
- Provide a framework for the implementation of environmental and social management initiatives.
- Ensure sufficient resources are allocated on the project budget so that the scale of the EMPr related activities are consistent with the significance of project impacts; and
- Provide feedback for continual improvement in environmental performance.

Best practice principles require that every reasonable effort be made to reduce and preferably to prevent negative impacts, while enhancing positive benefits, especially within the communities directly affected by the proposed project. These principles have guided the Environmental Impact Assessment process and the compilation of the EMPr.

The EMPr covers information on the management and mitigation measures that will be implemented to address impacts in respect of:

- Planning and design;
- Pre-construction and construction;
- Operation;
- Rehabilitation; and
- Decommissioning.

1.3 ENVIRONMENTAL IMPACTS

The proposed development was assessed to have an overall low impact on the receiving environment. Refer to table 1-1 for aspects requiring specific mitigation within the development footprint as specified in this EMPr.

Table 1-1: Environmental impacts and management outcomes

Impact	Significance (with mitigation)	Impact management outcomes
Construction phase		
Impacts on fauna and flora	Negative Medium	To avoid or reduce the loss of fauna and flora
Temporary employment opportunities	Positive Medium	To enhance the use of local skills and uplift the local community
Impacts on heritage resources	Negative Low	To avoid any loss of potential heritage resources
Impacts on paleontological resources	Negative Low	To avoid any loss of potential palaeontological resources
Impacts on existing service infrastructure (i.e., roads)	Negative Low	To avoid any damage to existing service infrastructure
Operational phase		
Impacts on fauna and flora	Negative Medium	To avoid the loss of biodiversity as much as possible
Impacts on heritage resources	Negative Low	To avoid any loss of potential heritage resources
Cumulative biophysical impacts resulting from similar development in the area	Negative Low	These types of developments are not located on ecological sensitive areas.
Decommissioning phase		
Impacts on fauna and flora	Negative Low	To avoid the loss of biodiversity as much as possible
Impacts on heritage resources	Negative Low	To avoid any loss of potential heritage resources
Socio-economic impacts (loss of employment)	Negative Low	Loss of local employment will occur

1.4 DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Environamics was appointed by the applicant as the independent EAP to conduct the Environmental Impact Assessment Process and prepare all required reports such as the EMPr. All correspondence to the EAP can be directed to:

Contact person: Tshepho Mamashela

Postal Address: 14 Kingfisher Street, Tuscany Ridge Estate, Potchefstroom, 2531

Telephone: 071 450 0408 (Cell)

Electronic Mail: Tshepho@environamics.co.za

And/or

Contact person: Marelie Both
Postal Address: 14 Kingfisher Street, Tuscany Ridge Estate, Potchefstroom, 2531
Telephone: 082 493 5166 (Cell)
Electronic Mail: marelie@environamics.co.za

Regulation 13(1)(a) and (b) determines that an independent and suitably qualified and experienced EAP should conduct the Environmental Impact Assessment. In terms of the independent status of the EAP, a declaration is attached as Appendix A to the EIA report. The expertise of the EAP responsible for conducting the BA is also summarized in the curriculum vitae included as part of Appendix A.

1.5 STRUCTURE OF THE REPORT

The implementation of an approved EMPr for the proposed activities is a requirement of the National Environmental Management Act (Act 107 of 1998) (NEMA) and will be a condition in the Environmental Authorisation (EA), should it be issued by the Free State Department of Economic Small Business Development Tourism and Environmental Affairs (DESTEA). As such, failure to comply with this EMPr will constitute an offence in terms of Section 24F of the NEMA and the holder of the EA (Applicant / Developer) may be liable for penalties and/or legal action. Therefore, it is important that all responsible parties understand their duties and undertake them with duty and care.

This report is structured in accordance with the prescribed contents stipulated in Appendix 4 of Regulation No. 326. It consists of five sections demonstrating compliance to the specifications of the regulations as illustrated in Table 1-1.

Table 1.2: Structure of the report

Requirements for the contents of an EMPr as specified in the Regulations		Section in report
Appendix 4(1) - An EMPr must comply with section 24N of the Act and include-		
(a)	details of -	1.4
	(i) The EAP who prepared the EMPr; (ii) The expertise of that EAP to prepare an EMPr, including a curriculum vitae.	
(b)	A detailed description of the aspects of the activity that are covered by the draft environmental management programme as identified by the project description.	2.3
(c)	a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers;	1.1
(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 Basic Assessment process for all phases of the development including-	1.2 & 1.3
	(i) Planning and design;	
	(ii) Pre-construction activities;	
	(iii) Construction activities;	
	(iv) Rehabilitation of the environment after construction and where applicable post closure; and (v) where relevant, operation activities	
(e)	a description and identification of impact management outcomes required for the aspects contemplated in paragraph (d);	1.3
(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 -	2.8
	(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;	
	(ii) comply with any prescribed environmental management standards or practices;	
	(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and (iv) comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;	
(g)	the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	2.6

(h)	the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	2.6
(i)	an indication of the persons who will be responsible for the implementation of the impact management actions;	2.2
(j)	the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	2.8
(k)	the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	2.4
(l)	a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;	4
(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 (ii) Risks must be dealt with in order to avoid pollution or the degradation of the environment.	3
(n)	any specific information that may be required by the competent authority.	N/A

This EMPr should form an integral part of the contract documents which will inform the Contractor/s of their duties in the fulfillment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by the proposed activities associated with the project as stipulated in the EMPr. The Contractor/s should note that conditions imposed by the EMPr are legally binding in terms of environmental legislation and that administrative and punitive actions can be taken against them should the conditions of the EMPr not be complied with. Furthermore, the EMPr is enforceable through additional conditions to the general conditions of contract that pertain to this project.

It is expected that the Contractor/s are conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the contract.

The EMPr is a dynamic document that will be periodically reviewed and updated. As part of ongoing implementation, this EMPr has also been publicly disclosed during the Public Participation Process of the Basic Assessment process for this project. An opportunity has been provided to participating stakeholders to comment on it.

2 APPROACH TO THE EMPR

This section introduces the approach to impact management – refer to Table 2-1. It also outlines the responsibilities of the Project Management Team. Table 2-3 to 2-7 details the range of approaches to be undertaken to manage project activities.

Table 2-1: Approach to Impact Management

Approach	Description
Avoidance	Avoiding activities that could result in adverse impacts and/or resources or areas considered sensitive.
Prevention	Preventing the occurrence of negative environmental impacts and/or preventing such an occurrence having negative impacts.
Preservation	Preventing any future actions that might adversely affect an environmental resource.
Minimization	Limiting or reducing the degree, extent, magnitude or duration of adverse impacts through scaling down, relocating, redesigning and/or realigning elements of the project.
Mitigation	Measures taken to minimise adverse impacts on the environment.
Enhancement	Magnifying and/or improving the positive effects or benefits of a project.
Rehabilitation	Repairing affected resources, such as natural habitats or water resources.
Restoration	Restoring affected resources to an earlier (possibly more stable and productive) state, typically 'background' or 'pristine' condition. These resources may include soils and biodiversity.
Compensation	Compensating for lost resources, and where possible, the creation, enhancement or protection of the same type of resource at another suitable and acceptable location.

2.1 KEY DEFINITIONS USED IN THIS EMPR

The key definitions used throughout this EMPr are listed in Table 2-2.

Table 2-2: Key definitions used in this EMPr

Term	Definition
Alien species	A species not indigenous to the area or out of its natural distribution range.
Alternatives	Alternatives are different means of meeting the general purpose and need of a proposed activity. Alternatives may include location or site alternatives, activity alternatives, process or technology alternatives, temporal alternatives or the 'do nothing' alternative.
Assessment	The process of collecting, organising, analysing, interpreting and communicating information which is relevant.
Construction	Construction means the building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity as per the EIA Regulations. Construction begins with any activity which requires Environmental Authorisation.
Decommissioning	To take out of active service permanently or dismantle partly or wholly, or closure of a facility to the extent that it cannot be readily re-commissioned. This usually occurs at the end of the life of a facility.
DESTEA	Department of Economic Small Business Development Tourism and Environmental Affairs
Environment	As per definition in the NEMA.
Environmental Assessment Practitioner	An independent environmental consultant with experience in the management of EA applications in terms of the NEMA.
Environmental Authorisation (EA)	Means the authorisation issued by a competent authority (Department of Forestry, Fisheries and the Environment) of a listed activity or specified activity in terms of the National Environmental Management Act (No 107 of 1998) and the EIA Regulations promulgated under the Act.
Environmental Control Officer (ECO)	The ECO is appointed by the Developer to ensure compliance to the EMPr and conditions of the EA during construction and provides proof of compliance documentation to the Project Management Team. The role of ECO will be fulfilled by the Developer or its Agent's SHE Representative.
Environmental	A change in the environment, whether adverse or beneficial, wholly or

Impact	partly, resulting from an organisations' activities, products or services.
Environmental management	It is the responsibility of the entire Project Management Team to deal with environmental considerations during the management cycle of the project, i.e. policy, planning and design, implementation (preconstruction, construction and operation), monitoring and corrective action and review.
Interested and affected party (I&AP)	Individuals or groups concerned with or affected by an activity and its consequences. These include the authorities, local communities, investors, work force, consumers, environmental interest groups, and the public.
Incident	An undesired event that may result in a significant environmental impact, although can be managed through internal response and procedures.
Method Statement	A written submission by the Contractor in response to the environmental specification or a request by the Site Manager, setting out the plant, materials, labour and method the Contractor proposes using to conduct an activity, in such detail that the Site Manager is able to assess whether the Contractor's proposal is in accordance with the Specifications and/or will produce results in accordance with the Specifications.
Plan	Sets out the intended method and/or specific measures required to mitigate and/or enhance the negative and positive impacts of the Project. A plan usually focuses on one project phase, i.e. construction, operation or closure.
Pre-construction	The period prior to the commencement of construction, which may include activities which do not require Environmental Authorisation
Project Management Team	The responsibility of the EMPr implementation resides on this team. This team includes the Developer and/or his appointed Agent as well as appointed contractors and consultants, including the ECO.
Programme	Identifies a series of interrelated measures (often contained in detailed plans) for managing the environmental effects of the Project. A programme provides broad direction and covers more than one project phase.
Safety, Health and Environmental Representative (SHE representative)	<p>A representative of the Developer or it's Agent, appointed as a SHE representative, assisting the construction manager on Health, Safety and Environmental aspects of the project on the construction site. The SHE representative will also perform the functions of the ECO for the project.</p> <p>Each Principal Contractor/s may also have their own SHE representative, but the SHE representative as referred to in this EMPr, refers to the SHE representative acting on behalf of the Developer and/or his appointed Agent.</p>

2.2 KEY LEGISLATION APPLICABLE TO THE DEVELOPMENT

The following legislation and guidelines are applicable to the development and have informed the scope and content of the EMPr:

- National Environmental Management Act (Act No 107 of 1998)
- EIA Regulations, published under Chapter 5 of NEMA (GNR 545, GNR 546 in Government Gazette 33306 of 18 June 2010)
- Guidelines published in terms of NEMA EIA Regulations, specifically:
 - Companion to the NEMA EIA Regulations of 2010 (Draft Guideline; DEA, 2010)
 - Public Participation in the EIA process (DEA, 2010)
- International Standards – IFC Standards and Equator Principles (2013)

2.3 ROLES AND RESPONSIBILITIES

The roles and responsibilities of the different legal appointments anticipated for the construction of the Tlios (Pty) Ltd sheep feedlot expansion will be dependent on the final Method Statements as well as the Health and Safety Plan to be compiled prior to the commencement of any site clearing and construction activities. The roles and responsibilities mentioned in this section of the EMPr will act as a guide for the compilation of the Health and Safety Plan.

2.3.1 Project Management Team

The following individuals form part of the Project Management Team and will be required to sign the policy before commencement of any work on site:

- The Developer/Proponent;
- Construction supervisor;
- Subcontractors; and
- Safety, Health and Environment (SHE) representative (acting as the ECO).

The Project Management Team will be responsible for the following:

- Ensuring that the Contractor/s are aware of the specifications, legal constraints/requirements and the Developer's policies pertaining to activities taking place regarding the proposed project;
- Monitoring and inspecting contractors' written records to illustrate compliance with the EMPr;

- Familiarising themselves with the Environmental Impact Assessment and EMPr for this development, the conditions set out in the EA, and all relevant environmental legislation; and
- Ensuring that all commitments/conditions in the EMPr, EA and any other environmental permits are communicated and adhered to by all employees and contractors involved with the proposed development.

2.3.2 THE DEVELOPER

The Developer as holder of the EA will be ultimately responsible for the implementation of all the relevant legislative requirements and compliance with the EMPr. To this end, the Developer will have the following responsibilities:

- The Developer will appoint Principal Contractor/s for each logical project phase in writing to assume the role of Principal Contractor/s as intended by the Construction Regulations and as determined by the Bills of Quantities;
- The Developer or its appointed Agent shall discuss and negotiate with the Principal Contractor/s the contents of the Health and Safety Plan of the both Principal Contractor/s and Sub-Contractor/s for approval;
- The Developer or its appointed Agent will take reasonable steps to ensure that the Health and Safety Plan of both the Principal Contractor/s and Sub-Contractor/s is implemented and maintained. The steps taken will include periodic audits at intervals of at least once every month;
- The Developer or its appointed Agent will prevent the Principal Contractor/s and/or the Sub-Contractor/s from commencing or continuing with construction work should the Principal Contractor/s and/or the Sub-Contractor/s at any stage in the execution of the works be found to:
 - have failed to comply with any of the administrative measures required by the Construction Regulations in preparation for the construction project or any physical preparations necessary;
 - have failed to implement or maintain their Health and Safety Plan;
 - have executed construction work, which is not in accordance with their Health and Safety Plan.
- Act in any way which may pose a threat to the Health and Safety of any person(s) present on the site of the works or in its vicinity, irrespective of him/them being employed or legitimately on the site of the works or in its vicinity; and
- The Developer or its appointed Agent will ensure compliance of all contractors and sub-contractors to the conditions set in the approved EMPr and EA.

- The Developer needs to give 14 (fourteen) days written notice to inform the DFFE that the activity will commence. The notification must include a date when the activity will commence as well as the reference number.

2.3.3 Principal Contractor/s

The Principal Contractor/s appointed for the construction of the different phases of The Tlios (Pty) Ltd feedlot will be responsible for the following:

- Ensure that he/she is fully conversant with the requirements of the specifications of this EMPr and all relevant Health and Safety legislation. This EMPr is not intended to supersede the Occupational Health and Safety Act (Act 85 of 1993) (the Act) nor the Construction Regulations or any part of either. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by the Principal Contractor/s in terms of this contract (entirely or in part) will continue to be legally required of the Principal Contractor/s to comply with. The Principal Contractor/s will in no manner or means be absolved from the responsibility to comply with all applicable sections of the Act, the Construction Regulations or any Regulations proclaimed under the Act or which may perceivable be applicable to this contract;
- Provide and demonstrate to the Developer a suitable and sufficiently documented Health and Safety Plan based on this EMPr, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the duration of execution of the works. This plan shall, as appendices, include the Health and Safety Plans of all sub-contractors for which he/she has to take responsibility in terms of this contract;
- Ensure that a copy of his/her Health and Safety Plan is available on site and is presented upon request to the Client, an Inspector, Employee or Sub-contractors;
- Ensure that a Health and Safety file, which shall include all documentation required in terms of the provisions of this EMPr, the Act and the Construction Regulations, is opened and kept on site and made available to the Client or Inspector upon request. Upon completion of the works, the Principal Contractor/s shall hand over a consolidated Health and Safety file to the Developer;
- Throughout execution of the contract, the Principal Contractor/s will ensure that all conditions imposed on his sub-contractors in terms of the Act and the Construction Regulations are complied with as if they were the Principal Contractor/s;
- From time to time the Principal Contractors shall evaluate the relevance of the Health and Safety Plan and revise the same as required, following which a revised plan shall be submitted to the Developer and/or his/her Agent for approval;
- In terms of Construction Regulation 5(7), keep a Health and Safety file on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors and sub-contractors on site that are

accountable to the Principal Contractor/s and the agreements between the parties and details of work being done;

- Comply with the EMPr and EA commitments and any other legislative requirements as applicable to their workings;
- Adhere to any instructions issued by the Moqhaka Local Municipality's Environmental Manager and/or the Developer and/or his/her Agent and/or the ECO / SHE Representative;
- Submit an environmental report on any environmental incidents that have occurred within 48 hours of the incident occurring; and

These functions will be performed by the Construction Supervisor of each Principal Contractor/s.

2.3.4 Construction Supervisor

The Construction Supervisor will be responsible for:

- Ensuring compliance with the EMPr and EA commitments and any other legislative requirements as applicable to their workings;
- Adhering to any instructions issued by the Moqhaka Municipality's Environmental Manager and/or the Developer and/or his/her Agent and/or the ECO / SHE Representative; and
- Ensuring that all employees receive adequate training on the requirements of the conditions as set out in the EA and EMPr.

2.3.5 Sub-contractors

Sub-contractors are responsible for:

- Ensuring compliance of their workforce with the requirements of the conditions as set out in the EA and EMPr, and any other legislative requirements as applicable to their workings; and
- Reporting any health, safety and environmental incidents to the construction supervisor within 24 hours of the incident.

2.3.6 SHE Representative

The SHE Representative will be responsible for:

- Reporting to the Developer and/or it's Agent;
- Familiarising him / herself with the project and EMPr, and ensuring compliance with the relevant legislation applicable to the project and Moqhaka Local Municipality (MLM) Health, Safety and Environment Policy as well as the Health and Safety Specifications and procedures;

- Authorising the removal of personnel and / or equipment should they contravene the requirements of any applicable Health and Safety legislation and policies;
- Advising the Developer on environmental issues and recommendations for the proposed development;
- Arranging for liaison with interested and affected parties (I&APs) on environmental issues of concern, should the need arise;
- Ensuring that all environmental and health and safety conditions are undertaken by all staff and contractors on site; and
- Ensuring that corrective actions are followed up and closed out in accordance with the conditions set out in the EMPr.

2.3.7 ECO

And independent ECO is to be appointed prior to the commencement of any authorized activities. Once appointed, the name of the ECO must be submitted to the Director: Compliance Monitoring at the DESTEA This is the responsibility of the developer/owner. The ECO will be responsible for the following:

- Reporting directly to the Developer and/or its Agent;
- Familiarising him / herself with the project and EMPr, and ensuring compliance with the relevant legislation applicable to the project as well as the Health and Safety Specifications and procedures;
- Communicating the contents and conditions of the EMPr and EA to the Principal Contractor/s and sub-contractor's employees. Training will be required to ensure all staff members are aware of the requirements of the EMPr;
- Monitoring the implementation of the conditions of the EMPr and EA throughout the project by means of site inspections and meetings;
- Recommending amendments to the EMPr;
- Undertaking regular monthly site inspections to assess compliance with the conditions of the EMPr and EA and take appropriate action to rectify non-conformances;
- Liaising with environmental statutory bodies, including but not limited to Moqhaka Local Municipality's Environmental Manager, and the DESTEA, where deemed necessary;
- Compiling monthly progress reports during the construction phase for submission to the Developer and/or his Agent and competent authorities (DESTEA);
- Advising the Developer on environmental issues and recommendations for the proposed development;
- Arranging for liaison with I&APs on environmental issues of concern, should the need arise;

- Recording all environmental concerns raised by I&APs;
- Ensuring that all environmental and health and safety conditions are undertaken by all staff and contractors on site; and
- Ensuring that corrective actions are promptly followed up and closed out.

2.4 LIFECYCLE OF THE SHEEP FEEDLOT FACILITY

The EMPr has recommended mitigation and management measures to avoid or minimise negative impacts and optimise the benefits arising from the positive impacts during the life-cycle of the development.

2.4.1 Pre-construction

The primary task of the pre-construction phase will include surveying of the area.

2.4.2 Construction

The primary focus on project management for the construction phase will include:

- Transportation of equipment and machinery to the site location;
- Setting up a construction camp and laydown areas;
- Development of temporary materials and waste storage and control measures;
- Stripping of surface vegetation and removal of vegetation, building rubble and domestic waste from site to the Moqhaka Local Municipality Landfill Site;
- Stripping and stockpiling of topsoil and sub soil from the site for later use for rehabilitation and landscaping; and

2.4.3 Operation

The operational phase of the feedlot expansion development will involve the following:

- Maintenance of the stormwater management system;
- Solid waste removal.

2.4.4 Rehabilitation

Rehabilitation activities associated with Tlios (Pty) Ltd feedlot are around the rehabilitation of disturbed areas outside of the infrastructure footprint.

The rehabilitation measures are to be undertaken in such a way that it ensures the rehabilitation of disturbed areas following the execution of the works, such that residual environmental impacts are remediated or curtailed.

2.4.5 Decommissioning

Upon closure of the feedlot, the natural vegetation will be allowed to re-establish on site.

2.5 CHECKING AND CORRECTIVE ACTION

Checking and implementing corrective action forms an important component of the EMPr management cycle. These ensure that:

- The required EMPr and EA conditions are being implemented on the site;
- The desired outcomes are being achieved and potential impact managed;
- On-going weekly inspections of operational controls and general state of operation; and
- Internal monthly audits to assess the compliance to the EMPr and EA or to focus on a particular performance issue; and
- Quarterly external audits by an independent professional for the duration of the construction phase.

Many potential impacts are difficult to monitor quantitatively, such as soil erosion and waste management. However, an on-going, but pragmatic, inspection regime must be developed that allows for potential environmental transgressions to be identified proactively so that mitigation can be quickly and effectively implemented.

There are several mechanisms for implementing corrective action both during the construction and operational phases. The main instruments used to address non compliances are the following:

- Verbal instructions – Minor transgressions from an established procedure;
- Written instructions – Normally following an audit; and
- Contract Notice – Following a breach in contract.

These instruments must be included in the contracts between the Developer and the Principal Contractors as a means of deterring personnel from contravening the conditions of the EA and the EMPr.

2.6 SITE DOCUMENTATION AND REPORTING

All non-conformances will be recorded and reported to the Developer and/or its Agent. These non-conformances will be rated according to a weighing methodology to be developed that will be used to determine the significance of each incident. Considering the transient nature of construction, continual daily visual inspections will be conducted by the SHE representative. The following documentation will be required on site:

- Complaints register;
- Environmental Incident Register;

- Monthly internal audit reports;
- Method statements with potential environmental impacts included;
- Non-conformance reports;
- Written corrective action instructions;
- EA; and
- EMPr and associated amendments.

The findings of all inspections and internal audits will be structured into instructive reporting providing information to all members of the Project Management Team. Corrective actions must be clearly defined where required. Within the reporting function a structured review component must be enforced. This review function will assist in prescribing necessary corrective actions.

Within the reporting structure it will be necessary to incorporate a review function that continually assesses the reporting and prescribes any necessary corrective action. The purpose of the review function is for the Developer to review the environmental management performance during all phases, and to propose measures to improve performance focusing on continual improvement.

2.7 MONITORING

All programmes and plans forming part of this document will be subject to monitoring. The monitoring of the compliance with the conditions of the EA and the EMPr will be done on a monthly basis during construction by the ECO / SHE representative and annually during the operational phase by Tlios (Pty) Ltd feedlot. Monitoring will have two elements namely:

- Routine monitoring against set standards or performance criteria;
- Annual review or evaluation. This will focus on the assessment of the effectiveness of the plan or programme.

During the construction phase, the Project Management Team will be responsible for monitoring and inspecting contractors' written records to illustrate compliance with the EMPr. This falls under the inspection role of the SHE Representative / ECO. This compliance monitoring is to verify that the responsible parties are adhering to the procedures, management conditions, and specifications contained in this EMPr.

2.7.1 Programme Monitoring

The SHE Representative / ECO will monitor their programme implementation for the proposed development on a monthly basis during the construction phase. This will include, but not be limited to, the monitoring of:

- Occurrence of alien vegetation as well as any possible (albeit unlikely) sensitive species;
- Water usage on a monthly basis;

- Waste Management Programmes used to manage the generation and disposal of waste on site; and
- Rehabilitation of the construction sites, post construction and continually during operation.

2.8 MANAGEMENT REVIEW

The Developer will review the EMPr at annual intervals during the operational phase. The purpose of the management review is to ensure that the conditions of the EMPr are still relevant, and to propose measures for improving the performance in the spirit of continuous improvement.

2.9 MITIGATION AND MANAGEMENT MEASURES

The mitigation and management measures identified to address the anticipated and potential impacts identified during the Environmental Impact Assessment process is presented in Table 2-3 to Table 2-7.

Table 2-3: Proposed Mitigation Measures during the Planning and Design Phase

POTENTIAL ENVIRONMENTAL IMPACT DURING PLANNING AND DESIGN (NATURE OF THE IMPACT)	RECOMMENDED MITIGATION MEASURES		
	Management and mitigation measures	Timeframe	Responsibility
General Management Measures			
Contractors and sub-contractors may not have sufficient knowledge and understanding of the potential impacts of construction or the requirements of the EMPr, leading to impacts identified under each aspect.	Compliance with the requirements of the EMPr will form part of the construction contract.	Upon appointment of Principal Contractors	Developer and/or appointed Agent
Site demarcation and compliance	<ol style="list-style-type: none"> 1. The Contractor and ECO must ensure compliance with conditions described in the EA. 2. Layouts should be adapted to fit natural patterns rather than imposing rigid geometries. 3. Construction must be limited to the footprint. 4. Regular environmental training should be provided to construction workers to ensure the protection of the habitat, fauna and flora and their sensitivity to conservation 5. Edge effects of pre-construction and construction activities, including erosion, sedimentation, and alien/weed control, need to be strictly managed in wetland areas as well as their associated buffer zones. 6. A buffer zone of 32 meters should be implemented around the drainage channels and riparian zone to prevent sediment changes to the channels. 7. If Palaeontological Heritage is uncovered during surface clearing and excavations the Chance find Protocol attached should be implemented immediately. Fossil discoveries ought to be protected and the ECO/site manager must report to South African Heritage Resources Agency (SAHRA) (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Tel: 021 462 4502. Fax: +27 (0)21 462 4509. Web: www.sahra.org.za) so that mitigation (recording 	Prior to commencement of site preparation and construction	Developer and/or appointed Agent

	and collection) can be carried out.		
Training of site staff	<p>Ensure that all staff have the appropriate level of environmental awareness and competence to ensure continued environmental due diligence and ongoing minimization of environmental harm, by:</p> <ol style="list-style-type: none"> 1. Environmental awareness training for construction staff, concerning the prevention of accidental spillage of hazardous chemicals and oil; pollution of water resources (both surface and groundwater), air pollution and litter control and identification of archaeological artifacts. 2. Staff should be educated as to the need to refrain from indiscriminate waste disposal and/or pollution of local soil and water resources and receive the necessary safety training. 3. Staff must be trained in the hazards and required precautionary measures for dealing with hazardous substances. 4. Spillage packs must be available at construction areas. 	Prior to commencement of site preparation and construction	Developer and/or appointed Agent
Site clearing	<ol style="list-style-type: none"> 1. Site clearing must take place in a phased, environmentally acceptable manner, as and when required. 2. Areas which are not to be constructed on within two months must not be cleared to reduce erosion risks. 3. The removal of indigenous plants should be kept to a minimum necessary. 4. Sensitive features that may be harmed must be marked to avoid any severe impacts to the environment. 	Site preparation prior to construction	Principal Contractor
Erosion	<ol style="list-style-type: none"> 1. Design an effective system of storm water run-off control, where it is required – that is at any points where run-off water might accumulate. The system must effectively collect and safely disseminate any run-off water from all accumulation points and it must prevent any potential down slope erosion. 	Once-off, during the design of the facility	Developer and/or appointed Agent

Table 2-4: Proposed Mitigation Measures during the Construction Phase

POTENTIAL ENVIRONMENTAL IMPACT DURING CONSTRUCTION (NATURE OF THE IMPACT)	RECOMMENDED MITIGATION MEASURES		
	Management and mitigation measures	Timeframe	Responsibility
Construction Camp			
Drainage of the construction camp	<p>Surface drainage measures must be established in the Construction Camps so as to prevent:</p> <ul style="list-style-type: none"> • Ponding of water; • Erosion as a result of accelerated runoff; and, • Uncontrolled discharge of polluted runoff. 	Construction phase	Principal Contractor, Environmental Liaison Officer and Environmental Control Officer
Environmental education and Training			
Environmental training	<ol style="list-style-type: none"> 1. The project manager must appoint an ECO prior to construction. 2. Ensure that all site personnel have a basic level of environmental awareness training. The Contractor must submit a proposal for this training to the ECO for approval. Topics covered should include: <ul style="list-style-type: none"> • What is meant by "Environment" • Why the environment needs to be protected and conserved • How construction activities can impact on the environment • What can be done to mitigate against such impacts? • Awareness of emergency and spills response provisions • Social responsibility during construction e.g. being considerate to local residents 3. Training should be undertaken by a party such as the ECO who has sufficient expertise and knowledge of environmental issues. 4. Training should be provided to the staff members in the use of the appropriate fire-fighting equipment. Translators are to be used where necessary. 	Construction phase	Tlios (Pty) Ltd
Monitoring of environmental training	The Contractor must monitor the performance of construction workers to	Construction phase	Tlios (Pty) Ltd

	ensure that the points relayed during their introduction have been properly understood and are being followed. If necessary, the ECO and/or a translator should be called to the site to further explain aspects of environmental or social behaviour that are unclear. Toolbox talks are recommended.		
Soils and Geology			
Mitigation for soil compaction	The most effective mitigation will be the minimisation of the project footprint by using the existing roads in the area and not create new roads to prevent other areas also getting compacted.	Construction phase	Principal Contractor and Environmental Liaison Officer
Chemical soil pollution	<ol style="list-style-type: none"> 1. All waste generated on site during construction should be stored in waste bins and removed from site on a regular basis. 2. Vehicles accessing the site should regularly be checked for fuel and oil spills. In case of spillage, the contaminated soil should be removed and transported to a designated waste site. 3. Any excess or waste material or chemicals should be removed from the site and discarded in an environmentally friendly way. The ECO should enforce this rule rigorously. 4. Spill kits should be on-hand to deal with spills immediately. 	Construction phase	Principal Contractor and Environmental Liaison Officer
Soil stripping	<ol style="list-style-type: none"> 1. No soil stripping must take place on areas within the site that the Contractor does not require for construction works or areas of retained vegetation. 2. Topsoil must not be stripped or stockpiled when it is raining or when the soil is wet as compaction will occur. 3. Subsoil and overburden in all construction and laydown areas should be stockpiled separately to be returned for backfilling in the correct soil horizon order. 4. Construction vehicles must only be allowed to utilise existing tracks or pre-planned access routes. 	Construction phase	Principal Contractor and Environmental Control Officer

Guidelines for soil stockpiles	<ol style="list-style-type: none"> 1. Stockpiles should not be situated such that they obstruct natural water pathways. 2. Stockpiles must not exceed 2m in height unless otherwise permitted by the Engineer. 3. If stockpiles are exposed to windy conditions or heavy rain, they must be covered either by vegetation or geofabric, depending on the duration of the project. Stockpiles may further be protected by the construction of berms or low brick walls around their bases. 4. Stockpiles must be kept clear of weeds and alien vegetation growth by regular weeding. 	Construction phase	Principal Contractor and Environmental Control Officer
Erosion	<ol style="list-style-type: none"> 1. Maintain where possible all vegetation cover and facilitate re-vegetation of denuded areas throughout the site to stabilize disturbed soil against erosion. 2. Cover disturbed soils as completely as possible, using vegetation or other materials. 3. Minimize the amount of land disturbance and develop and implement stringent erosion and dust control practices. 4. Protect sloping areas and drainage channel banks that are susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and Work Areas. 5. Control the flow of runoff to move the water safely off the site without destructive gully formation. 6. Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and Work Areas. 	Construction phase	Environmental Control Officer
Storage of fuel on site	<ol style="list-style-type: none"> 1. Less than 80 cubic meters of fuel is permitted to be stored on site at any one time. 2. Topsoil and subsoil to be protected from contamination. 	Construction phase	Principal Contractor and Environmental Control Officer

	<ol style="list-style-type: none"> 3. Fuel and material storage must be away from stockpiles. 4. Concrete and chemicals must be mixed on an impervious surface and provisions must be made to contain spillages or overflows into the soil. 5. Any storage tanks containing hazardous materials must be placed in bunded containment areas with sealed surfaces. The bund walls must be high enough to contain 110% of the total volume of the stored hazardous material. 		
Mixing of concrete on site	<ol style="list-style-type: none"> 1. The concrete batching plant must be contained within a bunded area. 2. Concrete mixing must only take place within designated areas. 3. Ready mixed concrete must be utilised where possible. 4. No vehicles transporting concrete to the site may be washed on site. 5. If a batching plant is necessary, run-off should be managed effectively to avoid contamination of other areas of the site. Run-off from the batch plant must not be allowed to enter the stormwater system. 	Construction phase	Principal Contractor and Environmental Control Officer
Earth works	<ol style="list-style-type: none"> 1. Soils compacted during construction must be deeply ripped to loosen compacted layers and re-graded to even running levels. Topsoil must be re-spread over landscaped areas. 	Construction phase	Principal Contractor and Environmental Control Officer
Erosion Control			
Erosion control actions that need to be implemented during construction	<ol style="list-style-type: none"> 1. All erosion control mechanisms need to be regularly maintained. 2. Retention of vegetation where possible to avoid soil erosion. 3. Vegetation clearance must be phased to ensure that the minimum area of soil is exposed to potential erosion at any one time. 4. No impediment to the natural water flow other than approved erosion control works is permitted. 5. Cover disturbed soils as completely as possible, using vegetation or other materials. 6. Protect sloping areas and drainage channel banks that are susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and Work Areas. 7. Repair all erosion damage as soon as possible to allow for sufficient 	Construction phase	Environmental Control Officer

	<p>rehabilitation growth.</p> <ol style="list-style-type: none"> 8. Gravel roads to the construction sites must be well drained to limit soil erosion. 9. Control the flow of runoff to move the water safely off the site without destructive gully formation. 10. Minimize soil exposure around the feedlot development. Re-vegetate exposed areas surrounding the feedlot development and allow a sufficient buffer between the development to prevent sedimentation into the wetlands / rivers. 		
Water Use, Quality and Protection			
Water use	<ol style="list-style-type: none"> 1. Develop a sustainable water supply management plan to minimise the impact to natural systems by managing water use, avoiding depletion of aquifers and minimising impacts to water users. 2. Water must be used sparingly. 	Construction phase	Engineer
Management of water quality	<ol style="list-style-type: none"> 1. Efficient oil and grease traps or sumps must be installed and maintained at refuelling facilities, workshops, fuel storage depots, and containment areas and spill kits must be available with emergency response plans. 2. The contractor must ensure that no water contamination occur and that strict measures are instituted when such pollution occur. 3. Polluted water must not come into contact with clean water. 	Construction phase	Environmental Control officer
Stormwater management	<ol style="list-style-type: none"> 1. The site must be managed in order to prevent pollution of drains, downstream watercourses or groundwater, due to suspended solids, manure and silt or chemical pollutants. 2. Silt fences must be used to prevent any soil entering the stormwater drains. 3. Promote a water saving mind set with construction workers in order to ensure less water wastage. 4. Manure must be stored at least 20m from any water bodies on site to 	Construction phase	Environmental Control officer

	avoid pollution.		
Protection of groundwater resources	<ol style="list-style-type: none"> 1. No unauthorised groundwater abstraction may occur on the site. 2. Should any water be discharged from site, the water is to comply with national effluent standards. No contaminated water must be discharged from site. 3. No activities must be allowed to encroach into a water course or feature without a Water Use License being in place from the Department of Water and Sanitation (DWS). 	Construction phase	Environmental Control officer
Sanitation	<ol style="list-style-type: none"> 1. Adequate sanitary facilities and ablutions must be provided for construction workers (1 toilet per every 15 workers) at appropriate locations on site. 2. The facilities must be regularly serviced and appropriately maintained to reduce the risk of surface or groundwater pollution. 3. Ablution or sanitation facilities must not be located within 100m of any water courses or features. 	Construction phase	Environmental Control officer
Concrete mixing	Concrete contaminated water must not enter soil or any natural drainage system as this disturbs the natural acidity of the soil and affects plant growth.	Construction phase	Environmental Control officer
Use and storage of hazardous materials	<ol style="list-style-type: none"> 1. Use and or storage of materials, fuel and chemicals which could potentially leak into the ground must be controlled. 2. Any hazardous substances must be stored at least 20m from any of the water bodies on site. 		
Site specific mitigation measures for surface water	<ol style="list-style-type: none"> 1. A buffer zone of 32 meters should be implemented around the drainage channels and riparian zone to prevent sediment changes to the channels. 2. Edge effects of pre-construction and construction activities, including 		

	<p>erosion, sedimentation and alien/weed control, need to be strictly managed in wetland areas as well as their associated buffer zones.</p> <ol style="list-style-type: none"> 3. A stormwater plan must be developed with the aid of an engineer to ensure that water runoff is diverted off the site without pooling and stagnation or erosion. Financial provision for closure will include the estimated costs for erosion control post-construction. 4. If compaction occurs, rectification can be done by application and mixing of manure, vegetation mulch or any other organic material into the area. Use of well cured manure is preferable as it will not be associated with the nitrogen negative period associated with organic material that is not composted. 5. Appropriate design and mitigation measures must be developed and implemented to minimise impacts on the natural flow regime of the watercourse i.e., through placement of structures/supports and to minimise turbulent flow in the watercourse. 6. No dumping of waste should take place within the riparian zone. If any spills occur, they should be immediately cleaned up. 7. Appropriate sanitary facilities must be provided for the duration of the proposed development and all waste removed to an appropriate waste facility. 8. All vehicles should be inspected for oil and fuel leaks on a regular basis. Vehicle maintenance yards on site should make provision for drip trays to capture spills. Drip trays should be emptied into a holding tank and returned to the supplier. 9. Limit pesticide use to non-persistent, immobile pesticides and apply in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications. 10. Rehabilitate disturbed areas as quickly as possible. 		
<p>Site specific mitigation measures for groundwater</p>	<ol style="list-style-type: none"> 1. Inventories should be made of all substances that are potentially hazardous to groundwater, which will be stored, used or transported over the sites. The risk of each substance to the groundwater should be considered. 	<p>Construction phase</p>	<p>Principal Contractor and Environmental Control officer</p>

	<ol style="list-style-type: none"> All areas in which substances potentially hazardous to groundwater are stored, loaded, worked with or disposed of should be securely banded (impermeable floor and sides) to prevent accidental discharge to groundwater. 		
Waste Management			
Litter management	<ol style="list-style-type: none"> Construction methods and materials should be carefully considered in view of waste reduction, re-use and recycling opportunities. Refuse bins must be placed at strategic positions to ensure that litter does not accumulate within the construction site. The Contractor shall supply waste collection bins where such is not available and all solid waste collected shall be disposed of at registered/licensed landfill. A housekeeping team should be appointed to regularly maintain the litter and rubble situation on the construction site. If possible and feasible, all waste generated on site must be separated into glass, plastic, paper, metal and wood and recycled. An independent contractor can be appointed to conduct this recycling. Littering by the employees of the Contractor shall not be allowed under any circumstances. All waste must be removed from the site and transported to a landfill site promptly to ensure that it does not attract vermin or produce odours. Where a registered waste site is not available close to the construction site, the Contractor shall provide a method statement with regard to waste management. 	Construction phase	Environmental Liaison Officer
Hazardous waste management	<ol style="list-style-type: none"> All hazardous waste materials must be carefully stored. Contaminants to be stored safely to avoid spillage. SABS approved spill kits to be available and easily accessible. 	Construction phase	Environmental Liaison Officer

Sanitation	<ol style="list-style-type: none"> 1. Staff shall be sensitised to the fact that they should use the available mobile chemical toilets at all times. No indiscriminate sanitary activities on site shall be allowed. 2. Under no circumstances may open areas, neighbours fences or the surrounding bush be used as a toilet facility. 3. The construction of “Long Drop” toilets is forbidden, but rather toilets connected to septic tanks. 4. Potable water must be provided for all construction staff. 	Construction phase	Environmental Liaison Officer
Flora			
Destruction and fragmentation of habitat	<ol style="list-style-type: none"> 1. Vegetation removal must be limited to the development footprint of construction site. 2. Vegetation removal must be phased in order to reduce impact of construction. 3. All flora not interfering with the operation of the feedlot construction shall be left undisturbed clearly marked and indicated on the site plan. 4. Exotic and invasive plant species should not be allowed to establish, if the development is approved. 5. During construction, sensitive habitats must be avoided by construction vehicles and equipment, wherever possible, to reduce potential impacts. 6. All development activities should be restricted to specific recommended areas. Storage of equipment, fuel and other materials must be limited to demarcated areas. The facility layout must be adapted to fit natural patterns rather than imposing rigid geometries. The entire development footprint must be clearly demarcated prior to the initial site clearance and prevent construction personnel from leaving the demarcated area. This would only be applicable to the construction phase of the proposed development. 7. Monitoring should be implemented during the construction to ensure that minimal impact is caused to the fauna and flora of the area. 8. Use existing facilities (e.g., impacted areas) to the extent possible to 	Pre-construction and Construction phase	Environmental Liaison Officer/ Principal Contractor

	minimise the amount of new disturbance.		
Rehabilitation	<ol style="list-style-type: none"> 1. All damaged areas shall be rehabilitated upon completion of the contract. 2. Rehabilitate disturbed areas as quickly as possible to reduce the area where invasive species would be at a strong advantage and most easily able to establish. 3. Rehabilitation must be executed in such a manner that surface run-off will not cause erosion of disturbed areas. 	Construction phase	Environmental Liaison Officer/ Principal Contractor
Exotic/Alien vegetation	<ol style="list-style-type: none"> 1. Alien vegetation on the site will need to be controlled. 2. The Contractor should be responsible for implementing a programme of weed control (particularly in areas where soil has been disturbed); and grassing of any remaining stockpiles to prevent weed invasion. This must include monitoring and eradication. 3. The spread of exotic species occurring throughout the site should be controlled. 4. Control involves killing the plants present, killing the seedlings which emerge, and establishing and managing an alternative plant cover to limit re-growth and re-invasion. 5. Rehabilitate disturbed areas as quickly as possible to reduce the area where invasive species would be at a strong advantage and most easily able to establish. 6. Institute a monitoring programme to detect alien invasive species early, before they become established and, in the case of weeds, before the release of seeds. Once detected, an eradication/control programme should be implemented to ensure that the species' do not spread to surrounding natural ecosystems. 7. Herbicide use shall only be allowed according to contract specifications. The application shall be according to set specifications and under supervision of a qualified technician. Limit pesticide use to non-persistent, immobile pesticides and apply in an environmentally friendly manner. 	Construction phase	Environmental Liaison Officer/ Principal Contractor

<p>Site specific mitigation measures for flora</p>	<ol style="list-style-type: none"> 1. The removal of indigenous plants should be kept to a minimum necessary. Trim, rather than fell of woody species along the edges of the development site where possible. The clearing and damage of plant growth in the riparian and wetland areas should be restricted to the actual road crossing where possible, and not into the sensitive adjacent areas. Where protected plants such as geophytes will need to be cleared or pruned, permits should be obtained from the relevant authority. 2. Peripheral impacts around the development footprint sites on the surrounding vegetation of the area should be avoided and a monitoring programme should be implemented to ensure the impacts are kept to a minimum, while the rehabilitation of the site should be prioritized after construction has been completed. 3. During construction, sensitive habitats must be avoided by construction vehicles and equipment, wherever possible, to reduce potential impacts. 4. Where holes for poles pose a risk to animal safety, they should be adequately cordoned off to prevent animals falling in and getting trapped and/or injured. This could be prevented by the constant excavating and backfilling during planting of the poles along the lines. 5. Poisons for the control of problem animals should rather be avoided since the wrong use thereof can have disastrous consequences for the raptors occurring in the area. The use of poisons for the control of rats, mice or other vermin should only be used after approval from an ecologist. 6. Limit pesticide use to non-persistent, immobile pesticides and apply in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications. 7. Monitoring should be implemented during the construction phase of the development to ensure that minimal impact is caused to the fauna and flora of the area. 8. Use existing facilities (e.g., impacted areas) to the extent possible to minimize the amount of new disturbance. 9. During construction, sensitive habitats must be avoided by construction vehicles and equipment, wherever possible, to reduce potential impacts. Only necessary damage must be caused and, for example, unnecessary 	<p>Construction phase</p>	<p>Environmental Liaison Officer</p>
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	driving around in the veld or bulldozing natural habitat must not take place.		
Fauna			
Protection of fauna on site	<ol style="list-style-type: none"> 1. Use of appropriate construction techniques. 2. No trapping or snaring to fauna on the construction site should be allowed. 3. No faunal species must be disturbed, trapped, hunted or killed by maintenance staff during any routine maintenance at the development. 4. Where holes for poles pose a risk to animal safety, they should be adequately cordoned off to prevent animals falling in and getting trapped and/or injured. This could be prevented by the constant excavating and backfilling during planting of the poles along the lines. 5. Poisons for the control of problem animals should rather be avoided since the wrong use thereof can have disastrous consequences for birds of prey. The use of poisons for the control of rats, mice or other vermin should only be used after approval from an ecologist. 6. During construction, sensitive habitats must be avoided by construction vehicles and equipment, wherever possible, to reduce potential impacts. 7. Any excess or waste material or chemicals should be removed from the site and discarded in an environmentally friendly way. 8. Hazardous chemicals to be stored on an impervious surface protected from rainfall and storm water run-off. 9. Maintain proper firebreaks around the entire development footprint. 10. Educate construction workers regarding risks and correct disposal of cigarettes. 11. More fauna is normally killed the faster vehicles travel. A speed limit should be enforced (preferably 40 km/hour). It can be considered to install speed bumps in sections where the speed limit tends to be disobeyed. (speed limits will also lessen the probability of road accidents and their negative consequences). 	Construction phase	Environmental Control Officer
Air Quality			
Dust control measures	<ol style="list-style-type: none"> 1. Retention of vegetation where possible will reduce dust travel. 	Construction phase	Environmental

	<ol style="list-style-type: none"> 2. Clearing activities must only be done during agreed working times and permitting weather conditions to avoid drifting of sand and dust into neighbouring areas. 3. Any complaints or claims emanating from the lack of dust control shall be attended to immediately by the Contractor. 4. Any dirt roads that are utilised by the workers must be regularly maintained to ensure that dust levels are controlled. 5. A speed limit should be enforced on dirt roads (preferably 30-40km/h). 		Liaison Officer
Odour control	<ol style="list-style-type: none"> 1. If animal waste and manure is regularly removed from the site very little unpleasant smells will occur. The handling removal and disposal for animal waste products must be in terms of legal requirements and as per guidance through an approved operational Environmental Management Plan. Sprinkler systems with chemicals to reduce dust and control odour and fly population must be used. 	Pre-construction and construction	Environmental Liaison Officer
Rehabilitation	The Contractor should commence rehabilitation of exposed soil surfaces as soon as practical after completion of earthworks.	Pre-construction and construction	Environmental Liaison Officer
Fire prevention	<ol style="list-style-type: none"> 1. No open fires shall be allowed on site under any circumstance. 2. No firewood or kindling may be collected from the site or the surrounds. 3. The Contractor must always have operational fire-fighting equipment available on site. The level of firefighting equipment must be assessed and evaluated through a typical risk assessment process. All staff should be trained in firefighting and how to use the fire-fighting equipment. 	Pre-construction, construction and operation	Environmental Liaison Officer
Noise and Vibrations			
Mitigation of noise and vibrations	<ol style="list-style-type: none"> 1. The construction phase must aim to adhere to the relevant noise regulations and limit noise to within standard working hours in order to reduce disturbance of dwellings in close proximity to the development. 2. Noise levels must be kept within acceptable limits. 	Environmental Liaison Officer	Environmental Liaison Officer

	<ol style="list-style-type: none"> 3. Construction workers to wear necessary ear protection gear. 4. Noise from labourers must be controlled. 5. Limit noise generating activities to normal daylight working hours and avoid weekends and public holidays. 6. Communication, complaints, and grievance channels must be implemented, and contact details of the CLO must be provided to the local community in the study area. 		
Energy Use			
The use of energy and actions that need to be implemented during construction	<ol style="list-style-type: none"> 1. Energy saving lighting must be implemented across the board. 2. Minimal lighting, while maintaining health and safety regulations, must be kept on during the night operations. 3. Equipment not in use must be switched off and unplugged to save on unnecessary energy costs. 	Construction phase	Environmental Liaison Officer
Heritage			
Mitigation of the impact that the new development may have on potential archaeological features or finds on the site	<ol style="list-style-type: none"> 1. The contractors and workers must be notified that archaeological sites might be exposed during the construction activities; 2. Should any heritage artefacts be exposed during excavation, work on the area where the artefacts were discovered, shall cease immediately and the Environmental Control Officer (ECO) shall be notified as soon as possible. 3. If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the heritage resource. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA; 4. All discoveries shall be reported immediately to a heritage practitioner so that an investigation and evaluation of the finds can be made. Acting upon advice from these specialists, the ECO will advise the necessary actions to be taken; 	Construction phase	Principal Contractor and Environmental Liaison Officer

	<ol style="list-style-type: none"> 5. Under no circumstances shall any artefacts be removed, destroyed or interfered with by anyone on the site; and 6. Contractors and workers shall be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological or palaeontological artefacts, as set out in the NHRA, Section 51(1). A person or entity, e.g. the ECO, should be tasked to take responsibility for the heritage sites and held accountable for any damage. 7. The following conditions apply with regards to the appointment of specialists: i) If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the heritage resource. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA. 8. The Contractor must ensure that his workforce is aware of the necessity of reporting any possible historical or archaeological finds to the ECO so that appropriate action can be taken. 9. Any destruction of a site can only be allowed once a permit is obtained and the site has been mapped and noted. Permits shall be obtained from the SAHRA should the proposed site affect any world heritage sites or if any heritage sites are to be destroyed or altered. 10. Known sites should be clearly marked, so that they can be avoided during construction activities. 		
Palaeontology	<ol style="list-style-type: none"> 1. If Palaeontological Heritage is uncovered during surface clearing and excavations the Chance find Protocol attached should be implemented immediately. The ECO responsible for the construction phase of the sheep feedlot should be aware of the potential for important fossil finds and the necessity to conserve them for possible professional mitigation. The ECO should monitor all substantial surface clearance operations and excavations into sedimentary rocks for fossil remains on an on-going basis during the construction phase. 2. If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature 	Construction phase	Principal Contractor, Environmental Liaison Officer & Environmental Control Officer

	<p>of the finds, must be contracted as soon as possible to inspect the heritage resource. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA;</p> <ol style="list-style-type: none"> 3. Recommended mitigation of chance fossil finds during the construction phase of the sheep feedlot and associated grid connection involves safeguarding of the fossils (preferably <i>in situ</i>) by the responsible ECO and reporting of finds to SAHRA (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Phone: +27 (0)21 462 4502. Fax: +27 (0)21 462 4509. Web: www.sahra.org.za). 4. All major site clearance and excavation work must be monitored for fossil remains. 5. Recording and sampling of significant new fossil finds by professional palaeontologist. 		
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Table 2-5: Proposed Mitigation Measures during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT DURING OPERATION (NATURE OF THE IMPACT)	RECOMMENDED MITIGATION MEASURES		
	Management and mitigation measures	Timeframe	Responsibility
Construction Site Decommissioning			
Removal of equipment	<ol style="list-style-type: none"> 1. All structures comprising the construction camp are to be removed from site. 2. The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc, and these shall be cleaned up. 3. All hardened surfaces within the construction camp area should be ripped, all imported materials removed, and the area shall be top soiled and regressed using the guidelines set out in the re-vegetation that forms part 	When beneficiaries take occupation	Principal Contractor. Developer, Environmental Control officer and Environmental Liaison Officer

	of this document.		
Associated infrastructure	<ol style="list-style-type: none"> 1. All rubble is to be removed from the site to an approved disposal site as approved by the Engineer. Burying of rubble on site is prohibited. 2. The site is to be cleared of all litter. 3. Fences, barriers and demarcations associated with the construction phase are to be removed from the site unless stipulated otherwise by the Engineer. 4. All residual stockpiles must be removed to spoil or spread on site as directed by the Engineer. 5. All leftover building materials must be returned to the depot or removed from the site. 6. The Contractor must repair any damage that the construction works has caused to neighbouring properties, specifically, but not limited to, damage caused by poor stormwater management. 	When beneficiaries take occupation	Principal Contractor. Developer, Environmental Control officer and Environmental Liaison Officer
Operation and Maintenance			
Maintenance	All applicable standards, legislation, policies and procedures must be adhered to during operation.	Operational phase	Developer
Public awareness	The emergency preparedness plan must be ready for implementation always should an emergency situation arise.	Operational phase	Developer
Soil Erosion and Geology			
Soil erosion	<ol style="list-style-type: none"> 1. Avoid stripping land surfaces of existing vegetation by only allowing vehicles to travel on existing roads and not create new roads. 2. If an activity will mechanically disturb the soil below surface in any way, then any available topsoil should first be stripped from the entire surface to be disturbed and stockpiled for re-spreading during rehabilitation. During rehabilitation, the stockpiled topsoil must be evenly spread over the entire disturbed surface. 	Operational phase	Developer

Surface and Groundwater			
Surface water	<ol style="list-style-type: none"> 1. Correct drainage of the site should ensure that contaminants do not impact upon the riparian areas. 2. The stormwater system on the proposed site needs to be regularly maintained to ensure effective working. 	Operational phase	Developer
Site specific mitigation measures for surface water	<ol style="list-style-type: none"> 1. Development and implementation of an adequate stormwater management plan to be designed by an appropriate engineer. 2. The stormwater management plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. 3. Minimize soil exposure around the development footprint. Re-vegetate exposed areas surrounding the feedlot development and allow a sufficient buffer between the development to prevent sedimentation into the wetlands / rivers. 4. Manage water effectively on, to, within, and from this site. 5. Rehabilitation of the development area after construction have been completed should be considered a high priority and all areas rehabilitated should be audited after construction has ceased by a suitably qualified environmentalist. 6. Environmental monitoring of environmental aspects should be implemented during operational phase of the development to ensure that minimal impact is caused to the wetlands area. 7. Edge effects, including erosion, sedimentation and alien/weed control, need to be strictly managed in wetland 8. All vehicles and equipment should be regularly inspected for leaks. Re-fueling must take place on a sealed surface area at least 300m away from the edge of the river buffer zone to prevent ingress of hydrocarbons into topsoil. 9. Appropriate design and mitigation measures must be developed and implemented to minimize impacts on the natural flow regime of the 	Operational phase	Developer

	<p>watercourse i.e., through placement of structures/supports and to minimize turbulent flow in the watercourse.</p> <ol style="list-style-type: none"> 10. Perform scheduled maintenance to be prepared for storms. Ensure that culverts have their maximum capacity, ditches are cleaned, and that channels are free of debris and brush than can plug structures. 11. No dumping of waste should take place within the riparian zone. If any spills occur, they should be immediately cleaned up. 12. Clean stormwater must be prevented from flowing onto the composting facility area and diverted away by berms. 13. Appropriate sanitary facilities must be provided for the duration of the proposed development and all waste removed to an appropriate waste facility. 14. Implement standard dust control measures, including periodic spraying (frequency will depend on many factors including weather conditions, soil composition and traffic intensity and must thus be adapted on an on-going basis) and chemical dust suppressants of construction areas and access roads, and ensure that these are continuously monitored to ensure effective implementation. 15. A speed limit (preferably 40 km/hour) should be enforced on dirt roads 16. Limit pesticide use to non-persistent, immobile pesticides and apply in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications. 		
<p>Site specific mitigation measures for groundwater</p>	<ol style="list-style-type: none"> 1. Inventories should be made of all substances that are potentially hazardous to groundwater, which will be stored, used or transported over the sites. The risk of each substance to the groundwater should be considered. 2. All areas in which substances potentially hazardous to groundwater are stored, loaded, worked with or disposed of should be securely bunded (impermeable floor and sides) to prevent accidental discharge to groundwater. 3. Locate manure stacks way from water bodies, floodplains, or other sensitive habitats. 	<p>Operational phase</p>	<p>Developer</p>

	4. Ensure that manure is applied to agricultural land only during periods that are appropriate for its use as fertilisers.		
Biodiversity (Fauna and Flora)			
Vegetation	<ol style="list-style-type: none"> 1. Indigenous vegetation must be maintained, and all exotics removed as they appear and disposed of appropriately. 2. Continued monitoring and eradication of alien invasive plant species are imperative. 3. Rehabilitation must be executed in such a manner that surface run-off will not cause erosion of disturbed areas during and following rehabilitation. 	Operational phase	Developer
Other fauna	No faunal species must be harmed by maintenance staff during any routine maintenance at the development.	Operational phase	Developer
Site specific mitigation measures	<ol style="list-style-type: none"> 1. All temporary stockpile areas, litter and dumped material and rubble must be removed and discarded in an environmentally friendly way. 2. Hazardous chemicals must be stored on an impervious surface and protected from the elements. These chemicals must be strictly controlled, and records kept of when it was used and by whom 3. All vehicles should be inspected for oil and fuel leaks on a regular basis. 4. Peripheral impacts around the development footprint sites on the surrounding vegetation of the area should be avoided and a monitoring programme should be implemented to ensure the impacts are kept to a minimum, while the rehabilitation of the site should be prioritized after construction has been completed. 5. Limit pesticide use to non-persistent, immobile pesticides and apply in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications. 6. Repair all erosion damage as soon as possible to allow for sufficient rehabilitation growth. 7. Gravel roads to the site must be well drained to limit soil erosion. 8. Control the flow of runoff to move the water safely off the site without 	Operational phase	Developer

	<p>destructive gully formation.</p> <ol style="list-style-type: none"> 9. Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and Work Areas. 10. Spill kits should be on-hand to deal with spills immediately. 11. Limit human activity in the no-developed areas as well as the completed areas to the minimum required for ongoing operation 12. All temporary stockpile areas, litter and dumped material and rubble must be removed and discarded with in an environmentally friendly way 13. Undeveloped areas that were degraded due to human activities must be rehabilitated. 14. No unauthorised removal of plant or animal species allowed. 15. Where holes for poles pose a risk to animal safety, they should be adequately cordoned off to prevent animals falling in and getting trapped and/or injured. This could be prevented by the constant excavating and backfilling during planting of the poles along the lines. 16. Poisons for the control of problem animals should rather be avoided since the wrong use thereof can have disastrous consequences. The use of poisons for the control of rats, mice or other vermin should only be used after approval from an ecologist. 17. Constant maintenance of the area to ensure re-colonisation of floral species. 18. Control involves killing the plants present, killing the seedlings which emerge, and establishing and managing an alternative plant cover to limit re-growth and re-invasion. Weeds and invader plants will be controlled in the manner prescribed for that category by the CARA or in terms of Working for Water guidelines. The control of these species should even begin prior to the construction phase considering that small populations of these species was observed during the field surveys. 		
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Waste Management			
Recycling and litter management	<ol style="list-style-type: none"> 1. The site should be kept clear of litter at all times. 2. Solid waste separation and recycling must take place for the duration of the operational phase for the development. 3. All waste must be removed promptly to ensure that it does not attract vermin or produce odours. 4. In house treatment procedures must be followed strictly. 5. Solid waste must be collected on a regular basis and disposed of at the closest municipal landfill site. 6. Package treatment plant must be regularly serviced. 7. Sheep manure will be collected from the feedlot on a regular basis during operational phase. This manure must be removed from site to local nurseries and farmers to be used as compost. Additional manure should be disposed of at the nearest landfill site. 8. Lime must be added to the manure to break it down, so that it does not pose a threat to subsoil hydrology. 	Operational phase	Developer
Heritage Resources			

Table 2-6: Proposed Mitigation Measures during the Decommissioning Phase

POTENTIAL ENVIRONMENTAL IMPACT DURING DECOMMISSIONING (NATURE OF THE IMPACT)	RECOMMENDED MITIGATION MEASURES		
	Management and mitigation measures	Timeframe	Responsibility
Ongoing Stakeholder involvement			
General	<ol style="list-style-type: none"> 1. Closure must be planned from inception through adequate social planning and infrastructure development that can be maintained by the communities after closure and opportunities to redirect skills must be sought. 2. A register to be kept of problems reported by community members and 	Decommissioning phase	Tlios (Pty) Ltd

	the steps taken to address/ resolve it.		
General site considerations			
General site decommissioning considerations	<ol style="list-style-type: none"> 1. All temporary fencing and danger tape must be removed once the construction phase has been completed. 2. All hardened surfaces within the construction camp area must be diced, all imported materials removed, and the area shall be top soiled and re-vegetated. 3. Temporary roads (if any) must be closed and access across these blocked. 4. The area that previously housed the construction equipment camp is to be checked for spills of substances such as oil, paint, etc. and these should be cleaned up. 5. The Department of Rural, Environment and Agricultural Development must be consulted in the case of decommission and closure. 	Following completion of construction activities in an area: decommissioning phase	Principal Contractor and Tlios (Pty) Ltd
Waste Management			
Waste management	<ol style="list-style-type: none"> 1. All decommissioned equipment must be removed from site and disposed of at a registered land fill. Records of disposal must be kept. 2. Rubble or waste that could accompany the construction effort, if the development is approved, should be removed during and after construction. Measures must be taken to avoid any spills and infiltration of petroleum fuels or any chemical pollutants into the soil during construction phase 3. The applicant must ensure that the final disposal site can accept the waste and the anticipated volumes thereof. Any hazardous waste must be disposed of at a hazardous waste disposal site. 	Decommissioning phase	Tlios (Pty) Ltd
Surface and Groundwater Responsibility			
Surface and groundwater responsibility	<ol style="list-style-type: none"> 1. Removal of any historically contaminated soil as hazardous waste. 2. Removal of all substances which can result in groundwater (or surface water) contamination. 	Decommissioning phase	Tlios (Pty) Ltd

	<ol style="list-style-type: none"> 3. Re-vegetation of exposed soil surfaces must be undertaken to ensure no erosion in these areas. 4. Necessary drainage works and anti-erosion measures must be installed, where required, to minimise loss of topsoil and control erosion. 5. Compaction of soils should be limited and / or avoided as far as possible.. Where any disturbance of the soil takes place (have taken place in the past), these areas must be stabilised and any alien plants which establish should be cleared and follow-up undertaken for at least 2 years thereafter and preferably longer. Where compaction becomes apparent, remedial measures must be taken (e.g., "ripping" the affected area). 6. Reseed any areas where earthworks have taken place with indigenous grasses to prevent further erosion. 7. Erosion control mechanisms must be established as soon as possible. 8. Vehicle traffic should not be allowed on the rehabilitated areas, except on allocated roads. 9. Appropriate design and mitigation measures must be developed and implemented to minimise impacts on the natural flow regime of the watercourse i.e., through placement of structures/supports and to minimise turbulent flow in the watercourse. 10. Perform scheduled maintenance to be prepared for storm events. Ensure that culverts have their maximum capacity, ditches are cleaned, and that channels are free of debris and brush than can plug structures. 11. After decommissioning all materials have to be disposed of in a responsible manner. 12. After decommissioning, the site has to be rehabilitated by sowing indigenous grass species. The control and monitoring of declared invaders must continue for five years after decommissioning. 		
Biodiversity Responsibility			
Loss of habitat	<ol style="list-style-type: none"> 1. Maintain footprint strictly during decommissioning. 2. Existing access roads must be used. 3. All infrastructure must be removed from the site. 4. Re-vegetation of affected areas must be made a priority to avoid erosion. 	Decommissioning phase	Tlios (Pty) Ltd

	<p>Re-vegetated areas may have to be protected from wind erosion and maintained until an acceptable plant cover has been achieved.</p> <ol style="list-style-type: none"> 5. Suitable stormwater/wind controls must be put in place until rehabilitation is complete. 6. Constant removal of alien invasive species in and around plant. 7. Newly rehabilitated areas must be adequately demarcated and access restricted (specifically vehicular access) until vegetation is established. Appropriate signage must be established and maintained to ensure personnel are aware of these areas. 8. Monitoring should be implemented during the decommissioning phase to ensure that minimal impact is caused to the fauna and flora of the area. 9. After decommissioning, infrastructure has to be removed and disposed of in a responsible manner. 10. After decommissioning, the site has to be rehabilitated by sowing indigenous grass species. The control and monitoring of declared invaders have to continue for five years after decommissioning. 		
Erosion and loss of topsoil	<ol style="list-style-type: none"> 1. Maintain where possible all vegetation cover and facilitate re-vegetation of denuded areas throughout the site, to stabilize disturbed soil against erosion. 2. If an activity will mechanically disturb the soil below surface in any way, then any available topsoil should first be stripped from the entire surface to be disturbed and stockpiled for re-spreading during rehabilitation. During rehabilitation, the stockpiled topsoil must be evenly spread over the entire disturbed surface. 3. Record GPS positions of all occurrences of below-surface soil disturbance (e.g. excavations). Record the date of topsoil stripping and replacement. Check that topsoil covers the entire disturbed area. 	Decommissioning phase	Tlios (Pty) Ltd
Noise and Vibrations			
Access	<ol style="list-style-type: none"> 1. The main routes on the site must be clearly signposted and printed delivery maps must be issued to all suppliers and Sub-contractors. 	Decommissioning	Tlios (Pty) Ltd

	2. Contractor must clearly mark all access roads. Roads not to be used must be marked with a "NO ENTRY for construction vehicles" sign.	phase	
Noise	Movement of heavy construction vehicles through residential areas must be timed to avoid peak morning and evening traffic periods. In addition, movement of heavy construction vehicles through residential areas must not take place over weekends.	Decommissioning phase	Tlios (Pty) Ltd
General	<ol style="list-style-type: none"> 1. The Contractor must meet safety requirements under all circumstances. All equipment transported must be clearly labelled as to their potential hazards according to specifications. All the required safety labelling on the containers and trucks used must be in place. 2. The Contractor must ensure that all the necessary precautions against damage to the environment and injury to persons are taken. 3. Care for the safety and security of community members crossing access roads must receive priority at all times. 	Decommissioning phase	Tlios (Pty) Ltd

3 ENVIRONMENTAL AWARENESS PLAN

The successful implementation of the conditions of the EMPr and EA is dependent on the adequate distribution of the requirements of the said conditions to all stakeholder associated with the Tlios (Pty) Ltd feedlot expansion. An Environmental Awareness Plan must be commissioned by the Developer prior to commencement of pre-construction activities, to familiarise all the members of the Project Management Team and their respective employees with the conditions of the EMPr and EA.

The implementation of the Environmental Awareness Plan should include the following:

- Compilation of summaries of the conditions of the EMPr and EA;
- Distribution of summaries and full documents to members of the Project Management Team;
- Induction of all employees (the SHE Representative should induct all construction workers) and visitors prior to commencement of site clearing and construction activities making them aware of:
 - Legal obligations as per NEMA, EMPr and EA;
 - Roles and responsibilities;
 - Mitigation measures applicable to their functions on site; and
 - Potential penalties for non-compliance.

The Environmental Awareness Plan must take into account the preferred language of the employees on site and must be presented in a language that they will understand.

4 AUDITING

The key to the successful implementation of the EMPr is appropriate monitoring and review to ensure effective functioning of the EMPr and to identify and implement corrective measures in a timely manner. In the event where discrepancies are identified, the problem must be investigated and attended to. All the results obtained during environmental monitoring must be documented for audit purposes.

An audit of the environmental monitoring and management actions undertaken is essential to ensure that it is effective in operation, is meeting specified goals, and performs in accordance with relevant regulations and standards. Audits should be conducted during the construction phase of the facility to ensure compliance with the management measures contained in the EMPr. The construction audit schedule is as follows:

- Monthly internal audits by the SHE representative / ECO;
- One post-construction audit by an independent external auditor; and
- Audits every five years of the overall compliance to the EA and EMPr conditions and recommendations for amendments for the remainder of the life of Tlios (Pty) Ltd feedlot.

The audits will incorporate the monthly reports submitted by the SHE Representative. The frequency of the operational phase audits may be increased should the findings of the audits find that the conditions of the EMPr and EA are not being complied with.

5 EMPr AMENDMENT

Amendments to the EMPr may be required as the project proceeds. The EMPr must be reviewed annually during the operational phase and any proposed amendments to the EMPr, as may be specified in the audit reports, must be confirmed with the Developer prior to being issued as a formal amendment application to DESTEA. Copies of the amendments will be issued to all registered I&APs.

Appendices

Appendix A: CV of the EAP

