DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME:

EXPANSION OF THE EXCELSIOR ABATTOIR - KURUMAN

21 JUNE 2023

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environmental

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DOCUMENT CONTROL	
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DECLARATION OF INDEPENDENCE

I, Lizette Kloppers, in my capacity as Environmental Assessment Practitioner, hereby declare that I –

- Act as an independent consultant;
- Do not have any business, financial, personal or other interest in the activity or application in respect of which I have been appointed in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) other than fair remuneration for the work performed; and
- That there are no circumstances that may compromise my objectivity in performing the work that I have been appointed for.

Lizette Kloppers (Pr.Sci.Nat.)
Environmental Assessment Practitioner
SACNASP Reg. No. 115453
EAPASA Reg No. 2019/767

2023-06-15
Date

LIST OF ACRONYMS

BA	**Basic Assessment**
CA	**Competent Authority**
CBD	**Central Business District**
CSA	**Constitution of Republic of South Africa, 1996 (Act 108 of 1996)**
DAEARDLR	**Department of Agriculture, Environmental Affairs, Rural Development and Land Reform**
EA	**Environmental Authorisation**
EAP	**Environmental Assessment Practitioner**
ECO	**Environmental Control Officer**
EIA	**Environmental Impact Assessment**
EMPr	**Environmental Management Programme**
ESM	**Environmental Site Manager**
Ha	**Hectares**
HCP	**Hygiene Control Programs**
HMS	**Health Management System**
I&APs	**Interested and Affected Parties**
NCNCA	**Northern Cape Nature Conservation Act, 2009 (Act 9 of 2009)**
NEMA	**National Environmental Management Act, 1998 (Act 107 of 1998)**
NEM:AQA	**National Environmental Management, Air Quality Act, 2004 (Act 39 of 2004)**
NEM:BA	**National Environmental Management: Biodiversity Act, 1998 (Act 10 of 2004)**
NEM:WA	**National Environmental Management: Waste Act, 2008 (Act 59 of 2008)**
NHRA	**National Heritage Resources Act, 1999 (Act 25 of 1999)**
NNS	**National Norms and Standards**
NWA	**Nation Water Act, 1998 (Act 36 of 1998)**
OHSA	**Occupational Health and Safety Act, 1993 (Act 85 of 1993)**
POPIA	**Protection of Personal Information Act, 2013 (Act 4 of 2013)**
PPP	**Public Participation Process**
SDS	**Safety Datasheet**
SOP	**Standard Operating Procedures**
WCMR	**Waste Classification and Management Regulations**

1. INTRODUCTION

1.1 PROJECT TITLE

Environmental Authorisation Application: Expansion of the Excelsior Abattoir – Kuruman.

1.2 APPLICANT DETAILS

Table 1: Applicant details

Applicant	Excelsior Abattoir CC
Contact Person	Rianes de Klerk
Physical Address	Erf 4051 and 4052, Kuruman
Postal Address	P.O. Box 1110, Kuruman
Telephone Number	083 285 1910
Email	rianes@vodamail.co.za

1.3 ENVIRONMENTAL ASSESSMENT PRACTITIONER DETAILS

Table 2: EAP details

EAP	EARTHnSKY Environmental (Pty) Ltd.
Contact Person	Lizette Kloppers
Postal Address	PO Box 5419, Rietvalleirand, 0174
Telephone Number	061 524 2211
Fax Number	086 552 6837
Email	lizette@earthnsky.co.za / lizette.earthnsky@gmail.com
Qualifications of the EAP	MSc Environmental Management – University of London External Programme; More than 12 years' experience as an EAP
Professional affiliation/registration	SACNASP Reg. No. 115453; EAPASA Reg No. 2019/767 EAP's Curriculum Vitae is attached to this report under Annexure A.

2. PROJECT PARTICULARS AND AFFECTED ENVIRONMENT

The Applicant, Excelsior Abattoir CC, has appointed EARTHnSKY Environmental (Pty) Ltd. in terms of Regulation 12 of the Environmental Impact Assessment Regulations, 2014, as amended, as the independent Environmental Assessment Practitioner (EAP) for the application for Environmental Authorisation (EA) for the following project: Expansion of the Excelsior Abattoir – Kuruman.

The listed activities associated with the Application is listed in Table 3 below.

Table 3: Listed activities

Listed activity as described in GN R.327 and 324.	Description of project activity that triggers listed activity
GNR 983 of 4 December 2014, as amended, Activity Number 38: The expansion and related operation of facilities for the slaughter of animals where the daily product throughput will be increased by more than— (ii) 6 units of reptiles, red meat and game.	Expansion of the existing Excelsior Abattoir to increase the cattle (red meat) slaughtering capacity from 50 to 200 cattle per day. The expansion will include internal changes to the existing abattoir as well as the expansion of the abattoir building to accommodate an additional cold storage room with three product loading bays. The main abattoir building will be extended to the north-west and south-west. The total infrastructure expansion area will be approximately 430m^2.

The EA application process requires the compilation of an EMPr. This EMPr has been compiled in terms of Section 24N (2) of NEMA and Appendix 4 of the EIA Regulations, 2014 (as amended). The EMPr becomes a legally binding document on the Applicant, should the EA be issued, in addition to other conditions stipulated in the Environmental Authorisation/record of decision. The EMPr remains a live document and makes provision for updating and finalisation during the detailed design and planning phase, and incorporation of any comments received during the Public Participation Process (PPP).

2.1 LOCATION AND NATURE OF THE PROPOSED PROJECT

The site is East of the R31 (Voortrekker Street) in Kuruman, approximately 1.6km to the South of the CBD of Kuruman. The site falls within the municipal boundaries of the Ga-Segonyana Local Municipality and John Taolo Gaetsewe District Municipality, Northern Cape Province.

The property for the proposed expansion and its associated activities is as follows:

- Properties: Erf 4051 and 4052, Kuruman.
- Property GPS coordinates 27°28'31.08"S; 23°26'37.32"E
- Property size: 65.8340Ha

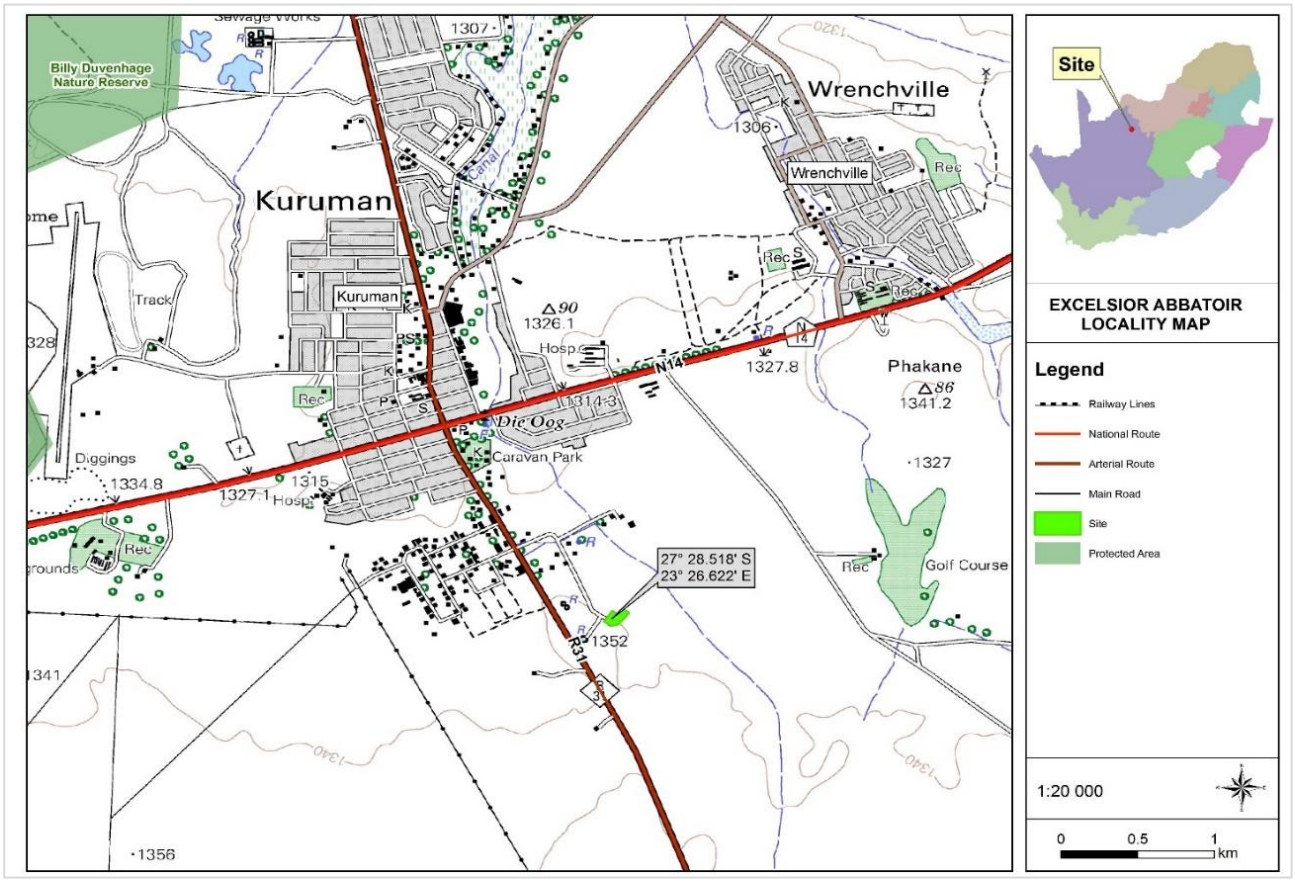


Figure 1: Excelsior Abattoir Locality

The project scope entails the expansion of the existing Excelsior Abattoir to increase the cattle (red meat) slaughtering capacity from 50 to 200 cattle per day. The expansion will include internal changes to the abattoir as well as the expansion of the abattoir building to accommodate an additional cold storage room with three product loading bays etc (Refer to Figure 2 below). The main abattoir building will be extended to the north-west with the following infrastructure:

- Chiller
- Order make-up area (chilled area)

- Air lock
- Two carcass dispatch bays
- One box dispatch bay

The main abattoir building will be extended to the south-west with the following infrastructure:

- Deboning facility
- Chiller/ refrigeration
- Boxing area
- Freezer store

The total infrastructure expansion area will be approximately 430m^2. Refer to Annexure B – Site Layout Plan.

The operational process of the abattoir currently entails the transportation of animals to the holding pens of the abattoir via trucks and contained within a demarcated area, whereafter the animals are moved into the processing facility. The abattoir is mainly divided into two different areas, i.e. dirty and clean areas. Within the dirty area, the slaughtering takes place and all blood within this area is collected and transported off site for composting. Animal hides, heads, stomach etc., are removed and water used to clean this area is diverted to the municipal sewage treatment system. In the dedicated clean areas, carcasses are stored in chillers until being transported off-site and sold to 3rd parties. Offal is also processed, packaged and kept in chillers prior to being sold and taken off-site. Animal hides are temporarily stored and salted in a dedicated storage area before being sold and taken off-site. The abattoir also has the capacity to slaughter 300 sheep per day.

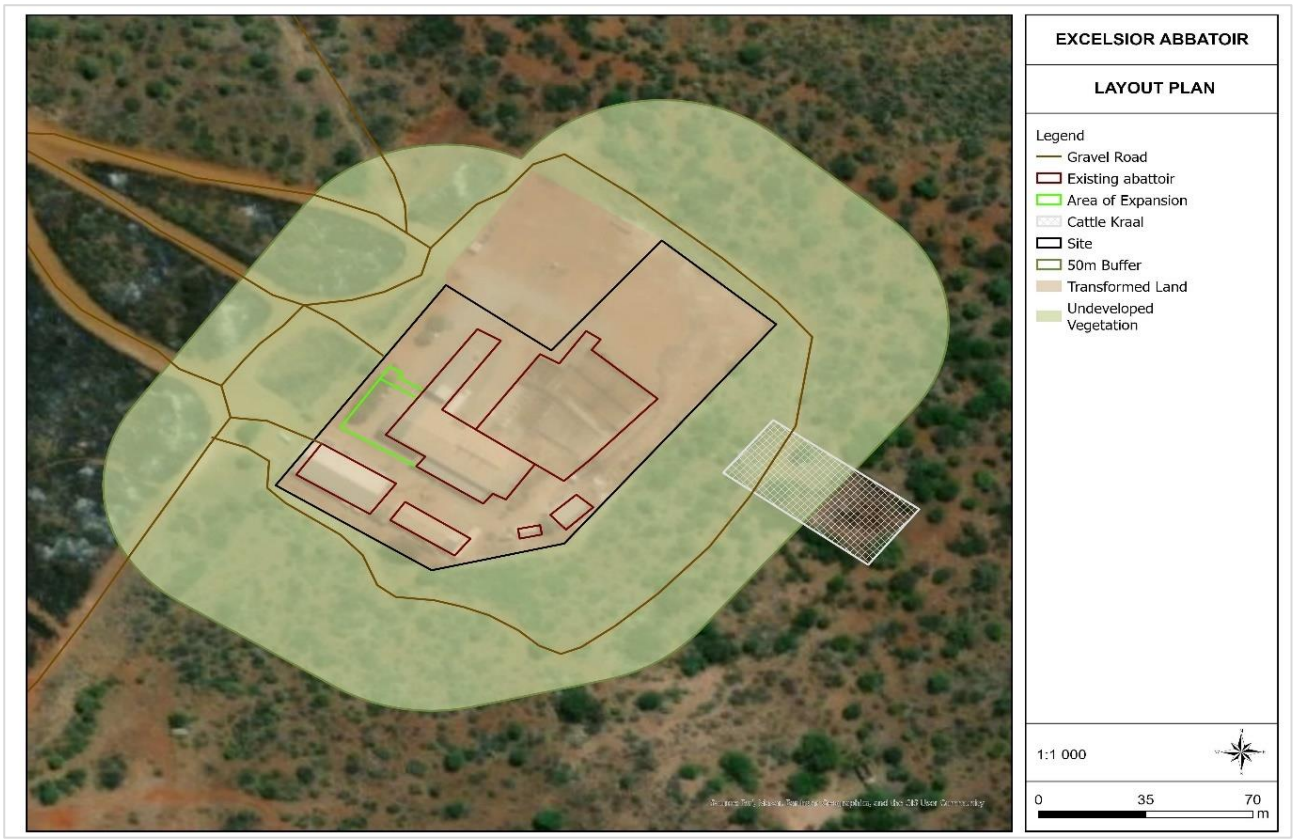


Figure 2: Excelsior Abattoir Layout Plan

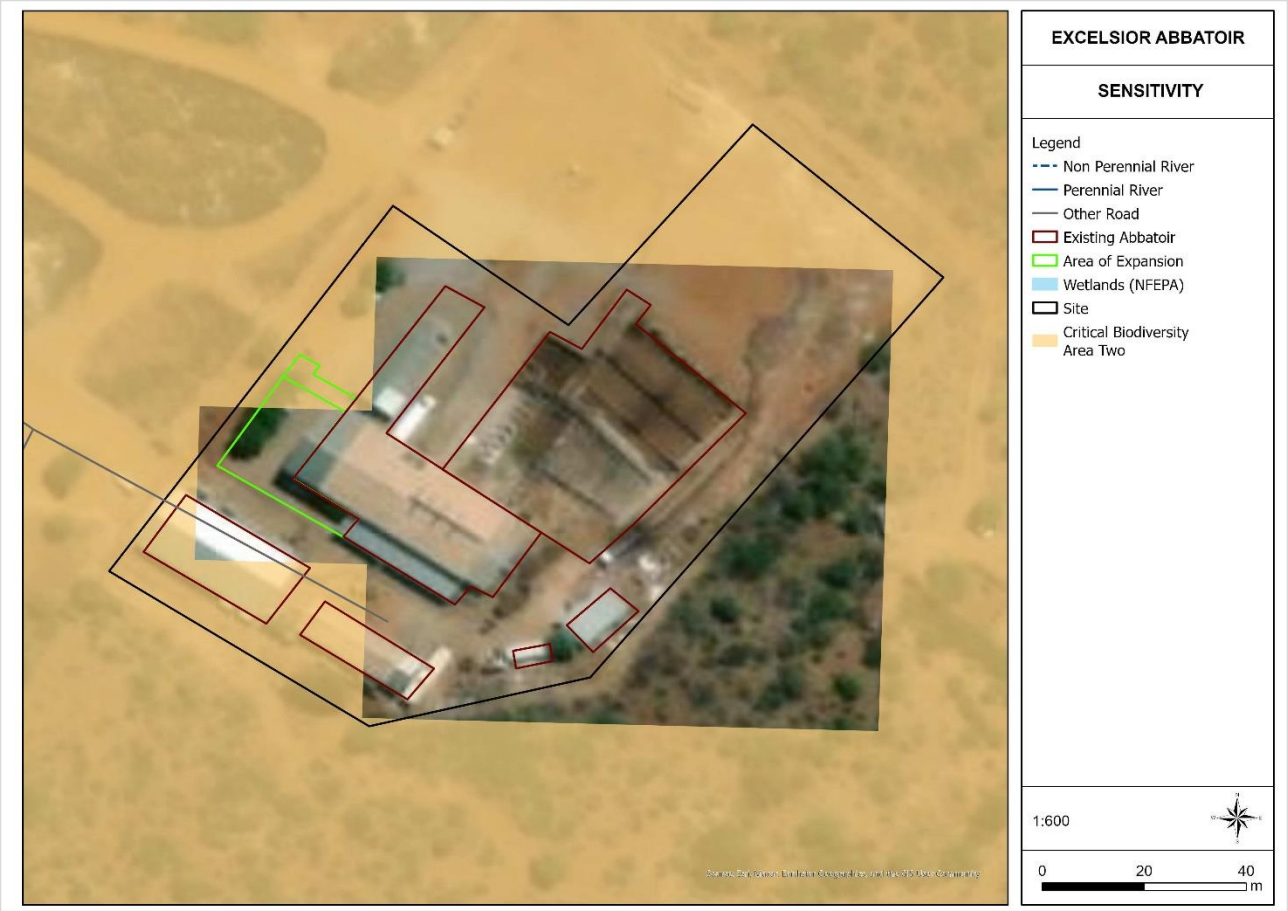


Figure 3: Environmental Sensitivity Map of the project site

2.2 SUMMARY OF POTENTIAL IMPACTS

A number of potential environmental impacts have been identified during the Basic Environmental Impact Assessment (BA) process and site investigation. Although not all the potential impacts identified are relevant to the construction and operational phase, there are some key issues that have been raised and that will require particular attention during the construction and operational phase of the abattoir expansion and operations. Discharges and wastes generated from abattoirs can impact the environment and good management practices are required. Wastes are generated from:

- Lairage and animal pens;
- Bleeding and stunning;
- Carcass processing and cleaning;
- Offal and by-product processing; and
- Wastewater.

Tables 3 and 4 below detail the impacts and risks identified for the construction and operational phases as a result of the proposed expansion.

Table 3: Impact assessment (construction phase)

ASPECT AND NATURE OF POTENTIAL IMPACTS		IMPACT SIGNIFICANCE BEFORE MITIGATION	IMPACT SIGNIFICANCE AFTER MITIGATION
SOIL	Soil pollution (diesel, oil etc.) and compaction	**Low (-)**	**Low (-)**
SOIL	Soil erosion and sedimentation	**Low (-)**	**Low (-)**

ASPECT AND NATURE OF POTENTIAL IMPACTS		IMPACT SIGNIFICANCE BEFORE MITIGATION	IMPACT SIGNIFICANCE AFTER MITIGATION
FAUNA	Accidental disturbance of small fauna such as snakes, lizards, frogs etc.	**Low (-)**	**Low (-)**
SOCIO-ECONOMIC	Job opportunities for local community.	**Medium (+)**	N/A
GROUND AND SURFACE WATER	Ground and surface water pollution through accidental spills and leaks from any equipment as well as the improper storage of fuels and chemicals, inadequate hazardous waste disposal or the mixing of cement / concrete.	**Medium (-)**	**Low (-)**
GROUND AND SURFACE WATER	Stormwater pollution through accidental spills and leaks from any equipment as well as the improper storage of fuels and chemicals, inadequate hazardous waste disposal or the mixing of cement / concrete.	**Medium (-)**	**Low (-)**
HEALTH AND SAFETY	Unsafe working conditions leading to worker health and safety risks.	**Low (-)**	**Low (-)**
AIR QUALITY	Dust pollution and nuisance to workers and community.	**Low (-)**	**Low (-)**
WASTE	Incorrect storage, handling and disposal of general and hazardous waste generated.	**Medium (-)**	**Low (-)**
NOISE	Temporary increase in noise levels during the site preparation and construction activities.	**Low (-)**	**Low (-)**
TRAFFIC	Temporary increase in traffic levels during the site preparation and construction activities.	**Medium (-)**	**Low (-)**
HERITAGE RESOURCES	Impact on archaeological and heritage resources during excavating, drilling, clearing or digging activities.	**Low (-)** *Rating as per specialist report (2023)	**Low (-)** *Rating as per specialist report (2023)
PALEONTOLOGICAL RESOURCES	Impact on fossils during excavating, drilling, clearing or digging activities.	**Low (-)** *Rating as per specialist report (2023)	**Low (-)** *Rating as per specialist report (2023)

Table 4: Impact assessment (operational phase)

ASPECT AND NATURE OF POTENTIAL IMPACTS		IMPACT SIGNIFICANCE BEFORE MITIGATION	IMPACT SIGNIFICANCE AFTER MITIGATION
ODOUR	Unwanted odours emanating from abattoir could include odours from urine and manure in holding pens, blood residues, or disposal of animal waste.	**Medium (-)**	**Low (-)**
SOCIO-ECONOMIC	Job opportunities for local community.	**High (+)**	N/A
SOCIO-ECONOMIC	Business growth of cattle farmers as a result of access to the market (off-set)	**High (+)**	N/A

WASTE	The improper disposal of the respective abattoir wastes generated.	**Medium (-)**	**Low (-)**
HEALTH AND SAFETY	Unsafe working conditions leading to worker health and safety risks.	**Medium (-)**	**Low (-)**
TRAFFIC	Minor increase in traffic and from the site.	**Medium (-)**	**Low (-)**

3. OBJECTIVES AND TERMS OF REFERENCE OF THE EMPR

This Environmental Management Programme (EMPr) has been compiled to provide recommendations according to which construction and operational activities of the proposed development have to be undertaken. The EMPr ensures that sound environmental practices are abided to throughout the construction and operational phases of the proposed development. The EMPr makes recommendations which must be implemented by all responsible parties and staff. It informs all relevant parties and staff of their responsibilities and legal obligations specifically relating to management and mitigation of potential environmental impacts.

The objectives of the EMPr are to:

- Ensure compliance with regulatory authority stipulations and legislation which may be local, provincial, national and/or international;
- Ensure that there is sufficient allocation of resources on the project budget so that the scale of EMPr related activities (mitigation measures) are consistent with the significance of the project's impacts;
- Verify environmental performance through information on impacts as they occur;
- Respond to unforeseen events;
- Provide feedback for continual improvement on environmental performance;
- Identify a range of mitigation measures which could reduce and mitigate the potential impacts to minimal or insignificant levels;
- Detail specific actions deemed necessary to assist in mitigating the environmental impact of the project;
- Identify measures that could optimise beneficial impacts;
- Create management structures that addresses the concerns and complaints of the I&APs with regard to the development;
- Establish a method of monitoring and auditing of environmental management practices during all phases of the development;
- Ensure that safety recommendations are complied with; and
- Specify time periods within which mitigation measures contemplated in the final EMPr should be implemented, where appropriate.

3.1 FORMAT AND STRUCTURE OF REPORT

This EMPr has been compiled in accordance with the requirements of Regulation 23 (4) (Appendix 4) of the NEMA EIA Regulations, 2014 (as amended).

Table 5: EMPr – Regulation 23 (4)

Requirement of the EIA Regulations	*Report compliance*
4 (a) Details of: *(i) The EAP who prepared the EMPr; and* *(ii) The expertise of the EAP to prepare an EMPr, including a curriculum vitae;*	Table 1 in Section 1.3
4 (b) A detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Tables 3 and 4 Section 2.2
4 (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 should be avoided, including buffers;	Figure 1 and 2 in Section 2.1. Layout Plan in Annexure B.
4 (d) A description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including- *(i) Planning and design;* *(ii) Pre-construction activities* *(iii) Construction activities* *(iv) Rehabilitation of the environment after construction and in the case of a closure activity, closure; and* *(v) Where relevant, operation activities;*	Tables 3 and 4 Section 2.2 Sections 5 and 6 **Closure activities are not applicable**
4 (f) A description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to– (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;	Section 6
4 (g) The method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 6
4 (h) The frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 6
4 (i) An indication of the persons who would be responsible for the implementation of the impact management actions;	Section 6
4 (j) The time period within which the impact management actions must be implemented;	Section 6
4 (k) The mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Section 6 & 8
4 (l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;	Section 6 & 8
4 (m) An environmental awareness plan describing the manner in which- *1. The applicant intends to inform his or her employees of any environmental risks which may result from their work; and* 2. *Risk must be dealt with in order to avoid pollution or the degradation of the environment*	Section 7
4 (n) any specific information that may be required by the competent authority.	None required as yet

4. LEGISLATIVE CONTEXT

All management and mitigation measures stipulated in the EMPr must comply with relevant national and provincial legislation, and regulations. Section 28 of NEMA places a duty of care on all individuals in terms of the protection of the environment, prevention of pollution and mitigation of negative environmental impacts. Table 5 lists the key legislation which has relevance to the proposed expansion project. It should be noted that only the most relevant legislation is listed in the table below and does not exempt parties from complying with any other legislation that may have relevance to this project.

Table 6: Legislative framework

ACT, POLICY, REGULATION, BY-LAW	SECTION / REGULATION	DESCRIPTION	APPLICABILITY TO THE ACTIVITY
Constitution of the Republic of South Africa (Act no. 108 of 1996) [as amended]	S 24	*"Everyone has the right-* *(a) To an environment that is not harmful to their health or well-being; and* *(b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-* *(i) Prevent pollution and ecological degradation;* *(ii) Promote conservation; and* *(iii) Secure ecologically sustainable development and use of natural resources while promoting a justifiable economic and social development"* (Republic of South Africa, 1996).	The Applicant has the overall responsibility to prevent pollution and ecological degradation throughout the life cycle of the project and to protect the environment for the benefit of natural resources for present and future generations. All stages of the project will be managed in accordance with a detailed EMPr as well as the conditions of the relevant authorisations/ permits. The objectives of the EMPr are to: • Ensure compliance with regulatory authority stipulations and guidelines which may be local, provincial, national and/or international; • Ensure that there are sufficient allocation of resources on the project budget so that the scale of EMPr related activities (mitigation measures) are consistent with the significance of the project's impacts; • Verify environmental performance through information on impacts as they occur; • Respond to unforeseen events; • Provide feedback for continual improvement on environmental performance; • Identify a range of mitigation measures which could reduce and mitigate the potential impacts to minimal or insignificant level;

ACT, POLICY, REGULATION, BY-LAW	SECTION / REGULATION	DESCRIPTION	APPLICABILITY TO THE ACTIVITY
			• Detail specific actions deemed necessary to assist in mitigating the environmental impacts of the project; • Identify measures that could optimise beneficial impacts; • Create management structures that addresses the concerns and complaints of the I&APs with regards to the development; • Establish a method of monitoring and auditing of environmental management practices during all phases of the development; • Ensure that safety recommendations are complied with; and • Ensure to keep to specific time periods within which the measures contemplated in the final EMPr should be implemented, where possible.
National Environmental Management Act 107 of 1998 (NEMA) and the Environmental Impact Assessment Regulations (2014) (as amended)	S28 S24	NEMA places a general duty of care on any person who causes pollution, to take reasonable measures to prevent such pollution from occurring. Section 24 provides for environmental authorisations. The environmental impact of listed activities has to be considered, investigated, assessed and reported to the competent authority (CA). No person may commence with an identified activity without prior Environmental Authorisation from the CA (Section 24F).	The Applicant has the overall responsibility to prevent pollution throughout the life cycle of the project. All stages of the project will be managed in accordance with a detailed EMPr as well as the conditions of the relevant authorisations/permits. The Applicant is undertaking a Basic Assessment Environmental Authorisation Process in accordance with the requirements defined in the EIA Regulations (2014). Should the CA issue the EA, the Applicant shall ensure compliance with the conditions and requirements of the EA and EMPr.
National Heritage Resources Act, 1999 (No. 25 of 1999)	S5 S6 S34	General principles for heritage resources management. Principles for management of heritage resources. Structures.	The Applicant has the responsibility to manage and conserve the national estate including archaeology, palaeontology, meteorites, structures and burial grounds and graves. During construction all operations should be halted should any of the said heritage resources be encountered.

ACT, POLICY, REGULATION, BY-LAW	SECTION / REGULATION	DESCRIPTION	APPLICABILITY TO THE ACTIVITY
	S35 S36 S38	Archaeology, palaeontology and meteorites. Burial grounds and graves. Heritage resources management (Republic of South Africa, 1999).	
National Environmental Management: Air Quality Act 39 0f 2004 (NEM:AQA)	S 32 S 34 S35	Control of dust. Control of noise. Control of offensive odours (Republic of South Africa, 2004a).	The Applicant must comply with the relevant standards, regulations and requirements of NEM:AQA relating to the sale of controlled fuels, dust pollution, noise pollution and offensive odours.
National Noise Control Regulations, 1998 (PN 627)	S 3 S4 S5	General prohibition. Prohibition of disturbing noise. Prohibition of noise nuisance (Republic of South Africa, 1989).	The Applicant must ensure that noise pollution during all phases of the proposed development is avoided and managed as far as practically possible. The Applicant must ensure that no construction equipment is used outside of the stipulated hours as per these Regulations.
National Water Act, 1998 (Act No. 36 of 1998) [as amended]	S 19 S20 S21	Prevention of and remedying effect of pollution. Control of emergency incidents. Water use (Republic of South Africa, 1998c).	The responsibility of the protection of water resources lies with the Applicant. The contamination of storm water, surface water and groundwater must be avoided. Discharge into the natural environment must be in accordance with the relevant allowable limits. The Applicant must apply for an Integrated Water Use Licence if engaging in any listed Section 21 water use. Should the Competent Authority issue the IWUL the Applicant must ensure compliance with the conditions stipulated in the Licence.
National Environmental Management: Waste Act,	S 16 S17	General duty in respect of waste management.	Waste activities (generation, storage, recycling, re-use, recovery and disposal) during all phases of the proposed development must be

ACT, POLICY, REGULATION, BY-LAW	SECTION / REGULATION	DESCRIPTION	APPLICABILITY TO THE ACTIVITY
2008 (Act No. 59 of 2008) [as amended]	S 22 S26	Reduction, re-use, recycling and recovery of waste. Storage of general waste. Prohibition of unauthorized disposal. Littering (Republic of South Africa, 2008).	managed according to the requirements of NEM:WA and its Regulations.
Waste Classification and Management Regulations 2013 (R 634)	S5 S6 S7 S10 S13	Safety datasheets. Waste management: General. Waste treatment. Records of waste generation and management. Offenses and penalties (Republic of South Africa, 2013c).	The Applicant must ensure compliance with the requirements of these Regulations by managing all wastes as per the Regulations. Safety data sheets (SDS) must be prepared for all hazardous waste as stipulated in these Regulations as relevant.
Veld and Forest Fire Act, 1998 (No. 25 of 1998)	S12 S13 S17 S18	Duty to prepare and maintain firebreaks. Requirements for firebreaks. Readiness for firefighting. Actions to fight fires (Republic of South Africa, 1998b).	The Applicant will ensure compliance with the requirements of this Act by obtaining the necessary firefighting equipment and protective clothing. The Applicant will ensure that all staff are trained in the case of a fire emergency as per Section 17 of the Act.
Hazardous Substances Amendment Act, 1992 (No.53 of 1992)	S2 S3	Declaration of grouped hazardous substances. Sale of Group I and Group III, and letting, use, operation, application and installation of Group III hazardous substances. Licensing.	The Applicant must ensure to handle, sell and store hazardous substances during the construction and operational phases in accordance with this Act.

ACT, POLICY, REGULATION, BY-LAW	SECTION / REGULATION	DESCRIPTION	APPLICABILITY TO THE ACTIVITY
	S4 S16	Liability of employer or principle (Republic of South Africa, 1992).	
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) (OHSA) [as amended]	S8 S9 S13 S14	General duties of employers to their employees. General duties of employers and self-employed persons to persons other than their employees. Duty to inform. General duties of employees at work (Republic of South Africa, 1993).	It is the responsibility of the Applicant to provide for the health and safety of persons at work and for the health and safety of persons on site, the protection of persons other than persons at work, against hazards to health and safety arising out of or in connection with the activities of persons at work. All employees and contractors must be informed of the hazards attached to their health and safety with regards to any work performed. Necessary training and induction must be conducted at regular intervals.
National Environmental Management: Biodiversity Act, 2004 (No. 10 of 2004)	S52 S57 S65 S69 S71 S73 S75	Ecosystems that are threatened or in need of protection. Restricted activities involving listed threatened or protected species. Restricted activities involving alien species. Duty of care relating to alien species. Restricted activities involving listed invasive species. Duty of care relating to listed invasive species. Control and eradication of listed invasive species (Republic of South Africa, 2004b).	The Applicant must ensure to protect biological diversity within the Republic of South Africa and eradicate and manage alien invasive species as per this Act.
National Environmental Management :Biodiversity	S2	Category 1a Listed Invasive Species.	The Applicant will ensure compliance with these Regulations by managing and eradicating Invasive species as per the Regulations.

ACT, POLICY, REGULATION, BY-LAW	SECTION / REGULATION	DESCRIPTION	APPLICABILITY TO THE ACTIVITY
Act: Alien and Invasive Species Regulations R598 of 2014	S3 S4 S5 S6	Category 1b Listed Invasive Species. Category 2 Listed Invasive Species. Category 3 Listed Invasive Species. Restricted activities (Republic of South Africa, 2014b).	
Promotion of Access to Information Amendment Act, 2002 (Act No. 2 of 2000)	S9	Objectives of the Act (Republic of South Africa, 2000).	It is the responsibility of the Applicant to give effect to the constitutional right of access to any information as required.
Red Meat Regulations, No. 1072, 17 September 2004	S119	Guidelines for the abattoir industry on how to meet food safety standards - spesifcally the disposal of condemned material.	The Applicant shall ensure that all operations are undertaken in terms of the specific requirements. Specific relevance as to how to deal with the disposal of condemned material.
Meat Safety Act, 2000 (Act No. 40 of 2000).	S 11	Establish and maintain essential national standards in respect of abattoirs.	The Applicant shall ensure that all operations are undertaken in terms of the specific requirements.
Animal Diseases Act, 1984 (Act no. 35 of 1984)	All	Provides for the control of animal diseases and parasites, for measures to promote animal health and for matters connected with this. It also regulates disposal of straying and diseased animals and animal carcasses.	The Applicant shall ensure that all operations are undertaken in terms of the specific requirements.
Northern Cape Nature Conservation Act 9 of 2009 (NCNCA)	Schedule 1 – 3	Listing protected and specially protected species for which authorisation must be obtained if they are to be impacted upon.	The Applicant shall obtain the necessary permits as and when required.

5. IMPLEMENTATION OF THE EMPR

The EMPr details a variety of management measures that will serve to mitigate the scale, intensity, duration or significance of the potential impacts associated with the proposed expansion. The EMPr has been compiled to provide recommendations and guidelines according to which compliance monitoring can be undertaken during the construction and operational phases of the proposed development. The EMPr informs all relevant parties and all other staff employed on site as to their duties in the fulfilment of the legal requirements during all the phases of the proposed development, with particular relevance to the prevention and mitigation of anticipated potential environmental impacts.

5.1 ROLES AND RESPONSIBILITIES

The Applicant is responsible for the implementation of the EMPr and for internal compliance monitoring of the EMPr. The EMPr will be made binding on all contractors operating on the site and will be included in the official contract documentation of each of the principal contractors to be appointed. The Applicant must appoint an internal Environmental Site Manger (ESM), to uptake the duties of internal Environmental Control Officer (ECO), who will monitor and facilitate compliance with the EMPr and other conditions of approval as they relate to environmental matters in the construction and operational phase of the development. Details of the management and implementation structures for this EMPr, as applicable to the construction and operational phases showing official communication and reporting lines (including instructions, directives and information), are presented in Figure 3 and Table 7.

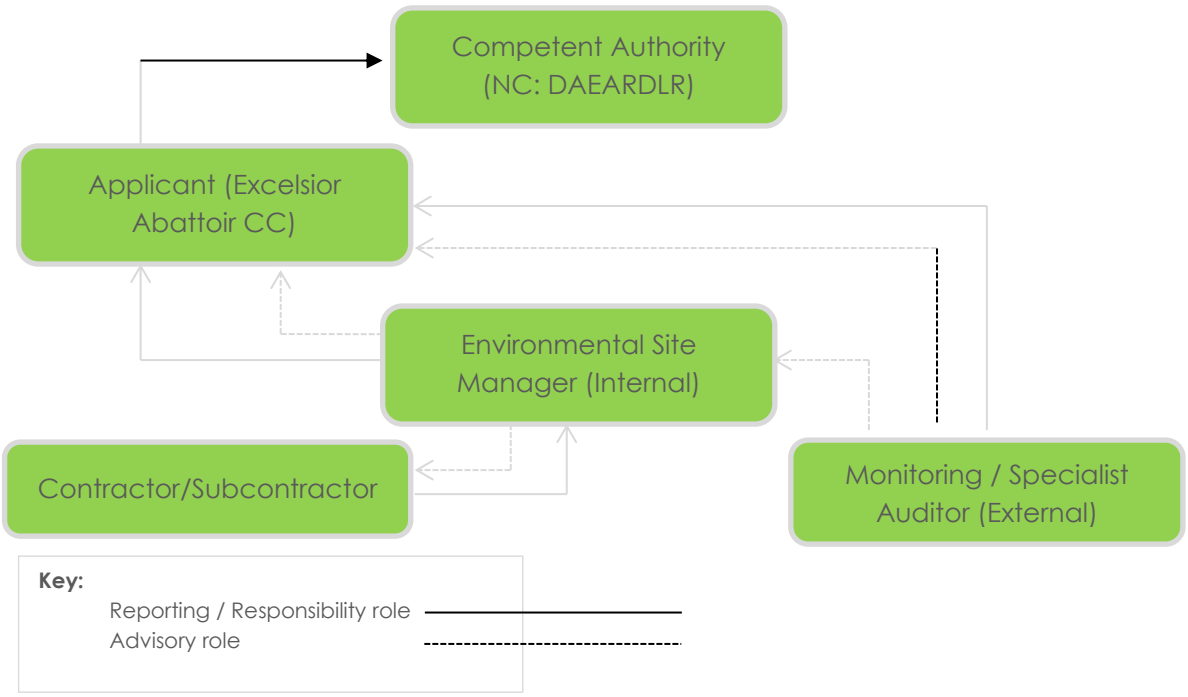


Figure 4: Roles and responsibilities

Table 7: Roles and responsibilities

Stakeholder / Party	Responsibilities
Competent Authority	DAEARDLR is the authority responsible for: • Provide comments on the BAR and EMPr; • Assessing the Basic Assessment (BA); • DAEARDLR has the overall responsibility for ensuring that the Applicant complies with the conditions of the EA, and EMPr; • Approval of any amendments to the EMPr (if required); and • Performing random site inspections to confirm compliance with all licenses and management thereof.
Applicant	The Applicant must: • Ensure compliance with the EMPr, and conditions of the EA if/when issued by DAEARDLR; • Ensure that all applicable and relevant permits and authorisations are obtained before commencement of construction; • Appoint an internal ESM prior to the commencement of construction activities; • Ensure that there are sufficient resources (financial, time, human) to manage and monitor the environmental impacts related to the construction and operational phases; • Ensure that all contractors are appropriately briefed prior to the commencement of any work on site and that their appointment includes environmental requirements as relevant; • Ensure that he/she is kept fully informed of the performance of the project against the requirements of the EMPr, and EA; • Ensure that corrective action is taken to rectify non-compliances according to the EA / EMPr as required; • Ensure that any proposed changes to the operations are communicated in writing to the Authorities and should such changes require amendments to the EA / EMPr it be done accordingly; • Give written notice to DAEARDLR prior to the commencement of construction and operation on site; • Provide any party (as requested / required) with a copy / access to the EMPr, and EA (including monitoring and audit reports); and • Keep hardcopies of the EMPr, and EA on site at all times.
Environmental Site Manager (Internal)	The ESM's responsibilities include the following: • Facilitation and monitoring (weekly) of compliance with the EMPr requirements, including the EA conditions; • Act as an advisor to the construction contractor on environmental issues during preparation and construction; • Training of staff and contractors, and to raise awareness on environmental requirements and aspects relating to the site and onsite activities; • Record keeping of environmental incidents/issues on site; • Upkeep of complaints register; • Ensure that all environmental incidents reported are dealt with timeously and effectively; • Completing start-up and site closure checklists; • Completing a monthly summary report detailing levels of compliance; and • Keeping a photographic record of progress on site from an environmental perspective for the ECO (external).

Stakeholder / Party	Responsibilities
Contractor	Contractors are required to: • Prepare site specific method statements in line with the EMPr, and conditions of the EA (as required); • Be conversant with the requirements of the EMPr, and EA; • Brief workers regarding any environmental requirements; • Bear the costs of any damages/compensation resulting from non-adherence to the EMPr or written site instructions (as specified in the contractor agreement); • Comply with all applicable legislation; • Keep record of any complaints raised by the public and record any comments and responses, in response to the complaints; • Inform the ESM of any incidents or complaints received; and • Conduct all activities in a manner that minimises disturbances to and impacts on the environment and surrounding residents.
Monitoring/Specialist Auditor /Environmental Control Officer (ECO) (External)	• Facilitation and monitoring of EMPr requirements and EA conditions; • Keeping a photographic record of progress on site from an environmental perspective; • Conduct regular site visits (as stipulated in the EA and EMPr) during the construction and operational phase to be able to report and respond to any environmental issues; • Report compliance and non-compliance issues to the CA as applicable; • Advise the Applicant on environmental issues; • Review incidents records that may pertain to the environment and reconcile the entries with the observations made during site inspection, monitoring and auditing; • Recommend corrective actions when required for aspects of non-compliance with the EMPr, and EA; and • Compile annual audit reports for submission to the CA as per the EA conditions.

6. MANAGEMENT SPECIFICATIONS AND MITIGATION MEASURES

6.1 PLANNING, DESIGN AND PRE-CONSTRUCTION PHASE

This EMPr is specific to the proposed development. The proposed environmental management and mitigation measures for the planning, design and pre-construction phases are collated in Tables 8 below.

Table 8: Planning, design and pre-construction phase mitigation and management measures

Legislative requirements		NEMA				
Objectives		To ensure effective planning and design so that environmental impacts during the planning, design and pre-construction phases can be minimised and/or avoided.				
Performance indicators		Overall compliance to the requirements of this EMPr and the EA (if issued).				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Planning for the abattoir expansion Ineffective planning of the abattoir expansion leading to avoidable environmental impacts.	Low (-)	1. The construction contractor must be provided with a copy of the Environmental Authorisation and Environmental Management Programme prior to commencing work on site. These documents must also form part of tender and contract documents for the contractor appointment, in order to ensure that the appointed contractor is aware of the environmental requirements to be implemented during the construction phase. 2. The applicant or construction contractor must ensure that all employees attend Environmental Awareness Training (the Environmental Awareness Plan that is contained in the EMPr for this project) prior to the construction activities commencing. Proof of training must be kept on record by the applicant. 3. The construction contractor must determine what Personal Protective	Low (-)	Before commencement of construction activities	Daily (internal ESM)	Monthly internal compliance reporting (ESM)

		Equipment (PPE) will be required for workers during the construction activities and the relevant PPE must be provided to workers. 4. Ways to cordon off or demarcate the construction area should be identified and implemented prior to construction activities commencing. This is to ensure that access to the area is restricted to workers involved in the construction activities and can include the erection of danger tape or a temporary fence or screen. Planning should also be undertaken for safety signage to be displayed at the construction area. This should be implemented before the construction activities commence. Signage indicating that the site is a "Construction Site", signage indicating the risks associated with the site, as well as emergency numbers must be displayed. 5. The construction contractor must determine the firefighting equipment requirements for the construction area and the relevant equipment must be present onsite before the construction activities commence. 6. The applicant must ensure that the appointed construction contractor is aware of the requirements for Safe Disposal Certificates to be obtained and provided to the applicant for all construction waste that will be removed from the site and disposed to landfill. 7. The applicant must ensure that the appointed construction contractor is				

		aware of the requirements for Waste Manifest Documents to be completed and provided to the applicant for all hazardous construction waste that will be removed from the site.				

6.2 CONSTRUCTION PHASE

This EMPr is specific to the proposed development. The proposed environmental management and mitigation measures for the construction phase are collated in Tables 9 – 16 below.

6.2.1 SOIL QUALITY

Table 9: Soil quality mitigation and management measures

Legislative requirements		NEMA S28 ,NEM:WA S16, & S27				
Objectives		Avoid soil contamination. Avoid soil erosion. Avoid soil compaction.				
Performance indicators		Zero spillages/waste contaminating soil on site. Minimal loss of topsoil.				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Soil Quality Contamination/ pollution of soil through the accidental spillage of hazardous substances, or waste on site.	Low (-)	**General** 1. All hazardous substances shall be stored within a demarcated area on site. 2. The hazardous substances storage area should be locked when not in use and equipped with adequate health safety signage, as required by relevant legislation and regulations. 3. All hazardous substances must be recorded in a hazardous material register.	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM) Monthly external compliance reporting (ECO). Upkeep of hazardous substances register (ESM).

		4. All hazardous substances must be stored in accordance with their SDS requirements. 5. All hazardous substances shall be stored in containers with lids, which are kept firmly shut to avoid spillage. 6. All containers must be kept in such a condition as to be reasonably safe from damage and to prevent leakage. 7. A SDS for all hazardous materials e.g. paints, thinners, oils, etc. must be kept on site and updated regularly. 8. Where bunds are used (if applicable), they should be able to contain 110% of the volume of the substance stored in the event spillages should occur. The bund should be fitted with a drainage control valve which is to remain closed except when the bund is being emptied. 9. Temporary storage of hazardous waste must be avoided insofar possible. 10. A designated bin for all hazardous waste must be made available on site. 11. Cement must be stored in appropriate structures with impermeable flooring. **Handling and decanting** 1. All excess hazardous chemicals, hydrocarbons and contaminated containers must be removed and collected by a certified hazardous waste removal company and disposed at a certified hazardous waste		As required	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM) Monthly external compliance reporting (ECO).

		disposal site (if applicable). A safe disposal certificate should be issued on disposal. 2. Should decanting be necessary the spill precaution as recommended on the SDS must be adhered to. 3. Decanting of liquids will only be done over drip trays. 4. Containers into which decanting is being done must be of the same material as the original substance container. 5. PPE as recommended on the SDS must be used when decanting hazardous substances. **Spillage incidents** 1. Development and implementation of emergency procedures to respond to the spillage of hydrocarbon based chemicals. 2. Hazardous chemical spill kits should be present and accessible on site at all times. 3. All construction materials prone to spillage are to be stored on appropriate structures with impermeable flooring. 4. All hazardous material spills must be cleaned up immediately. Where spills occur, compromised soil/vegetation shall be treated as hazardous waste and disposed of accordingly. 5. A register in which a record is maintained of the volume, nature, location, date, time and the clean-up action in the event of a spillage incident is to be kept on site.		As required	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM) Monthly external compliance reporting (ECO).

Physical soil characteristics Compaction of the soil surface due to heavy machinery. ***Soil erosion*** Soil erosion and sedimentation.		6. All construction vehicles, machinery and equipment must be maintained to prevent leaks. 7. Vehicles and machinery have to be repaired and serviced over drip trays. 8. Portable toilet facilities should be inspected once a week to prevent leakage or spillages into the natural environment. **Soil compaction** 1. No heavy machinery should be allowed on natural areas that fall outside the proposed development footprint. **Soil erosion** 1. Temporary storm water canals and cut-off trenches should be erected to adequately divert water away from the construction site and activities. 2. Netting should be erected around the construction site to prevent wind erosion. 3. Top soil and sub-soil stockpiles should be kept separated. 4. The top 20 cm of top soil should be preserved for rehabilitation and landscaping purposes. 5. The extent of exposed soils at any one time should be limited.		Immediately Immediately	Daily visual inspections (ESM) Monthly (ECO) Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO). Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).

6.2.2 GROUND- AND SURFACE WATER

Table 10: Storm water, surface water and groundwater quality/quantity mitigation and management

Legislative requirements		NEMA S28; NWA S19, S20; NEM:WA S16 & 27				
Objectives		Prevent contamination of clean storm water run-off from the site to prevent pollution of the receiving environments. Prevent localised flooding on site by ensuring that the storm water infrastructure are not impeded e.g. through sediment build up and debris and remains functional. Prevent surface water and ground water contamination.				
Compliance indicators		Stormwater infrastructure is visibly free of significant litter, sediment, oil, paint residues and other contaminants. The quality of the stormwater is in line with the relevant water quality limits. Surface and groundwater quality meets the national monitoring requirements and limits. Zero spillages on site.				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Storm water/ surface water and ground water quality Ground and surface water pollution through accidental spills and leaks from any equipment as well as the improper storage of fuels and chemicals, inadequate hazardous	Medium (-)	**General** 1. All hazardous substances shall be stored within a demarcated area on site. 2. The hazardous substances storage area should be locked when not in use and equipped with adequate health safety signage, as required by relevant legislation and regulations. 3. All hazardous substances must be recorded in a hazardous material register. 4. All hazardous substances must be stored in accordance with their SDS requirements. 5. All hazardous substances shall be stored in containers with lids, which are kept firmly shut to avoid spillage.	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO). Upkeep of hazardous substances register (ESM).

waste disposal or the mixing of cement / concrete. Stormwater pollution through accidental spills and leaks from any equipment as well as the improper storage of fuels and chemicals, inadequate hazardous waste disposal or the mixing of cement / concrete.		6. All containers must be kept in such a condition as to be reasonably safe from damage and to prevent leakage. 7. A SDS for all hazardous materials e.g. paints, thinners, oils, etc. must be kept on site and updated regularly. 8. Where bunds are used (if applicable), they should be able to contain 110% of the volume of the substance stored in the event spillages should occur. The bund should be fitted with a drainage control valve which is to remain closed except when the bund is being emptied. 9. Temporary storage of hazardous waste must be avoided insofar possible. 10. A designated bin for all hazardous waste must be made available on site. 11. Cement must be stored in appropriate structures with impermeable flooring. 12. Vehicles should be parked on impermeable surfaces as far as possible to prevent hydrocarbon spillages. **Handling and decanting** 1. All excess hazardous chemicals, hydrocarbons and contaminated containers must be removed and collected by a certified hazardous waste removal company and disposed at a certified hazardous waste disposal site (if applicable). A safe disposal certificate should be issued on disposal.		As required	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).

		2. Should decanting be necessary the spill precaution as recommended on the SDS must be adhered to. 3. Decanting of liquids will only be done over drip trays. 4. Containers into which decanting is being done must be of the same material as the original substance container. 5. PPE as recommended on the SDS must be used when decanting hazardous substances. **Spillage incidents** 1. Development and implementation of emergency procedures to respond to the spillage of hydrocarbon based chemicals. 2. Hazardous chemical spill kits should be present and accessible on site at all times. 3. All construction materials prone to spillage are to be stored on appropriate structures with impermeable flooring. 4. All hazardous material spills must be cleaned up immediately. Where spills occur, compromised soil/vegetation shall be treated as hazardous waste and disposed of accordingly. 5. A register in which a record is maintained of the volume, nature, location, date, time and the clean-up action in the event of a spillage incident is to be kept on site.		As required	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).

		6. All construction vehicles, machinery and equipment must be maintained to prevent leaks. 7. Vehicles and machinery have to be repaired and serviced over drip trays. 8. Portable toilet facilities (if on site) should be inspected once a week to prevent leakage or spillages into the natural environment. **Storm water** 1. Divert storm water run-off away from the construction site by erecting adequate storm water infrastructure. 2. All areas surrounding constructed infrastructure that have been subjected to soil compaction must be ripped if applicable. 3. Keep storm water infrastructure clear from littering or any other construction material. 4. Do regular maintenance on storm water infrastructure. 5. Where necessary, stone walls and gabions must be constructed. 6. Re-vegetation should take place as soon as practically possible.		Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).

6.2.3 BIODIVERSITY

Table 11: Biodiversity - fauna and flora management and mitigation

Legislative requirements	CSA S 24; NEMA S 28; NEMBA, NCNCA
Objectives	Limit disturbance to and impacts on natural vegetation (outside of the site) and listed protected species. Avoid / limit habitat and species loss. Avoid the spread of alien and invasive species.

		Avoid displacement of small fauna. Avoid removal of listed protected and specially protected species without permit.				
Compliance indicators		Natural areas outside the development footprint are not disturbed. No evidence of hunting or snares on site. Eradication of all alien and invasive species found onsite. Permits and licenses in place and complied with as and when required.				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Disturbance or destruction of flora outside of the site (no natural vegetation remaining at the site).	Low (-)	**Flora** 1. Ensure that workers do not unnecessarily trample vegetation outside of the demarcated construction footprint and veld. 2. Any areas which are marked with a high sensitivity value should be avoided and no unnecessary movement in these areas should occur. 3. The development footprint of infrastructure should be kept to a minimum. 4. Collection of firewood, plants and lighting fires on the site and adjacent natural areas are not allowed. 5. No listed threatened and protected may not be removed without a permit. 6. Any alien plants - Category 1b and 3 - must be removed.	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).
Accidental disturbance of small fauna		**Fauna**		Immediately	Daily visual inspections (ESM)	Monthly internal compliance reporting (ESM).

such as snakes, lizards, frogs etc.		7. Ensure that no form of hunting, poaching, snaring or trapping of animals takes place within the site or surrounding areas. 8. The fence surrounding the construction site must be checked regularly for trapped animals. 9. Snare register should be developed. 10. Keep to the demarcated footprint as to avoid the unnecessary displacement of any small fauna. 11. Obtain permits for the removal of any listed protected and specially protected species in terms of NCNCA (if required).			Monthly (ECO)	Monthly external compliance reporting (ECO).

6.2.4 WASTE

Table 12: Waste management and mitigation

Legislative requirements		CSA S 24; NEMA S 28; NWA S19; NEM:WA S16, S17, S22, S26 & S27				
Objectives		To manage waste in a manner that prevents detrimental impacts to the environment and human health. Promote waste minimisation (reduction), reuse and recycling of waste generated on the site. Avoid littering and pollution. Ensure that all wastes are stored, handled and disposed of as per the regulatory requirements.				
Compliance indicators		No litter/illegal dumping visible anywhere on the site. Overall good housekeeping. No evidence of waste in storm water infrastructure. Responsible disposal of wastes and implementation of waste reduction, recycling and re use opportunities.				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Waste Incorrect storage,	Low (-)	**General housekeeping**	Low (-)	Immediately	Daily visual inspections (ESM)	Monthly internal compliance reporting (ESM).

handling and disposal of general and hazardous waste generated.		1. The site and surrounding areas are to be maintained in a clean, orderly, presentable condition at all times. 2. Burning and burying of waste on site is not permitted. 3. Waste stream identification and classification (if applicable). 4. All waste generated shall be separated into the relevant waste streams (i.e. general waste, hazardous waste; recyclables). 5. Compliance with SANS 10234 requirements shall be adhered to (as required). **Waste management (collection, storage and handling)** 1. A central waste storage and transition area shall be established and maintained; 2. This central waste storage and transition area shall be surfaced and adequately demarcated; 3. Portable wheelie bins shall be placed in demarcated areas; 4. Wheelie bins shall be colour coded and labelled to identify the waste stream for which it is intended. Colour coding is as follows: o General Waste _ Green (Waste type labelling) o Hazardous Waste _ Red (Waste type labelling) o Recyclables - White (Waste type labelling)		Immediately	Monthly (ECO) Daily visual inspections (ESM) Monthly (ECO)	Monthly external compliance reporting (ECO). Upkeep of waste SOP's. Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).

		5. All waste containers on-site (bins, skips, drums, etc.) will be clearly labelled to show which wastes can be disposed of into each bin. 6. The general waste (domestic) shall be removed and shall be disposed of at a licensed waste landfill site. 7. All hazardous waste shall be removed (within 30 days) by a licensed waste service provider and shall be disposed of at a licensed waste landfill site and records of safe disposal shall be supplied to the Applicant by the Contractor. **Waste specific management measures** *General Waste:* 1. All domestic waste generated shall be disposed of into specifically demarcated and labelled bins. 2. No staff shall be allowed to deposit waste / litter anywhere on the site except into the bins provided. 3. Under no circumstances shall domestic waste be dumped in any unauthorised landfill site / waste site. 4. Hazardous waste should be kept separate from general waste. *Building rubble:* 1. The Contractor shall ensure that the contractors camp and working areas are cleaned regularly.		Immediately	Daily visual inspections (ESM) Monthly (ECO)	Keep records of safe disposal by independent contractor (ESM) Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).

		2. Infilling of waste will be executed insofar possible. 3. Clean rubble shall be temporarily stockpiled in a waste skip / central stockpile (away from any drainage / sensitive areas) . *No plastics, shrink wrap, paint buckets or any other debris that does not constitute clean building rubble, shall be stored at such stockpile sites. *Timber:* 1. Should timber be generated from construction activities it must be collected and stored within the central waste storage/ transition area. 2. Wooden waste should not be mixed with other types of waste. 3. The timber shall be kept free of any water (rain) and other hazardous contamination. 4. The timber shall be collected and recycled insofar possible. *Scrap metal:* 1. All ferrous and non-ferrous scrap metal shall be separated at source and stockpiled in the waste storage area. 2. Scrap metal must not be mixed with other wastes. 3. Recycling of metal is encouraged. *Hazardous Waste:*				

		1. All hazardous waste generated shall be kept separate and shall not be mixed with general waste. 2. All hazardous waste shall be stored within a sealed drum on an impermeable surfaced area within the central waste storage and transition area. 3. All hazardous waste should have a SDS and such waste shall be disposed of as per the product SDS. 4. Hazardous waste shall be collected by a licensed waste service provider and be disposed of at a licensed landfill site with certificates of safe disposal and waste manifest documents. 5. The total quantity of hazardous waste stored at the site at any one time shall not exceed 80m^3. *Hazardous liquid oil:* 1. All used oil shall be stored in approved sealed containers. 2. All oil generated from the equipment shall be decanted into approved containers, returned to a central point designated for the correct storage of hazardous liquids and collected by an approved waste collection company. 3. Under no circumstances may any oil be released directly into the natural environment. The design, construction and operation of all equipment and facilities, required for the				

		effective collection, containment, control and disposal of used oil shall at all times comply with environmental legislation and standards to prevent pollution and/or contamination of the environment. 4. All oil storage areas shall be bunded in accordance with the SANS specifications: - Minimum requirements for the volumetric capacity of the containment area (SANS 10131:2004); - Design capacity (SANS 10089-1:2003); and - Building material used (SANS 10227). 5. Care shall be exercised when decanting old oil into containers to prevent spillages. *Hydrocarbons (petrol and diesel fuels):* 1. All redundant liquid types shall be placed in clearly marked, sealed containers, (preferably the containers the material was supplied in) and sent to the flammable store area prior to disposal. Redundant fuels shall be stored separately to prevent: • Chemical reaction or fires; • Toxic fumes/gases; and • Pollution to the environment. 2. Where possible, recycling should be implemented. 3. An authorised and permitted hazardous waste removal contractor shall remove all redundant fuels from the site to a permitted hazardous waste disposal site.				

6.2.5 AIR QUALITY – NOISE AND DUST

Table 13: Air Quality – Emissions, noise and dust management and mitigation

Legislative requirements		CSA S24; NEMA S28; NEM:AQA S32, S34, S35; National Noise Control Regulations S3, S4, S5				
Objectives		Prevent nuisance to surrounding land-users. Ensure sound environmental management of air quality. Management of fugitive dust sources.				
Compliance indicators		No records/complaints of excessive noise or dust creating a nuisance to surrounding members of the public. Compliance local regulations as applicable. No complaints of disruptive odours.				
Impact/ Aspect	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Noise Temporary increase in noise levels during the site preparation and construction activities.	Low (-)	**General** 1. Excessively noisy machinery must only be used during regular operating hours and not after hours, where possible. 2. Construction activities should only take place during normal working hours, as far as possible. 3. Any noise complaints received must be recorded in a complaints register. 4. The Contractor shall adhere to the local by-laws and regulations regarding the noise and associated hours of operations. 5. Noise levels should comply with the SANS Code of Practice 100103 - 0994. 6. Equipment should be fitted with noise reduction devices as far a reasonably possible. 7. A complaints register must be kept on site containing:	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO). Upkeep of complaints register (ESM).

		• Name of complainant • Physical address • Telephone number • Date and time of complaint 8. Provision of appropriate PPE. 9. Training of staff on the use of PPE and the dangers involved in excessive noise exposure.				
Dust Dust pollution and nuisance to workers and community.	Low (-)	1. Generation of dust shall be minimized and dust nuisance for the surrounding community shall be kept to a minimum wherever possible. 2. Reasonable measures must be undertaken to ensure that any exposed areas and material stockpiles (if any) are adequately protected against the wind. 3. Dust screens of a suitable height should be erected wherever possible. 4. All exposed surfaces should be minimised in terms of duration of exposure to wind. 5. Potable water shall not be used for the dust suppression of soil or sand stockpiles (if required). 6. Speed limits should be implemented to limit the amount of dust pollution. 8. All sand stockpiles must be covered (if possible). 9. Construction materials transported to site must be covered when necessary to prevent it from blowing off vehicles.	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO). Upkeep of complaints register (ESM).

6.2.6 HEALTH AND SAFETY

Table 14: Health and Safety: Fire and emergency management and mitigation

Legislative requirements		OHS S8, S9, S13 & S14				
Objectives		To facilitate efficient response to emergency situations that may arise on the site. Create a safe working environment for all workers on site. Train all contractors and employees on health and safety risks relevant to the construction phase.				
Performance indicators		No emergency incidents. No health concerns. No environmental emergencies occurring onsite.				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Health and Safety Unsafe working conditions leading to worker health and safety risks.	Low (-)	**Fire prevention** 1. Contractor/s shall take all reasonable and active steps to avoid increasing the risk of fire through their activities on site. 2. All workers (including sub-contractors) on-site will be made aware of possible fire risk associated with construction activities on site. 3. The Developer shall ensure that the basic fire-fighting equipment is available on site and to the satisfaction of the local firefighting services. 4. No fires for heating purposes shall be allowed. 5. The Contractor shall be liable for all costs incurred by the organisations sub-contracted to extinguish all fires started by any person(s) under their control.	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).

		Response to fire incidence on-site 1. An Emergency Plan (including Fire Protection, Response and Evacuation Plan) is to be prepared and conveyed to all staff on the site. This shall identify: - a fire marshal for the site; - all potential fire hazards; - fire-fighting equipment to be provided on site; - procedure in case of a fire; - a fire evacuation route and plan; and - emergency contact numbers. 2. Key staff members will be trained to deal with the control of fire-fighting equipment on site and to assist with evacuations as required. 3. All staff is to be familiar with the position of fire control equipment on site and response and evacuation procedures. This should be covered in the inductions for all new site staff and visitors. 4. In the case of a fire occurring on site, the following actions are to be taken immediately: - Contact Local Fire Department response unit. - Warn adjacent landowners of potential danger.		Immediately	Daily visual inspections (ESM) Monthly (ECO)	Upkeep of SOPs on response to emergencies. Upkeep of Emergency Response Plan. Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO). Keep records of safety inductions.
		Safety and security 1. All Construction activities undertaken on site should be carried out in accordance		Immediately	Daily visual inspections (ESM)	Monthly internal compliance reporting (ESM).

Health and Safety Environmental emergencies occurring on-site.		with all the requirements stipulated by the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) (OHSA). 2. All personnel (Developer/Contractors) working on site shall wear the applicable PPE as required by the activity being undertaken. 3. No personnel, except for security staff (if applicable), are allowed to stay / live on the site. Security staff are to be provided with accommodation and ablution facilities and communication equipment. 4. The Developer must ensure safety representatives and managers are appointed and trained for all on-site work construction activities. All contractors/sub-contractors should appoint a safety officer. All applicable safety standards and regulations should be enforced Training should include emergency procedures. 5. Potentially hazardous areas must be clearly demarcated with adequate signage. 6. Emergency contact details for the police, security company, ambulance and fire department must be available at all times. **Emergency management** 1. All accidents must be recorded in a register. Data about the accident must be provided within 24 hours after occurrence.		Immediately	Monthly (ECO) Daily visual inspections (ESM)	Monthly external compliance reporting (ECO). Monthly internal compliance reporting (ESM).

		2. Appropriate recording documents must be available on site together with a designated Health and Safety Officer. 3. Appropriate authorities and law enforcement officers must be consulted in such instances if required. 4. Steps must be identified to prevent recurrence of similar incidents. These steps must be recorded and monitored. 5. Actions taken to address the occurrence of the incident and measures to avoid the recurrence of such must be recorded. 6. Emergency contact details for the police, security company and fire department must be available at all times in case of an emergency situation. 7. The application of the OHSA and associated regulations must be ensured. This includes the distribution and use of protective clothing and equipment to at least include safety shoes, overalls gloves, dust masks, and where appropriate ear muffs and eye/face protection shields (if required). 8. The Safety Officer is to present emergency procedures during the mandatory Health and Safety induction presented to all new site staff, contractors and visitors. 9. Appropriate SHE signs (symbolic safety signs) must be displayed on site.			Monthly (ECO)	Monthly external compliance reporting (ECO). Monthly internal Health and Safety performance audits and reporting (ESM). Upkeep of incident reports (ESM).

		10. The following requirements would be the minimum for the safety program: • Orientation of new employees including safety training and emergency contingency planning. • Thorough investigation and documentation of all accidents to ascertain the cause and future methods of preventing recurrence. • Mandatory first aid training for all staff members. • Regularly scheduled safety meetings. • Fire prevention and fire-fighting instructions. • Routine inspection and testing procedure for all safety and emergency equipment and protective devices, and routine walk through inspections conducted by the operator through all areas to identify and correct potential unsafe conditions. • Posting for safety bulletins and posters required by regulatory agencies and other materials concerning accident prevention and hazardous conditions. • The Applicant shall abide by all local, provincial and national safety requirements.				

		• The Applicant shall provide for a fires aid station and emergency medical response station for injured staff.				

6.2.7 TRAFFIC

Table 15: Traffic management and mitigation

Legislative requirements		National Road Traffic Act (NRTA), NEM:AQA				
Objectives		Construction vehicles do not affect local stakeholders.				
Performance indicators		No records / complaints of traffic incidents / queries from the public / neighbours No accidents or damage of property				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Traffic Temporary increase in traffic levels during the site preparation and construction activities.	Low (-)	**General** 1. Ensure that construction vehicles are not congesting main roads during peak hours. 2. Construction vehicles must be roadworthy and adhere to tonnage limitations.	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO).

6.2.8 HERITAGE AND PALEONTOLOGICAL RESOURCES

Table 16: Heritage and paleontological management and mitigation

Legislative requirements	National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA)

Objectives		All fossils and archaeological, cultural heritage and paleontological resources over 60 years of age (such as stone hand tools, remnants of old structures, old ceramic shards, human remains, war memorabilia etc.) are protected under the National Heritage Resources Act, 1999 (Act 25 of 1999).				
Performance indicators		No impact / destruction of any archaeological, cultural heritage and paleontological resources.				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Archaeological: Possible impact on archaeological and heritage resources during excavating, drilling, clearing or digging activities.	Low (-)	**Discovery of artefacts or human remains** 1. The subterranean nature of cultural heritage (archaeological and/or historical) resources must always be kept in mind. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward. This could include previously unknown and unmarked graves and/or cemeteries. 2. If anything of an archaeological nature is found on site, work is to be stopped and an Archaeologist notified. Once the specialist confirms a genuine artefact has been found, the South African Heritage Resources Agency (SAHRA) is to be informed. 3. The area should be cordoned-off and access restricted, so that a systematic and professional	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO). Approval from SAHRA if required.

		investigation can be undertaken. 4. Once the material is remove/collect by the specialist, work can recommence in that area.				
Paleontological resources: Possible impact on fossils during excavating, drilling, clearing or digging activities.	Low (-)	**Discovery of paleontological heritage resources (extinct animals and plants and their fossilised remains)** 5. The overburden and inter-burden must always be surveyed for fossils. Special care must be taken during the clearing, digging, drilling, blasting, trenching, and removal of overburden not to intrude fossiliferous layers. 6. Threats are earth moving equipment/machinery (front end loaders, excavators, graders, dozers) during construction, the sealing-in, disturbance, damage or destruction of the fossils by development, vehicle traffic, and human disturbance. 7. Mitigation is needed if fossils are found. Permission needed from SAHRA. 8. The ECO must survey the excavations for fossils and follow SAHRA protocol. 9. The protocol is to immediately cease all construction activities if a fossil is unearthed, construct a 30 m no-go barrier, and contact SAHRA	Low (-)	Immediately	Daily visual inspections (ESM) Monthly (ECO)	Monthly internal compliance reporting (ESM). Monthly external compliance reporting (ECO). Approval from SAHRA if required. Chance Find Protocol.

		for further investigation. 10. It is further suggested that a Section 37(2) agreement of the Occupational, Health and Safety Act 85 of 1993 is signed with the relevant contractors to protect the environment (fossils) and adjacent areas as well as for safety and security reasons.				

6.3 OPERATIONAL PHASE

This EMPr is specific to the proposed expansion and associated operations. The proposed environmental management and mitigation measures for the operational phase are collated in Tables 17 - 20 below.

6.3.1 TRAFFIC

Table 17: Traffic management and mitigation

Legislative requirements		National Road Traffic Act (NRTA), NEM:AQA				
Objectives		Production and operational trucks do not significantly affect local stakeholders or impact on the environment.				
Performance indicators		No records / complaints of traffic incidents / queries from the public / neighbours. No accidents or damage of property.				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Traffic Minor increase in traffic to and from the site.	Medium (-)	General 1. Ensure that trucks are not congesting main access road towards site. 2. Ensure that the trucks travelling on gravel roads towards the site keep to speed of 40 km/h.	Low (-)	Immediately	Continuous (Internal ESM) As required by EA (Applicant)	Quarterly internal compliance reporting (ESM) As required by EA (Applicant)

		3. Ensure that all trucks and other vehicles park in demarcated areas on site for delivery and collections. 4. Record and address any traffic complaints.				

6.3.2 AIR QUALITY – ODOUR

Table 18: Air Quality – Odour management and mitigation

Legislative requirements		CSA S24; NEMA S28; NEM:AQA S32, S34, S35				
Objectives		Prevent odour nuisance to surrounding land-users. Ensure sound environmental management of air quality.				
Compliance indicators		No records/complaints of odours creating a nuisance to surrounding members of the public. Compliance to local regulations as applicable.				
Impact/ Aspect	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Odour Unwanted odours emanating from abattoir could include odours from urine and manure in holding pens, blood residues and hide storage.	Medium (-)	1. Manage all waste on site as per specifications detailed in Waste Management Section of this EMPr. **2.** Ensure implementation of relevant SOPs to minimise odour generation. 3. Develop and maintain odour control procedure. 4. All odour complaints must be recorded and investigated. 5. Install and maintain odour control equipment (as required). 6. All chemical storage areas and chemical-based odour control equipment must be located on impermeable concrete floors with bunding capable of containing 110% of any spillage.	Low (-)	Immediately	Continuous (Internal ESM) As required by EA (Applicant)	Quarterly internal compliance reporting (ESM) As required by EA (Applicant)

		7. Ensure that the garbage (household/general waste) is collected on a regular basis to reduce the presence of vermin and flies and reduce odours. 8. Manure must be frequently removed from the holding pens and taken off site. 9. Good housekeeping and rapid processing is essential to stop odours developing. 10. Dropped material must not be left to develop odours. 11. All conveyors and pipe runs for waste animal matter transfer operations must be capable of being dismantled for effective cleaning. 12. Offal and waste animal matter must be received in a fully enclosed building.				

6.3.3 HEALTH AND SAFETY

Table 19: Health and safety mitigation and management measures

Legislative requirements	OHS S8, S9, S13 & S14 Red Meat Regulations, No. 1072, 17 September 2004 Meat Safety Act, 2000 (Act No. 40 of 2000).
Objectives	To maintain compliance with national standards of abattoirs. To control animal diseases and parasites, for measures to promote animal health. To facilitate efficient response to emergency situations that may arise on the site. Create a safe working environment for all workers on site. Train all contractors and employees on health and safety risks.
Performance indicators	Compliance with the relevant regulations. No emergency incidents. No health concerns. No environmental emergencies occurring onsite.

Aspect / Impact	Significance Pre-mitigation	Mitigation and Management Measures	Significance Post-mitigation	Time period for implementation	Monitoring frequency and (responsibility)	Reporting: frequency, (responsibility) and requirements
Hygiene/safety and maintenance Unhygienic working conditions at the abattoir leading to worker health and safety risks	Medium (-)	**Hygiene Management Program and Evaluation System** 1. A Health Management System (HMS) must be developed - detailing information on control measures or programs required to monitor identified control points, including the methods of monitoring or checking these control points. 2. A document management system must provide for slaughtering activities, data, records etc. 3. A schematic plan of the abattoir must be available as per the regulations. 4. Hygiene Control Programs (HCP) must be developed for approval by the Department as per the Regulations: personal hygiene, slaughtering, meat inspections, medical worker fitness, sterilizing processes and plant cleaning, water quality control, waste disposal, plant maintenance etc.	Low (-)	Immediately	Continuous (Internal ESM) As required by EA (Applicant)	Quarterly internal compliance reporting (ESM) As required by EA (Applicant)
Health and Safety Fire and chemical exposure during operations	Medium (-)	**Fire prevention** 1. The Applicant shall take all reasonable and active steps to avoid increasing the risk of fire through their activities on site. 2. All workers (including visitors) on-site will be made aware of possible fire risk associated with operations. 3. The Applicant shall ensure that the basic fire-fighting equipment is available	Low (-)	Immediately	Continuous (Internal ESM) As required by EA (Applicant)	Quarterly internal compliance reporting (ESM) As required by EA (Applicant) Upkeep of SOPs on response to emergencies.

		on site and to the satisfaction of the local firefighting services. **Response to fire incidence on-site** 1. An Emergency Plan (including Fire Protection, Response and Evacuation Plan) is to be prepared and conveyed to all staff on the site. This shall identify: - a fire marshal for the site; - all potential fire hazards; - fire-fighting equipment to be provided on site; - procedure in case of a fire; - a fire evacuation route and plan; and - emergency contact numbers. 2. Key staff members will be trained to deal with the control of fire-fighting equipment on site and to assist with evacuations as required. 3. All staff is to be familiar with the position of fire control equipment on site and response and evacuation procedures. This should be covered in the inductions for all new site staff and visitors. 4. In the case of a fire occurring on site, the following actions are to be taken immediately: - Contact Local Fire Department response unit. - Warn adjacent landowners of potential danger.				Upkeep of Emergency Response Plan.

Health and Safety Environmental emergencies occurring on-site.		**Emergency management** 1. All accidents must be recorded in a register. Data about the accident must be provided within 24 hours after occurrence. 2. Appropriate recording documents must be available on site together with a designated Health and Safety Officer. 3. Appropriate authorities and law enforcement officers must be consulted if required. 4. Steps must be identified to prevent recurrence of similar incidents. These steps must be recorded and monitored. 5. Actions taken to address the occurrence of the incident and measures to avoid the recurrence of such must be recorded. 6. Emergency contact details for the police, security company and fire department must be available at all times in case of an emergency situation. 7. The application of the OHSA and associated regulations must be ensured. This includes the distribution and use of protective clothing and equipment to at least include safety shoes, overalls gloves, dust masks, and where appropriate ear muffs and eye/face protection shields (if required). 8. The Safety Officer is to present emergency procedures during the mandatory Health and Safety induction		Immediately	Continuous (Internal ESM) As required by EA (Applicant)	Quarterly internal compliance reporting (ESM) As required by EA (Applicant) Monthly internal Health and Safety performance audits and reporting (ESM). Upkeep of incident reports (ESM).

		presented to all new site staff, contractors and visitors. 9. Appropriate SHE signs (symbolic safety signs) must be displayed on site. 10. The following requirements would be the minimum for the safety program: • Orientation of new employees including safety training and emergency contingency planning. • Thorough investigation and documentation of all accidents to ascertain the cause and future methods of preventing recurrence. • Mandatory first aid training for all staff members. • Regularly scheduled safety meetings. • Fire prevention and fire-fighting instructions. • Routine inspection and testing procedure for all safety and emergency equipment and protective devices, and routine walk through inspections conducted by the operator through all areas to identify and correct potential unsafe conditions. • Posting for safety bulletins and posters required by regulatory agencies and other materials concerning accident prevention and hazardous conditions.				

		• The Applicant shall abide by all local, provincial and national safety requirements. • The Applicant shall provide for a fires aid station and emergency medical response station for injured staff.				

6.3.4 WASTE MANAGEMENT

Table 20: Waste management mitigation and management measures

Legislative requirements		CSA S24; NEMA S28; NWA S19; NEM:WA S16, S17, S22, S26 & S27; WCMR, NNS, Red Meat Regulations, No. 1072, 17 September 2004 Meat Safety Act, 2000 (Act No. 40 of 2000)				
Objectives		To manage waste in a manner that prevents detrimental impacts to the environment and human health. Promote waste minimisation (reduction), reuse and recycling of waste generated on the site. Avoid litter, odours and pollution. Ensure that all waste are stored, handled and disposed of as per the regulatory requirements.				
Compliance indicators		No litter/illegal dumping visible anywhere on the site. Overall good housekeeping. No evidence of waste in storm water infrastructure. No odours due to incorrect waste handling. Responsible disposal of wastes and implementation of waste reduction, recycling and re-use opportunities.				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Waste The improper disposal of the respective abattoir wastes generated.	Medium (-)	The National Environmental Management: Waste Act (Act No. 59 of 2008) and any associated Regulations and Norms and Standards must be adhered to at all times. **General housekeeping**	Low (-)	Immediately	Continuous (Internal ESM) As required by EA (Applicant)	Quarterly internal compliance reporting (ESM) As required by EA (Applicant)

		1. The site and surrounding areas are to be maintained in a clean, orderly, presentable condition at all times. 2. All waste generated shall be separated into the relevant waste streams (i.e. general waste, hazardous waste; recyclables). 3. Keep records of safe disposal of waste by independent contractors. 4. Designated waste storage and transition area(s) shall be established and maintained 5. The waste storage and transition areas shall be surfaced and adequately demarcated. 6. Portable wheelie bins shall be placed outside at the demarcated areas. 7. Wheelie bins shall be colour coded and labelled to identify the waste stream for which it is intended. Colour coding is as follows: o General Waste _ Green (Waste type labelling) o Hazardous Waste _ Red (Waste type labelling) o Recyclables - White (Waste type labelling) 8. All waste containers on-site (bins, skips, drums, etc.) will be clearly labelled to show which wastes can be disposed into each bin.				

		9. The general waste (domestic) shall be removed and disposed of at a licensed general waste landfill site. 10. All hazardous waste shall be removed (within 30 days) by a licensed waste service provider and shall be disposed of at a licensed hazardous waste landfill site and records of safe disposal shall be kept. This also includes Waste Manifest records. **All process / operational waste on site must be managed in accordance with their specific relevant on site procedures (SOPs).** ***Domestic Waste*** 1. All domestic waste generated shall be disposed of into specifically demarcated and labelled bins for collection. 2. No staff shall be allowed to deposit waste / litter anywhere on the site except into the bins provided. 3. Under no circumstances shall domestic waste be dumped in any unauthorised landfill site / waste site. 4. Domestic waste must be collected by the municipality and disposed of at the Ga-Segonyana Local Municipality Landfill site. ***Non-infectious condemned waste (operational/ processing waste)***				

		1. The waste must be appropriate managed and stored and thereafter sent to a predator (lion) facility on a bi-weekly basis. 2. Records must be kept of the volumes and disposal. ***<u>Hazardous infectious condemned waste (from operations)</u>*** 3. On-site treatment through the cooking/boiling of the condemned waste in a stainless-steel tank (paraffin fired) wherein disinfection of the waste takes place. 4. Any residue post sterilization will be disposed of in accordance with regulatory requirements. 5. Records must be kept of volumes, treatment and safe disposal. ***<u>Blood and manure waste</u>*** 6. Off-site treatment to compositing facility. 7. Records must be kept of volumes, treatment and safe disposal. ***<u>Wastewater / effluent</u>*** 8. Disposal into local municipalities' sewer system. 9. Records must be kept on volumes.				

		10. If not possible, any storage, treatment and disposal of effluent on site must be licensed in terms of the NWA, 1998. ***<u>Other hazardous waste</u>*** 11. All hazardous waste generated shall be kept separate and shall not be mixed with general waste. 12. All hazardous waste shall be stored within a sealed drum on an impermeable surfaced area within a designated waste storage and transition area. 13. All hazardous waste should have SDS and such waste shall be disposed of as per the product SDS. 14. Hazardous waste shall be collected by a licensed waste service provider and be disposed of at a licensed landfill site with certificates of safe disposal and Waste Manifest records. 15. The total quantity of hazardous waste stored at the site at any one time shall not exceed 80m^3. *Hazardous liquid oil:* 1. All used oil shall be stored in approved sealed containers. 2. All oil generated from equipment shall be decanted into approved containers, returned to a central point designated for the correct storage of hazardous liquids				

		and collected by an approved waste collection company. 3. Under no circumstances may any oil be released directly into the natural environment. The design, construction and operation of all equipment and facilities, required for the effective collection, containment, control and disposal of used oil shall at all times comply with environmental legislation and standards to prevent pollution and/or contamination of the environment. 4. All oil storage areas shall be bunded in accordance with the SANS specifications. *Hydrocarbons (petrol and diesel fuels):* 1. All redundant liquid types shall be placed in clearly marked, sealed containers (preferably the containers the material was supplied in) and stored in a designated area prior to disposal. Redundant fuels shall be stored separately to prevent: • Chemical reaction or fires; • Toxic fumes/gases; and • Pollution to the environment. 2. Where possible, recycling should be implemented. 3. An authorised and permitted hazardous waste removal contractor shall remove all redundant fuels from the hazardous waste site, to a permitted waste disposal site.				

6.4 POST-CONSTRUCTION AND REHABILITATION PHASE

This EMPr is specific to the proposed development. The proposed environmental management and mitigation measures for the post-construction and rehabilitation phases are collated in Table 21 below.

Table 21: Post-construction and rehabilitation phase mitigation and management measures

Legislative requirements		NEMA				
Objectives		To ensure effective rehabilitation so that any remaining environmental impacts from the construction phase can be remediated.				
Performance indicators		Overall compliance to the requirements of this EMPr and the EA (if issued).				
Aspect / Impact	**Significance Pre-mitigation**	**Mitigation and Management Measures**	**Significance Post-mitigation**	**Time period for implementation**	**Monitoring frequency and (responsibility)**	**Reporting: frequency, (responsibility) and requirements**
Rehabilitation after the abattoir expansion Same impacts as under the construction phase.	Low (-)	1. Ensure implementation of the mitigation measures as under the construction phase. 2. Use only indigenous plant species for gardens and rehabilitation, as far as possible. 3. Eradicate any alien invasive vegetation observed onsite. 4. Demarcation of the construction area (for e.g. danger tape, safety signage etc.) must be removed. 5. No dumping of material or waste may take place beyond the site boundary. 6. Topsoil must be replaced during rehabilitation and landscaping. 7. Rehabilitation must already be initiated during the construction phase, where possible. 8. Areas for rehabilitation must be cleared of any building rubble and/or debris before rehabilitation is commenced with. 9. Soil should be moved when dry, as far as possible.	Low (-)	The management actions for the Post-construction and Rehabilitation Phase must be completed within 6 months from the completion of the Construction Phase.	Daily (internal ESM)	Monthly internal compliance reporting (ESM)

		10. Weeds must be removed prior to soil replacement. 11. Rehabilitated areas must be monitored to ensure that rehabilitation was effective.				

7. ENVIRONMENTAL AWARENESS PLAN

The Applicant must ensure that employees and contractors are informed of the environmental risks associated with the work that they conduct, as well as steps that need to be taken to prevent degradation of the environment. This will be ensured by implementing this Environmental Awareness Plan. The Environmental Awareness Plan includes information to be presented during initial Induction Training for all employees and contractors that will be involved in the proposed project.

Induction Training

Every employee and/or contactor must complete the Induction Training session prior to commencing with any work related to the proposed project. Proof of attendance of the Induction Training must be kept on file by the Applicant, in the form of completed attendance registers. Every employee and/or contactor must complete the attendance register, thereby confirming attendance of the Induction Training session and that the training material was understood.

Training Material

The training material should be presented as a training manual and must include the following topics:

- What is meant by the term "environment" and why the environment requires protection;
- The environmental impacts and risks that may result from the proposed project;
- How the environmental impacts and risks should be avoided and mitigated;
- The Environmental Management Programme (EMPr) conditions that are applicable to the employee/contractor's work during the proposed project and how the conditions should be implemented;
- The procedure to follow in the event of chemical and/or hydrocarbon spillages; and
- The protection of workers who refuse to do environmentally hazardous work, as provided for in the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Where required, the training can be presented in a verbal format, as opposed to the presentation of a training manual.

8. MONITORING AND AUDITING

Environmental monitoring and compliance auditing should occur throughout the entire lifecycle of the project both internally (ESM) and externally (ECO/Auditor). Refer to monitoring measures in the respective tables. The frequency of monitoring and auditing will be set out in the EA conditions and must be adhered to during all times. Monitoring is required to ensure compliance with the management and mitigation measures contained in the EMPr.

9. SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

No specific information has been required by the Competent Authority at this stage of the application process.

Curriculum Vitae
Lizette Kloppers

PERSONAL DETAILS

Full Names	Lizette Kloppers
Date of Birth	1 December 1987
Marital Status	Married
Home language	Afrikaans (Speak, read and write)
Other languages	English (Speak, read and write)
Nationality	South African
Gender	Female
Contact Details	E-MAIL: lizette@earthnsky.co.za CELL: 061 524 2211
Professional Registrations / Certifications	EAPASA: 2019/767 SACNASP: 115453 IEMA Certified Carbon Footprint Analyst
Professional experience	Lizette has more than 12 year's experience in the field of Environmental Management, including various Environmental Authorisation applications (Basic Environmental Impact Assessments, full Scoping and Environmental Impact Assessments, Waste Management Licence applications and Section 24G Rectification applications) and Environmental Legal Compliance Audits. Clients include some of the leading agricultural and industrial companies in South Africa, such as AFGRI Operations Limited, BiC, Mpact, the University of Pretoria and DMS Powders.

QUALIFICATIONS AND TRAINING COURSES

Qualification	Institution	Year
BSc BIODIVERSITY AND ECOLOGY cum laude	UNIVERSITY OF STELLENBOSCH	2009
Postgraduate certificate in ENVIRONMENTAL MANAGEMENT (upgraded to MSc)	UNIVERSITY OF LONDON – EXTERNAL SYSTEM	2010
Certificate: Greening your Business (Nedbank and BusinessDay course)	NEDBANK	2011
Environmental Law for Environmental Managers	NORTH WEST UNIVERSITY - CENTRE FOR ENVIRONMENTAL MANAGEMENT	2013
MSc ENVIRONMENTAL MANAGEMENT with merit	UNIVERSITY OF LONDON – INTERNATIONAL PROGRAMMES	2014
An Introduction to Waste Classification in South Africa: Towards Implementation of the National Environmental Management Waste Act	NORTH WEST UNIVERSITY - CENTRE FOR ENVIRONMENTAL MANAGEMENT	2014
Resource Efficiency and Cleaner Production (RECP) Introductory Course	NATIONAL CLEANER PRODUCTION CENTRE (NCPC)	2015
ISO 14001:2015 Requirements	BSI SOUTH AFRICA	2016
Energy Management Systems (EnMS) End User Training	NATIONAL CLEANER PRODUCTION CENTRE (NCPC)	2016
GLOBALG.A.P. Public Farm Assurer Workshop – Crops (F&V)	GLOBALG.A.P. ACADEMY	2017
Energy Management 101	NATIONAL CLEANER PRODUCTION CENTRE (NCPC)	2017
Energy Performance Measurement Indicators (EnPI)	NATIONAL CLEANER PRODUCTION CENTRE (NCPC)	2020
Carbon Footprint Analyst	TERRA FIRMA ACADEMY	2020

WORK EXPERIENCE

Current employment:

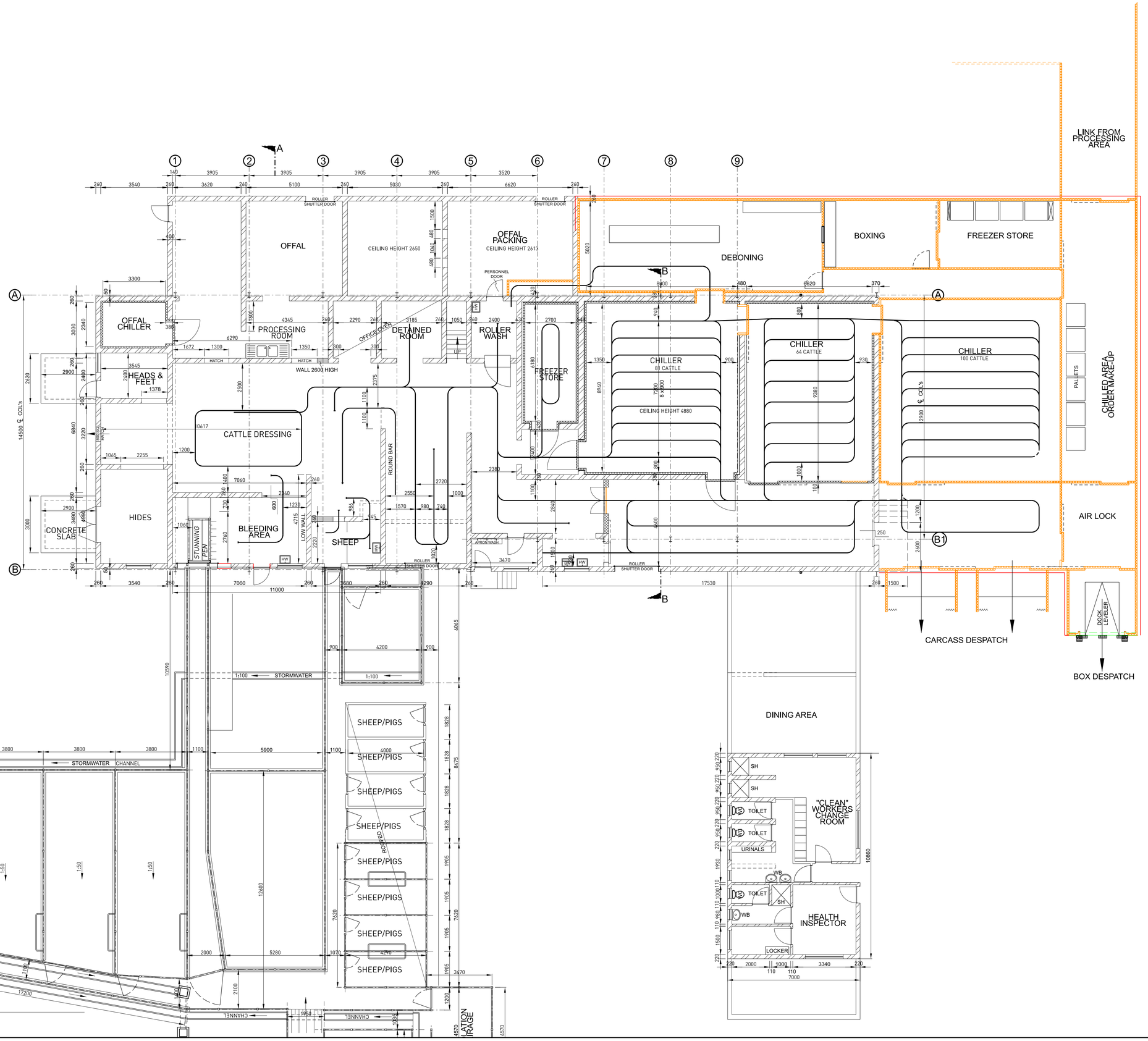
- EARTHnSKY Environmental – Director and Environmental Consultant – 8 April 2016 – present.

Previous employment:

- Research assistant – data collection for a PhD project – 14 October – 9 November 2010.
- African Bank – administrative assistant; full-time and temporary contract – 3 Jan 2010 – 29 April 2011.
- Shangoni Management Services – Senior Environmental Consultant – 3 May 2011 – 7 April 2016.

REFERENCES	
Name	**Organisation/Institution**
1. Ruzelle Myburgh	DMS Powders
2. Ilze Euckermann	University of Pretoria
3. Cara Terblanche	SFP Townplanning
4. Tania van Staden	ARISCU
5. Patricia van der Walt	TiKOTECH
6. Charlotte Maphaha	Southern Proteins

Contact details will be provided upon request.



NO.	DATE	REVISION	
A	2023-06-06	DRAWING UPDATED AND ISSUED FOR COMMENT	NN
		APPROVED FOR DISTRIBUTION	NM

SCIP ENGINEERING GROUP
JOHANNESBURG
WITBANK
IN PARTNERSHIP WITH:
VAN VLIET DE WET & PARTNERS
PO Box 48550
Roosevelt Park, 2129
Johannesburg
Gauteng
Tel: 011 888 1425
Fax: 011 888 1075
joburg@scip.co.za
www.scip.co.za

CLIENT

KURUMAN

PROJECT

KURUMAN ABATTOIR

DESCRIPTION

PROPOSED LAYOUT OF ABATTOIR

DESIGNED	-	SCALE 1:100	PAPER SIZE A1
DRAWN	GM	DATE	MAY 2023
CHECKED	W.v.V	● CONCEPT DRAWING ○ TENDER DRAWING ○ CONSTRUCTION DRAWING ○ AS BUILT DRAWING	
SIGNED	-	DRAWING STATUS	

DRAWING No. 2103-G0-10 REVISION. A

CHANGE ROOMS

OFFAL PROCESSING PLANT

LINK FROM PROCESSING AREA

OFFAL

OFFAL PACKING
CEILING HEIGHT 2615

CEILING HEIGHT 2650

DEBONING

BOXING

FREEZER STORE

OFFAL CHILLER

PROCESSING ROOM

DETAINED ROOM

ROLLER WASH

FREEZER STORE

CHILLER
80 CATTLE

CHILLER
64 CATTLE

CHILLER
100 CATTLE

CHILLED AREA OVER MAKE UP

HEADS & FEET

CATTLE DRESSING

HIDES

CONCRETE SLAB

BLEEDING AREA

SHEEP

AIR LOCK

CARCASS DESPATCH

BOX DESPATCH

DINING AREA

"CLEAN" WORKERS CHANGE ROOM

HEALTH INSPECTOR

SHEEP/PIGS

STORMWATER

STORMWATER CHANNEL

ISOLATION LAIRAGE

"CLEAN" AREA

"CLEAN" ENTRANCE

"DIRTY" ENTRANCE

LIVESTOCK OFF-LOADING

"DIRTY" AREA

RESERVOIR

NORTH

NORTH

NO.	DATE	REVISION	
A	2023-06-06	DRAWING UPDATED AND ISSUED FOR COMMENT	NN

SCIP ENGINEERING GROUP
JOHANNESBURG
WITBANK
IN PARTNERSHIP WITH:
VAN VLIET DE WET & PARTNERS
PO Box 48550
Roosevelt Park, 2129
Johannesburg
Gauteng
Tel: 011 888 1425
Fax: 011 888 1075
joburg@scip.co.za
www.scip.co.za

CLIENT

KURUMAN

PROJECT

KURUMAN ABATTOIR

DESCRIPTION

SITE PLAN OF PROPOSED EXTENSIONS TO ABATTOIR

DESIGNED	-	SCALE 1:200	PAPER SIZE A1
DRAWN	GM	DATE	MAY 2023
CHECKED	W.v.V	● CONCEPT DRAWING ○ TENDER DRAWING ○ CONSTRUCTION DRAWING ○ AS BUILT DRAWING	
SIGNED	-	DRAWING STATUS	

DRAWING No. 2103-G0-11 REVISION. A

$TIME$ $DATE$ $FILE$