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Environmental Management Plan (EMPr) and Integrated Wastewater Management Plan (IWWMP) for Paula Poultry Abattoir, Brandfort, Masilonyana Municipality, Free State

Report prepared for

Paula Farm, Brandfort

DWS Reference Number: WU18198

Environmental Assessment Ref: TBD

Michelle Boshoff
SM SERVICES & CONSULTING Pty Ltd
Reg. No. 2016/347600/07

Environmental Management Plan (EMPr) and Integrated Wastewater Management Plan (IWWMP) for Paula Poultry Abattoir, Brandfort, Masilonyana Municipality, Free State

PREPARED FOR:

APPLICANT:

ESTAIN DE SWARDT
PAULA FARM
BRANDFORT
MASILONYANA MUNICIP0ALITY

PROJECT TITLE:

The proposed construction of a new poultry abattoir on the Farm Paula, Brandfort, Masilonyana Municipality, Free State.

COMPILED BY:

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Draft Report for Comment

SM SERVICES & CONSULTING
EMP AND IWWMP FOR EIA AND WULA

For Paula Poultry Abattoir

DOCUMENT CONTROL

Phase	Author	Status	Revision	Distributed on	Signature
Author	Michelle Boshoff	Draft	01	10 November 2020	
Review	Natalie Sharp	Draft	01	29 November 2020	
Approved	Michelle Boshoff	Draft	02	30 November 2020	

GENERAL SITE INFORMATION

Description of all affected farm portions:		
21-digit Surveyor General codes of all affected farm portions:	Portion 1 of Farm Paula 1063 F00600000000106300001	

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1. EXECUTIVE SUMMARY

The project proponent, Mr. Estian de Swart has appointed SM Services and Consulting Pty Ltd as the Environmental Assessment Practitioner (EAP) to undertake an application for a Basic Assessment and a water use license as well as compile a environmental management plan and integrated waste water treatment plan.

The required environmental impact assessment (Basic Assessment Report) (BAR) was conducted in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, for the proposed construction of an abattoir on the Farm Paula. Concurrent to the BAR, an application for a water use license (WULA) in terms of Section 21 and associated activities has been be launched to meet the requirements of the National Water Act, 1998 (Act No 36 of 1998)(NWA). As no solid waste is expected to be disposed of, as all products from the abattoir is anticipated to be used – no application will be made in terms of a waste permit.

The Farm Paula is an existing agricultural producer on the outskirts of the town Brandfort, in the Free State. The property is situated upslope of a seasonal tributary to the Modder River within the C52G quaternary catchment. There are existing chicken/poultry houses on-site and Mr. de Swardt has been breeding and selling live chickens the last few years. He now wishes to extent the operation to include the processing of the chickens further. This application is for the construction of a Poultry Abattoir for the processing of chickens (± 800 per day) on the Farm Paula.

This document must be read in conjunction with the Guide to Water and Waste-Water Management in the Poultry Abattoir Industry, written by Steffen, Roberson and Kirsten for the Water Research Commission (WRC Project No 127, TT 46/90), Pretoria March 1993. Please refer to Appendix G.

2. ABBREVIATIONS AND ACRONYMS

Abbreviation	Meaning
BA	Basic Assessment
BAR	Basic Assessment Report
BID	Background Information Document
CA	Competent Authority
CBA	Critical Biodiversity Area – areas required to meet biodiversity targets for ecosystems, species and ecological processes, as identified in a systematic biodiversity plan
DESTEA	Free State Department: Economic, Small Business Development, Tourism and Environmental Affairs
DWS	Department of Water & Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAPs	Environmental Assessment Practitioners
ECO	Ecological Control Officer – independent site agent appointed to observe and enforce the implementation of environmental policies and principles on a development site
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMPr	Environmental Management Programme
ERAP	Emergency Response Plan
ESA	Ecological Support Area
GIS	Geographic Information System – system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data
HSSE	Health, Security, Safety and Environment
I&AP	Interested and Affected Party
I&AP's	Interested and Affected Parties
IDP	Integrated Development Plan
NWA	National Water Act (Act 36 of 1998)
NEMA	National Environmental Management Act (Act 107 of 1998)
NEM:BA	National Environmental Management Biodiversity Act (Act 10 of 2004)
NEMWA	National Environmental Management: Waste Act (Act 59 of 2008)
NHRA	National Heritage Resources Act (Act 25 of 1999)
NWA	National Water Act (Act 36 of 1998)
PPP	Public Participation Process

SACNASP	South African Council for Natural Scientific Professions
SANS	South African National Standards
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SDF	Spatial Development Framework

3. INTRODUCTION

3.1 Background Information

SM Services and Consulting (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner **(EAP Reg No 2020/714)** responsible for facilitating Environmental Management Program Report (EMPr) and Integrated Wastewater Management Plan (IWWMP)for Paula Poultry Abattoir. This document supplements the Basic Assessment Report for Paula Poultry Abattoir and the water use application.

The main purpose of the EMPr / IWWMP is to prevent avoidable damage and/or minimize or mitigate unavoidable environmental damages associated with any construction, maintenance or demolition where there is a risk of environmental damage and to enhance positive benefits of the project.

It is essential that the integrated EMPr / IWWMP be carefully studied, understood, implemented and adhered to at all time. Expansion or adaptation of this management plan be required in specific circumstances but may require approval from DESTEA and / or DWS. This document is a live document and thus may change from time to time, subject to approval from the relevant authorities.

This integrated EMPr / IWWMP has been drafted taking onto account the *Western Cape Provincial Guideline for Environmental Management for Abattoirs* (2005) as well as the *Guideline Manual for the Management of Abattoirs and other Waste of Animal Origin* (2009). The scope and the level of detail have been adjusted to an appropriately restricted level, based on the Paula Poultry Abattoir development, reflecting the following considerations:

- The assessment of impacts
- Mitigation & monitoring requirements
- Legal requirements
- The complexity of the project activities

Two specialist studies were identified for the proposed development, namely a heritage/paleontological assessment and a terrestrial biodiversity assessment.

4. ENVIRONMENTAL MANAGEMENT PROGRAM (EMPR) AND INTEGRATED WASTEWATER MANAGEMENT PLAN

4.1 Purpose of the EMPr & IWWMP

This integrated EMPr and IWWMP provides an operational framework for avoiding, minimizing and remedying environmental degradation in and around the proposed development, thereby giving practical effect to the Applicant's statutory Duty of Care.

The integrated EMPr and IWWMP also provides guidance on ecological monitoring in support of adaptive management. The integrated EMPr and IWWMP is a condition of environmental authorizations and is therefore legally enforceable. It may also need to be amended in order to respond to changing environmental conditions or new information.

This integrated EMPr and IWWMP shall be binding on all the parties involved in the construction and operational phases of the project, and shall be enforceable at all levels of contract and operational management within the project.

The integrated EMPr and IWWMP has the following objectives:

- The outline mitigation measures and environmental specifications which are required to be implemented for the planning, construction, rehabilitation and operational phases of the project in order to minimize the extent of environmental impacts, and to manage environmental impacts associated with ephemeral drainage lines.
- To ensure that the construction and operation phases do not result in undue or reasonable avoidable adverse environmental impacts and ensure that any potential environmental benefits are enhance.
- To identify entities who will be responsible for the implementation of the measures and outline functions and responsibilities.
- To propose mechanisms for monitoring compliance, and preventing long-term or permanent environmental degradation.
- To facilitate appropriate and proactive responses to unforeseen events or changes in project implementation that was not considered in the EIA process.

The mitigation measures identified within the Environmental Impact Assessment process are systematically addressed in the integrated EMPr and IWWMP, ensuring the minimization of adverse environmental impacts to an acceptable level.

To achieve effective environmental and water management, it is important that Contractors and the Applicant are aware of their responsibilities in terms of the relevant environmental legislation and the content of this integrated EMPr and IWWMP. The Applicant is responsible for informing employees and contractors/sub-contractors of their environmental obligations in terms of the environmental specifications, and for ensuring that employees are adequately experienced and properly trained I order to execute the work in a manner that will minimize environmental impacts. The Applicant and Contractors obligations in this regard include the following:

- Ensuring that employees have a basic understanding of key environmental features of the construction site and surrounding environment.
- Ensuring a copy of the integrated EMPr and IWWMP is readily available on-site that all site staff is aware of the location and has access to the document. Employees must be familiar with the requirements of the integrated EMPr and IWWMP and the environmental specifications as they apply to the construction and operation of the facility.
- Ensuring that, prior to commencing any site works, all employees and sub-contractors have attended an appropriate Environmental Awareness Training course. The course must provide the site staff with an appreciation of the projetc's environmental requirements, the integrated EMPr and IWWMP specifications, and how they are to be implemented.
- Awareness of any other environmental matters, which are deemed to be necessary by the ECO.

Any changes or deviations to this integrated EMPr and IWWMP must be authorised by the competent authority.

5. DESCRIPTIVE OVERVIEW

5.1 Location

Description of all affected farm portions:	
Farm Name:	Portion 1 of Farm Paula 1063
21-digit Surveyor General Code:	F00600000000106300001
Property Size:	91.2ha
Development Footprint:	995m^2

5.2 Ownership and Management

Applicant:	Estian De Swardt
Postal Address:	P. O. Box 11700, Universitas, Bloemfontein, 9321
Telephone:	083 350 1384
Email:	estiands@gmail.com

5.3 Site Description

The Farm Paula is located outside Brandfort, within Ward 2 of the Masilonyana Municipality with the Lejweleputswa District Municipality. The Farm Paula falls within the C52G Quaternary Drainage Region. The farm is an existing agricultural land use and whish to extend its current agricultural uses to include chicken houses and a poultry abattoir.

The closest formal residential area to the farm is Brandfort town that is located approximately 19.2km from the farm.

The site is situated on a relatively flat landscape with no hills or slopes adjacent to it.

5.4 Site Assess

The site is located on an unnamed dirt road south west of Brandfort. Take the R703 (Voortrekker Road) and exit Brandfort on the west side. Travel 1.16km towards the R30 road and turn right (westwards) onto unnamed Dirt Road 1.

Continue straight on the dirt road (Dirt Road 1) for 12.3km and turn left (southwards) onto another dirt road (Dirt Road 2) Travel for 5.73km. Paula Farm will be located on the right.

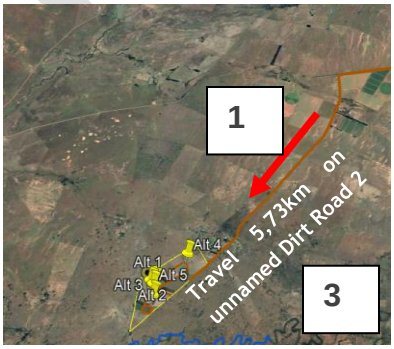

Figure 1: Access to site from Brandfort Town

5.5 The Receiving Environment

The proposed development site is located on an existing active agricultural farm. The surrounding properties are also existing active agricultural sites used for mixed farming activities.

6. EMPR & IWWMP PHASING

6.1 Pre-Construction Phase

The pre-construction phase refers to the design phase of the project. This will ensure that any requirements and best practice mechanisms are built into the planning / design phase to be developed in the construction and operational phase.

6.2 Construction Phase

The construction phase refers to the actual construction of the development of the property and includes all earthworks and installation of bulk services (water, sewerage, roads, stormwater, electricity, etc.)

6.3 Operational Phase

The operational phase of this project includes all the facets of the abattoir, including the handling of the chickens. Processing of carcasses and by0products and the disposal of waste materials. This integrated EMPr and IWWMP includes several recommendations sourced from the guideline documents but must not be exhaustive.

The Applicant must ensure that the Operational Phase maintains the underpinning principles “Duty-of-Care-to-the-Environment” and ideals of sustainable development.

6.4 Closure and Decommissioning Phase

Decommissioning refers to the process of removing the operating assets of the development after completion of the operating life cycle/

The proposed abattoir’s life span is subject to outside influences such as economic factors which could cause closure of the need for an upgrade beyond the capacity of the cadastral unit. This could lead to the closure and decommissioning for the proposed development as it was described in the Basic Assessment Report. Since factors influencing closure may in many cases be unknown at this stage, specific management recommendations are not included within this integrated EMPr & IWWMP. In the event that decommissioning is required, all relevant legal processes must be complied with.

7. LEGISLATIVE REQUIREMENTS

7.1 The Constitution (Act 108 of 1996)

The **National Constitution (Act 108 of 1996)** is the supreme law of the Republic of South Africa. It is the logical point of departure of any exploration of the maze of statutory provisions hat apply within environmental protection and land use management context. It *inter alia* confirms that everyone has the right to an environment that is not harmful to their health and well-being and to have the environment protected for the benefit of present and future generations. It also

stipulates, as an objective of local government, that it should promote social and economic development and it enjoins the public administration to be development orientated. In other words, a balanced approach is envisaged to matters of this nature.

7.2 National Environmental Management Act (Act 107 of 1998)

The National Environmental Management Act (Act 107 of 1998) (NEMA) makes provision for the identification and assessment of **activities** that are potentially detrimental of the environment and which require authorisation from the relevant authorities based on the findings of an environmental assessment.

NEMA embraces the notion of sustainable development as contained in the Constitution of South Africa (Act 106 of 1996). NEMA also aims to provide for co-operative environmental governance by establishing principles for decision-making on all matters relating to the environment. Principles contained in Section 2 of NEMA, amongst other things, prescribed that environmental management must:

- In order of priority aim to avoid, minimize or remedy disturbance of ecosystems and loss of biodiversity;
- Avoid degradation of the environment and avoid jeopardizing ecosystem integrity.
- Pursue the best practicable environmental option by means of integrated environmental management.
- Protect the environment as the people's common heritage.
- Control and minimize environmental damage.
- Pay specific attention to management and planning procedures pertaining to sensitive, vulnerable, highly dynamic or stressed ecosystems.

It is incumbent upon the landowner, to ensure that the abovementioned principles, entrenched in this Integrated EMPr & IWWMP are upheld and complied with.

7.3 National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA)

This Act controls the management and conservation of South Africa's biodiversity within the framework of NEMA. Amongst others, it deals with the protection of species and ecosystems that warrant national protection, as well as the sustainable use of indigenous biological resources. Sections 52 & 53 of this Act specifically make provision for the protection of critically endangered, endangered, vulnerable and protected ecosystems that have undergone, or have a risk of undergoing, significant degradation of ecological

structure, function or composition as a result of human intervention through threatening processes.

The National List of Threatened Ecosystems (Notice 1477 of 2009, Government Gazette No 32689, 6 November 2009) was gazetted in 2014. The list of threatened terrestrial ecosystems supersedes the information regarding terrestrial ecosystem status in the National Spatial Biodiversity Assessment (NSBA) 2004 & 2011.

In the case of Paula Farm 1063, Brandfort, the entire property is developed agricultural land and has been significantly transformed by historical agricultural practices and as such this Act has very limited applicability. As a result a terrestrial biodiversity assessment was undertaken.

7.4 National Environmental Management: Waste Act (Act 59 of 2008) (NEM:WA)

NEM:WA deals with the handling, depositing, treatment, processing, recycling, re-use and/or storage of both 'general' and 'hazardous' waste products. This Act was assented by the President on 10 March 2009 and enacted on 3 July 2009. Subsequently all waste related activities are omitted from NEMA and must be authorised in terms of NEM:WA.

The National Waste Management Strategy presents the South African government's strategy for integrated waste management for South Africa. It deals among others with: Integrated Waste Management Planning, Waste Information Systems, Waste Minimization, Recycling, Waste Collection and Transportation, Waste treatment, Waste Disposal and Implementing Instruments.

Paula Poultry Abattoir proposed to use most of the slaughtered chickens as products. Waste water will be treated as used as fertilizer liquid for irrigation on selected crops. The proposed facility produces no hazardous waste, only general waste and animal manure. It has been confirmed that waste items that are re-used as a different primary product are considered to be '*by-products'* and not waste. With relation to the Paula Poultry Abattoir none of the general waste, by-products, or animal manure generated by the facility fall within the threshold of NEM:WA listed activities.

7.5 Environmental Conservation Act, 1989 (ECA)

The EIA regulations contained in the Environmental Conservation Act (ECA) have been replaced by NEMA. However, property owners must comply with the draft regulations pertaining to noise as published in Section 25 of the ECA, as well as Section 24 of the

ECA regarding waste management and Section 20 of the ECA dealing with waste management.

7.6 National Environmental Management: Air Quality Act 2004 (Act 39 of 2004) NEM:AQ

The purpose of the Act is to protect the environment by providing reasonable measures for the "prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; to prove for national norms and standards regulating air quality monitoring, management and control by all sphere of government; for specific air quality measures; and for matters incidental to.

Section 35(2) of the Act is of potential relevance. It specifies that "the occupier of any premises must take all reasonable steps to prevent the emission of any offensive odour caused by any activity on such premises". Due to the remote locality of the proposed development site, the impact that might arise as a result of the development is regarded as non-significant.

7.7. National Water Act (Act 36 of 1998) NWA

The National Government is responsible for the equitable allocation and use of the scarce and unevenly distributed water resources of the nation. The aim of water resource management is to ensure the sustainable use of water through the protection of the quality of water resources for the benefit of all water users. There is a need for the integrated management of all aspects of water resources and the delegation of management functions to a regional or catchment level where appropriate, to enable everyone to participate.

Sections 5 to 7 provide the framework for the protection, use, development, conservation, management and control of water resources for the country. Section 3 promotes the protection of water resources related to their use, development, conservation, management and control. Specific waste uses The National Government has overall responsibility for and authority over water resource management. This includes the equitable allocation and beneficial use of water in the public interest. Therefore, a person can only be entitled to use water if the use is permissible under the Act. Section 4 makes provision for listed activities whereby authorisation from the Department of Water and Sanitation need to provide authorisation for.

7.8 National Heritage Resources Act (Act 25 of 1999)

Heritage Resources are those resources, both human and natural, created by activities from the past that remain to inform present and future societies of that past. The South African Heritage Resources Agency (SAHRA) is a statutory organisation established in terms of the National Heritage Resources Act (No. 25 of 1999) as the national body responsible for the protection of South Africa's cultural heritage resources.

SARHA maintains a list of national and provincial heritage sites in South Africa, as declared by them and the nine provincial heritage resources authorities. The list is maintained by SAHRA by means of an online, publicly accessible database, the South African Heritage Resources Information System (SAHRIS), that also serves as an integrated national heritage resources management tool. Should any artifacts be uncovered and be regarded as historical cultural / heritage significant, a permit must be obtained from SARHA.

7.9 Meat Safety Act (Act 40 of 2000)

The Act aims to provide measures to promote meat safety of animal products. It also aim to establish and maintain essential national standards in respect of abattoirs. The Act regulate the importation and exportation of meat and establish meat safety schemes.

The Act further ensures that any meat product designated for public consumption must be slaughtered as a registered facility. The facility must comply with the health and safety standards provided for in the Act. The Act also provides guidelines to determine the grading of facilities.

7.10 Poultry Regulations (GN 153 of 2006)

The Poultry Regulations were promulgated by the Minister of Agriculture in terms of Section 22 of the Meat Safety Act. The purpose of the Regulations is *inter alia* to provide for measures to promote poultry meat safety and the safety of poultry products. The Regulations establish and maintain essential national standards in respect of poultry abattoirs. It also refers to meat safety schemes. The Regulations came into effect on 24 February 2006.

7.11 Animal Diseases Act (Act 3 of 1984)

This Act is of importance since the Regulations were amended on 13 November 2009 by Regulation 1059. The amendment covers the use of protein from ruminant origins

(excluding milk and milk products) and their disposal. This has a direct effect on the manufacturing of blood and bone meal. Part of the onsite monitoring by the veterinary public health official is to ensure that bio security within the abattoir is maintained.

7.12 Animal Protection Act (Act 71 of 1962)

This Act pertains to the slaughtering requirements and specifications for the transportation, bleeding, stunning and lairage of animals in confined areas. The building plans and throughput certificates issued to abattoirs take these into account.

7.13 Occupational Health and Safety Act (Act 85 of 1993)

The Act provides for health and safety to persons at work and for the health and safety of persons in connection with the use of plant and machinery; 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 of work.

In terms of this Act, a Health and Safety Officer and Protocol must be implemented on the site. The appointment of a Health and Safety Officer (HSO)is the responsibility of the applicant/proponent and contractor and is included in this report to ensure due diligence on construction sites. It is the responsibility of the appointed of HSO) to conduct any required audits and as such only the appointment of an OHS will be auditable in terms of this document.

7.14 National Building Regulations

The National Building Regulations and Building Standards Act as amended must be complied with. This Act address, *inter alia*:

- Specifications for draftsmen, plans, documents and diagrams;
- Approval by local authorities;
- Appeal procedures;
- Prohibition or conditions with regard to erection of buildings in certain conditions;
- Demolition of buildings;
- Access to building control officers;
- Regulations and directives and
- Liability

8. ENVIRONMENTAL MANAGEMENT PROCEDURED

8.1 Functions and Responsibilities

This section deals with the responsibility of various parties during the Construction Phase of the development.

8.1.1 Holder of the Environmental Authorisation

The Applicant is responsible for ensuring compliance with the conditions contained in the Environmental Authorisation and permit or any other person acting on his/her behalf. This include, but not be limited to an agent, servant, worker, employee or any person rendering service to the Applicant in respect of the activity, including but not be limited to contractors and consultants.

The Applicant is responsible for appointing an Environmental Control Officer (ECO), Site Engineer and Contractor for the duration of the construction contract and for ensuring that the Site Engineer and Contractor fulfil their obligations in terms of this Integrated EMPr and IWWMP. The Applicant and or its representative must notify the relevant authorities in writing within 24 hours thereof if any condition in the Environmental Authorisations and permits are not adhered to.

8.1.2 Abattoir Employees

Employees are responsible for ensuring that the Integrated EMPr and IWWMP Is implemented during the operational phase in accordance with the requirements of the document. However, should they fail, the abattoir owners retain the ultimate responsibility. Employees incur personal liability for violations of laws in schedule 3 to the national environmental management act of 1998, unless they can show that the offense occurred as a result of the employee's failure to take reasonable measures to prevent the violation. Therefore, any complaints must be lodged in the Complaints Register. Records of a compliance register must be made available to the relevant authorities upon request.

8.2 Engineers, Contractors and Services Providers

The Site Engineer / Main Contractor and the ECO Are expected to develop a close working relationship and to stay in contact with each other. The Site Engineer issues site instructions to the contractor and all requests and communications between the ECO an contractor or via the Site Engineer. The only exception to this is where the easy own needs to issue a “Stop works” order on the contractor or the Site Engineer if serious environmental harm is about to happen or is happening as a result of construction

activities. This “Stop Works Order” must be confirmed by the ECO as soon as practically possible to all affected construction personnel.

When the ECO is not on site, the Site Engineer will be responsible for implementation of the Integrated EMPr and IWWMP. Any construction and construction related activities that might lead to damage to the environment should be immediately brought to the attention of the ECO.

8.3.1 Monitoring Responsibilities of the ECO

- The ECO will undertake at least monthly site inspections and monitor and assist in environmental tasks to be executed incompliance with the Integrated EMPr and IWWMP as well as compile the weekly environmental checklists;
- to ensure that the mitigation/rehabilitation measures and recommendations referred to in the Environmental Authorization or implemented and to ensure compliance with the provisions of the Integrated EMPr and IWWMP.
- should investigate and deal with environmental issues and concerns involved with the construction phase of the project
- must work in close conjunction with the applicant and site representatives’ contractors and subcontractors
- must identify and demarcate the impact area for example construction footprint area before commencement of activities
- must identify No-Go areas and areas sensitive to erosion and have these areas demarcated
- must demarcate the necessary areas for storage of materials, ablutions, eating areas of contract workers
- must keep a site inspection diary which will be the record of construction progress and environmental compliance and is recorded in the form of a ECO checklist and diary entries and photographic records for visual reference
- these documents must be available to the authorities for inspection upon request. The record must include the outcome of meetings discussions with the contractor and must reflect environmental queries agreed actions and date of eventual compliance. These must form part of the official environmental record.

8.3.2 Authority of the ECO

The ECO has the authority to stop works if in his or her opinion there is serious threat to, or impact on the environment, caused directly by construction operations. This authority is to be limited to non-compliance to the Integrated EMPr and IWWMP and emergency situations where consultation with the applicant is not immediately available. The easy oh

Easter inform the client of the reasons for the stoppage and agree on a solution to the problem as soon as possible.

upon failure by the contractor to show adequate consideration to the environmental aspects of this contract, i.e. willful destruction off the environment, the ECO may recommend to the applicant to have the contractors representative or any employees removed from the site all work suspended until the matter is remedied. no extension of time will be considered in the case of such suspensions and all costs will come to borne by the contractor.

8.3.3 Appointment of an Environmental Site Officer (if necessary)

When necessary or possible the ECO may appoint an environmental site officer to carry out the site inspections and the following will apply

- The suitably qualified and trained environmental site officer is appointed prior to commencement of construction activities, site inspections or decided upon between the applicant and the ECL depending on the environmental sensitivity off the construction areas and site location
- the frequency of site inspections is also determined prior to commencement of works but can change if the need arises the suitable qualified environmental site officer will perform certain functions related to the continued compliance with the Integrated EMPr and IWWMP Under guidance and instruction of the ECO.

Qualifications of an environmental site officer:

- have proven previous experience as an environmental site officer
- have a sound understanding of the contents of the Integrated EMPr and IWWMP
- must be able to enforce compliance to all relevant site documents.
- have a basic knowledge of the NEMA and other relevant information
- a construction background will be advantageous
- must be able to work with site personnel and resident engineers

9. CHANGES TO THE INTEGRATED EMPR AND IWWMP

No deviation from the contents of the Integrated EMPr and IWWMP is allowed without the necessary approvals from the relevant authorities. Changes or deviations must be motivated in writing by means of a Method Statement and the same procedures for a standard method statement should be followed.

Any additions or amendments must first be approved by the ECO who will use his or her discretion after consulting with the Environmental Consultant (EAP) and the Applicant.

10. RECORD KEEPING

All records relating to the implementation of this Integrated EMPr and IWWMP (e.g. photographs, declaration of understanding, ECO checklists, environmental register) must be stored for easy retrieval. These should be available for scrutiny by any relevant authority.

Photographs should be taken and stored on this site prior to, during and immediately off the construction, as a visual reference. Any non-compliance report must have sufficient photographic proof.

11. ENVIROMENTAL COMPLETION STATEMENT

An Environmental Completion Statement is a report by the ECO or EAP stating completion of the project and compliance with the Integrated EMPr and IWWMP and conditions.

12. PRE-CONSTRUCTION DESIGN CONSIDERATIONS

It is recommended that sustainable design considerations or implemented during the planning phase in order to ensure that the impacts associated with development or avoided, minimized all managed before construction commences.

12.1 Abattoir Design Principles

The layout of the premises and building must be designed so that the production process moves in one direction without any cross flow of products which may adversely affect the hygiene of the product. Live slaughter animals are received at the “dirty” end of the abattoir and meat is dispatched from the clean side of the abattoir.

Below are the requirements for an abattoir according to the **Meat Inspectors Manual: Abattoir Hygiene:** The premises must be finished with lockable gates in order to control the unauthorized entry of vehicles, persons and animals.

1. The layout of the site must be such that a linear flow pattern can be maintained with life animal reception on one site and removal of products on the other.
2. “Clean” and “dirty” areas must be separated according to the functions as previously mentioned.
3. Surfaces on the site must be paved or grassed. Traffic areas in the smaller abattoir must have a surface that is dust and mud free, readily cleanable and while drained. The planting of grass and shrubs creates a pleasant environment and gives the impression that the premises are well managed and cared for.
4. From the point of view of industrial psychology it has been found that the more attractive a site is maintained, the easier it is for the workers to accept and adjust do the high standards of hygiene expected from them.
5. All paved areas must provide for stormwater drainage
6. Vehicle parking areas where carcasses are off-loaded, or meat is loaded under roof must have curbstones and be drained so that they can be cleaned every day. Dirt that is washed on to grass is impossible to remove.

12.2 Energy Conservation

The provision of energy has become a controversial topic and has led to the reconsideration for many people of how they source and use energy in their homes and businesses. It is important for people to create a habit of conserving energy on a daily basis.

Many of the suggestions below generally require inclusion during the design phase of new developments but can just as easily be incorporated into existing buildings.

12.2.1 Solar Heating Water Systems

Solar heated water systems or an innovative way of producing hot water without putting additional pressure on gas or municipal power supply. There are many different tops available on the market, and the owner and applicant must consider all the requirements before making a choice.

12.2.2 Energy Efficient Lighting

In terms of Best Practice, it is required that energy saving lighting fixtures be used throughout the entire development. It is therefore specified that light emitting diodes (LED) or compact fluorescent (CF) lighting be used as opposed to incandescent lighting.

12.2.3 Solar Energy Generation of Electricity

Solar energy is created by light and heat which is emitted by the sun, in the form of electromagnetic radiation. With modern technology, we can capture this radiation and turn it into a usable form of solar energy such as electricity. Capturing solar energy depends very much on the size of the available storage in the form of batteries. The recommendation of this document is that solar energy must be used wherever possible, in conjunction with the existing electrical provisions.

12.2.4 Geyser and Pipe Insulation

apart from the savings in terms of energy as detailed, insulating Jesus and pipes site water, as shorter periods of running the test to get hot water or required. Installed geezers and all hot water part should have insulation fitted where possible.

12.3 Water Conservation

Water conservation in South Africa is of vital importance. Our water resources or under extreme pressure from pollution, over abstraction and development and all efforts to minimize usage must be implemented. Abattoirs in particular, can overuse water given the hygiene requirements that are required.

The following water resource measures, among others, must be implemented to reduce water demand:

- No animals may overnight
- Paunch content should be removed without the use of water as far as possible
- It is advisable to first hose down blood soiled areas with cold water. Hot water causes blood to congeal which leads to longer washing times and water wastage.
- Geysers must be fitted with insulation jackets to minimize water being wasted while waiting for hot water. If the geysers is a distance away from the usage area, either a secondary heating mechanism must be placed inline or the water must be captured by means of a heat sensitive valve that pipes it to a holding tank for later use.
- All houses must be fitted with self-closing nozzles or pistol grips to prevent water wastage when not in use.
- All taps used for personal hygiene must be low flow nozzles with automatic cut off or foot operated mechanisms.
- Water monitoring must take place daily.
- Water saving information / education must be available to personnel.

13. WASTE RELATED ACTIVITIES IDENTIFIED IN THE BASIC ASSESSMENT REPORT

The environmental process identified and assessed various potential impacts associated with the proposed project. Waste related impacts that were assessed during the environmental process are listed below. Impacts are categorized according to their level of significance. Categories range from Low, Medium-Low, Medium, or High-Medium to High.

CONSTRUCTION PHASE

Negative Impacts (Low)	**Description of the Impact**
Waste – Sewerage / effluent / hydrocarbons	Little or no sewerage will be generated during the land clearing and construction. Spillage and/or leakage of hydrocarbons by construction vehicles and machinery may cause chemical contamination of soil and groundwater.
Waste – Building rubble and littering	There Will be building rubble generated during the construction phase. Construction workers might litter during this phase.

OPERATIONAL PHASE

Negative Impacts (Medium)	**Description of the Impact**
Waste – Sewerage / effluent / hydrocarbons	The vast majority of effluent produced by the proposed development will be in the form of blood water and fat. it is anticipated that the effluent will be bumped to a holding tank and treated accordingly. Thereafter the treated effluent will be used ask fertilizer in the irrigation scheme on certain crops.

Negative Impacts (High-Medium)	Description of the Impact
Waste – Solid waste	Solid waste entail feathers, dead on arrival birds, etc. Feathers will be buried on-site in trenches and covered-up to decompose naturally. Since the applicant's chicken houses will be located on the same property as the abattoir and in close vicinity – it is anticipated that dead birds on arrival will be minimal. However, should a bird die, it will be disposed of by a private waste contractor. Manure will be temporally stored on-site and used as natural supplement in the fertilizing of the crops on site.

14. CONSTRUCTION PHASE MANANAGEMENT PLAN

The overall goal for construction phase is to undertake activities associated with the construction of a new abattoir on Paula Farm, Brandfort.

General Management Strategy

- Appointment of the Environmental Control Officer

Mitigation Measures during the Construction Phase

All appropriate mitigation measures should be implemented by the Applicant for the duration of the construction phase.

Overall Goal: Undertake the construction phase in a way that:

- Ensure that all construction activities are properly managed in respect of environmental aspects and impacts

- Enables construction activities to be undertaken without significant disruption to other land uses and activities in the area, in particular concerning noise impacts.
- Minimise the impact on heritage sites should they be uncovered.
- Establishes an environmental baseline during construction activities on the site, where possible.

Roles and Responsibilities for the Construction Phase

As the applicant/proponent, Estian de Swart, must ensure that the project complies with the requirements of all environmental authorizations and permits, and obligations emanating from other relevant environmental legislation. While the applicant has a duty of care in this regard, the contractor will be held directly responsible for all these permits. This obligation is partly made through the development of the Integrated EMPr and IWWMP and the implementation thereof. Mr. De Swart will retain various key roles and responsibilities during the construction phase. These are outlined within the Integrated EMPr and IWWMP compiled for construction activities on Paula Farm 1063, Brandfort.

Objectives

In order to meet this goal, the following objectives have been identified, together with the necessary actions and monitoring requirements.

OBJECTIVE: Securing the site and site camp establishment, including fences	
The Contractor(s) must take all reasonable measures to ensure the safety of the public in the surrounding area. Where the public could be exposed to danger by any of the works or site activities, the Contractor(s) must, as appropriate provide suitable flagman, barriers and all warning signs in English and any other relevant indigenous language, all to the approval of the Site Manager /Engineer.	
Project components	Construction Phase
Activity	• Open excavations • Site preparation • Cement / concrete batching • Fuel storage & hazardous substance spillage • Movement of construction employees' vehicles in the area and on site • Habitat transformation during construction
Potential Impact	• Hazardous substance contamination (soil & water) • Erosion • Vegetation clearance • Disturbance of faunal communities due to construction as well as poaching and hunting risk from construction staff[1]. • Disturbance to potential archeological sites[2]
Mitigation Target	• To secure the site against unauthorized entry • To protect members of the public and landowners • Minimize pollution to stormwater that could affect the storm water system

[1] *Information obtained from Terrestrial Biodiversity (Fauna & Flora) Specialist Report, October 2020*

[2] *Palaeontological Desktop Assessment for the Proposed Paula Poultry Abattoir near Brandfort, Masilonyana Municipality, Free State, October 2020*

Mitigation: Action / Control	Responsibility	Timeframe
Secure site, working areas and excavations in an appropriate manner as agreed.	Contractor / ECO	During site establishment and duration of the contract
Hazardous substances must be secured in a locked container that have sufficient ventilation. Spill container kits need to be placed on-site. Any hazardous substance spill must be cleaned up immediately and the contaminated material must be disposed of at an approved landfill site.	Contractor / ECO / Applicant	During site establishment and duration of the contract
When necessary to control access, fence and secure area using appropriate means, and implement access control procedures.	Contractor / ECO	During site establishment and duration of the contract
Develop and implement an efficient access control system which allows for the identification of all people on site.	Contractor / ECO	During site establishment and duration of the contract
All cement batching must take place on an area that is to be hot surfaced as part of the development. The location of concrete batching areas and hazardous storage areas must be approved by the ECO Washdown areas must be confined Two within the concrete batching areas only.	Contractor / ECO	Duration of the contract

Limit vehicle used to existing disturbed areas within the demarcated work areas	Contractor / ECO	Duration of the contract
Establish the necessary ablution facilities with chemical toilets and provide adequate facilities and ablution for construction workers.	Contractor / ECO	During site establishment and duration of the contract
Monitoring	• Undertake a pre-construction walkthrough of the site. • An incident reporting system will be used to record noncompliance to the integrated EMPR & IWWMP. • Regular visual inspection of fence for signs of deterioration forced areas. • Regular visual inspections for hazardous substance spillages. • Public complaints register used to record complaints received. • ECO to monitor all construction areas on a continuous basis until all construction is completed, immediate report back to the Site Manager. • Concrete batching outside areas indicated for should only take place with the necessary approval of the ECO and then all topsoil must be stripped and stockpiled for reuse. • concrete mixing areas must have bunded walls or a small settling pond in order to prevent cement runoff • dry mixing areas to be carefully placed in consultation with the ECO • when using ready mix concrete, K must be taken to prevent spills from the trucks while offloading • easier to address any infringement with responsible contractors as soon as these are recorded • in areas where construction activities have been completed and we know further disturbance would take place,	

	rehabilitation and revegetation must commence as soon as possible. • Any areas that are identified by the ECO as being prone to erosion must be suitably protected.

OBJECTIVE: Minimisation of Development Footprint (demarcation of work areas) including all infrastructure	
Project components	Construction Phase
Activity	• Site preparation • Vegetation clearance • Installation of services • Construction of buildings & pollution • Alien plant invasion in and around the road.[3] • Unregulated runoff from the access road. • Maintenance activities which may lead to negative impacts such as pollution, herbicide drift etc.
Potential Impact	• Alien plant invasion[4] • Disturbance to potential archeological sites • Impacts on ecological processes Loss of plant cover leading to erosion as well as loss of faunal habitat and loss of specimens of protected plants[5] • Disturbance to local residents
Mitigation Target	• Undertake specialist assessments in terrestrial biodiversity and paleontology. • To retain natural vegetation, where possible. • To minimize footprints of disturbance of vegetation / habitat. • Remove and store all topsoil on areas that are to be excavated; and use this topsoil in subsequent rehabilitation of disturbed areas.

[3] *Information obtained from Terrestrial Biodiversity (Fauna & Flora) Specialist Report, October 2020*

[4] *Information obtained from Terrestrial Biodiversity (Fauna & Flora) Specialist Report, October 2020*

[5] *Information obtained from Terrestrial Biodiversity (Fauna & Flora) Specialist Report, October 2020*

Mitigation: Action / Control	Responsibility	Timeframe
Preconstruction walk-through of road footprint.	ECO	During site establishment and duration of the contract
Vegetation control should be by manual clearing and herbicides should not be used except to control alien plants in the prescribed manner, including annual monitoring of alien invasive plants	Contractor / ECO	During site establishment and duration of the contract
Obtain relevant permits from the Department of Agriculture, Forestry and Fisheries (DAFF) and the Free State Department of Environment and Nature Conservation prior to any construction activities at the site	ECO	During site establishment and duration of the contract
Protected species which cannot be avoided should be translocated to a safe area on the site prior to construction. This does not include woody species which cannot be translocated and where these are protected by DAFF and permit for their destruction would be required	ECO	During site establishment and duration of the contract
Constructions activities must be restricted to demarcated areas to minimize the impact of the development footprint.	Contractor / ECO	Duration of the contract
Should any archeological or heritage artefacts (as defined in the National Heritage Resources Act (Act 25 of 1999)) be found the ECO and relevant authority must be notified immediately and all	Contractor / ECO / Applicant	During site establishment and duration of the contract

work around the discovery site must stop until approval to continue with construction at the affected area is provided.[6]		
Topsoil must not be stripped of stockpiled when it is raining or when the soil is wet as compacting will occur.	Contractor / ECO	Duration of the contract
Limit vehicle use to existing disturbed areas within the demarcated work areas.	Contractor / ECO	Duration of the contract
Approved plans must show location of all construction areas	Contractor / ECO	Duration of the contract
Monitoring	• Approved plans must show location of all construction areas. • The exact footprint of the construction areas to be surveyed and pegged. • ECO report must contain surveyed plan.	

[6] *Palaeontological Desktop Assessment for the Proposed Paula Poultry Abattoir near Brandfort, Masilonyana Municipality, Free State, October 2020*

OBJECTIVE: Waste & Hazardous Substances Management		
Project components	Construction Phase	
Activity	• Construction rubble generation • Hazardous substance spillage and disposal of containers • Debris clearance • General waste generation	
Potential Impact	• Contamination of soil and water resource • Unauthorized waste laydown areas • Impacts on vegetation & ecological processes	
Mitigation Target	• To minimize waste generation. • Minimize footprints of disturbance of vegetation / habitats. • To prevent or minimize the contamination of the natural environment by pollutants from waste generated on-site. • To prevent or minimize the contamination of the natural environment by pollutants from general and hazardous waste generated on-site.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Waste bins should not be allowed to overflow and are to be emptied regularly. No littering is permitting on-site.	Contractor / ECO	Duration of the contract
Any hazardous material spill must be contained and cleaned up immediately. The ECO must be informed immediately of any hazardous spills.	Contractor / ECO	During site establishment and duration of the contract
Accumulation of large stockpiles of waste is not permitted. Waste is to be removed at regular intervals,	Contractor / ECO	Duration of the contract

with a minimum frequency of once a week.		
Building rubble is to be kept separate from other construction waste. Rubble is to be kept clean of brick ties, plastics, papers and cement bags.	Contractor / ECO	Duration of the contract
Rubble stockpiles and waste structures shall be positioned to permit easy access by removal trucks.	Contractor / ECO	Start and end of the construction.
All waste is to be disposed of at approved landfill sites. No burning or burying is permitted.	Contractor /Applicant / ECO	Start and end of the construction.
Hazardous waste such as oil, diesel, petrol, chemicals, paints and solvents are to be disposed of separately from general waste.	Contractor /Applicant / ECO	Start and end of the construction.
Demarcated waste bins shall be provided for hazardous waste and placed at designated areas.	Contractor /Applicant / ECO	Start and end of the construction.
Runoff from the washing out of wall cavities is to be contained against the building by excavations of berms around the foundations.	Contractor /Applicant / ECO	Start and end of the construction.
Cleaning of equipment is to take place within designated areas.	Contractor /Applicant / ECO	Start and end of the construction.
No wastewater may be disposed of on-site or onto soil or into any water body.	Contractor /Applicant / ECO	Start and end of the construction.
Monitoring	• ECO to monitor all construction areas on a continuous basis until all construction is completed. Immediate report back to Site Manager / Engineer.	

	• An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP • Concrete batching outside areas indicated for should only take place with the necessary approval of the ECO and then all topsoil must be stripped and stockpiled for re-use. • Regular visual inspection of fence for signs of deterioration and/ or forced access.

OBJECTIVE: Heritage & Paleontological Management		
Project components	Construction Phase	
Activity	• Site preparation & clearance • Construction activities	
Potential Impact	• Disturbance to archeological sites and destruction of artefacts	
Mitigation Target	• To minimize disturbance footprint. • Identify sensitive areas and secure artefact sites	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Undertake an archeological / paleontological assessment of the area to determine probability of the	Applicant	Prior to commencement of any construction activities
Should any archeological or heritage artefacts (as defined in the National Heritage Resources Act (Act 25 of 1999)) be found the ECO and relevant authority must be notified immediately and all work around the discovery site must stop until approval to continue with construction at the affected area is provided.	Contractor / ECO / Applicant	During site establishment and duration of the contract
Monitoring	• ECO to monitor all construction areas on a continuous basis until all construction is completed. Immediate report back to Site Manager / Engineer. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP • Concrete batching outside areas indicated for should only take place with the necessary approval of the ECO and then all topsoil must be stripped and stockpiled for re-use.	

	• Regular visual inspection of fence for signs of deterioration and/ or forced access.

OBJECTIVE: Erosion and Sedimentation Control		
Project components	Construction Phase	
Activity	• Site preparation • Vegetation clearance • Construction activities	
Potential Impact	• Vegetation loss can lead to exposed soil that can erode due to rain and wind • Sediments can be displaced during heavy rainfall events	
Mitigation Target	• To minimize erosion damage. • To minimize scarring of soil surface and land features. • To minimize disturbance and loss of topsoil.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Construction activities must preferably take place during the dry winter months to reduce the potential of erosion.	Contractor	Duration of the contract
Areas prone to erosion should be monitored and the necessary mitigation measures should be initiated on-site if necessary.	Contractor / ECO	Duration of the contract
Topsoil stockpiles (if relevant) must be clearly demarcated as no-go areas.	Contractor / ECO	Duration of the contract
Topsoil stockpiles must not be higher than two meters to avoid compaction thereby maintaining the soil integrity and chemical composition.	Contractor / ECO	Start and end of the construction.
Stockpiles ought to be stabilized if signs of erosion are visible.	Contractor / ECO	Start and end of the construction.

The stockpiles my only be placed within the demarcated areas the location of which must be approved by the ECO.	Contractor / ECO	Start and end of the construction.
Dust control on the construction site must be implemented.	Contractor / ECO	Start and end of the construction.
Any excavation must be supervised by the ECO.	Contractor / ECO	Start and end of the construction.
Removed topsoil will be retained for future landscaping efforts and hence stop Bolt in demarcated areas	Contractor / ECO	Start and end of the construction.
Monitoring	• ECO to monitor all construction areas on a continuous basis until all construction is completed. Immediate report back to Site Manager / Engineer. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP • Regular visual inspection of stockpiles areas for signs of erosion.	

OBJECTIVE: Traffic Management		
Project components	Construction Phase	
Activity	• Construction activities might lead to temporarily traffic increase on the site	
Potential Impact	• Traffic accidents due to	
Mitigation Target	• To minimize erosion damage. • To minimize scarring of soil surface and land features. • To minimize disturbance and loss of topsoil.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Warning signs of construction work and vehicles must be placed at areas where oncoming traffic can be made aware of the dangers.	Contractor	Duration of the contract
Designated driving and parking areas for construction vehicles and activities.	Contractor	Duration of the contract
Monitoring	• ECO to monitor all construction activities until all construction is completed. Immediate report back to Site Manager / Engineer. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

OBJECTIVE: Economic and Employment Impacts		
Project components	Construction Phase	
Activity	• Construction activities might lead to temporarily increase in temporary workers on-site. • Construction activities may lead to short term economic upliftment during the construction period	
Potential Impact	• Increase is job opportunities in the area. • Temporary workers may request accommodation during the construction period. • Temporary increase number of people on-site during the construction period.	
Mitigation Target	• To minimize impact of influx of external people in the area. • To minimize disturbance caused by external people. • To optimize on using local labor.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Advertise construction job opportunities in the immediate area surrounding the site.	Contractor / Applicant	Duration of the contract
Where specific qualified personnel is not available in the immediate area, they must be sourced in the relevant municipal or district municipal area where possible.	Contractor / Applicant	Duration of the contract
Monitoring	• Contractor and Applicant can review relevant curriculum vitae's and also contact relevant references for job candidates. • Local housing / accommodation / guesthouses benefit from the development.	

15. OPERATIONAL PHASE MANAGEMENT PLAN

The Operational Phase of this EMPr Refers to the day to day management activities that are required to ensure sustainability and the achievement of the principles and objectives of the development. The requirements are applicable to the applicant all employees and all visitors to the abattoir.

15.1 Biosecurity

Biosecurity is a strategic and integrated approach that in composes the policy and regulatory frameworks (including instruments and activities) that analyze and manage risks in the sectors of food safety, animal life and health, and plant life and health including associated environmental risks. Biosecurity covers the introduction of plant pests, animal pests and diseases and the introduction and release of genetically modified organisms (GMO) and their products to name a few. Biosecurity is a realistic concept of direct relevance to sustainability of agriculture, food safety and the protection of the environment, including biodiversity[7]

In light of this, two documents provide the required standards for all abattoirs in South Africa, in terms of animal health, control and management of diseases, control and management of effluent and control and management of water resources. These are the Meat and Safety Act, Act 40 of 2000 and the Meat Inspectors Manual.

The following are the central national operating standards which apply to all abattoirs asper the Meat Safety Act (Act 40 of 2000);

a) Slaughter facility may only be registered as an abattoir if it complies with the prescribed requirements relating to throughput, structural requirements, hygiene management practices and related matters.
b) The owner of the abattoir must procure a meat inspection service for the abattoir.
c) Meat inspection service is my only be performed by the national executive officer, a provincial executive, an authorized person or an assignee, who must perform that function independently from the abattoir.
d) A person contemplated in paragraph (c) must be a veterinarian, meat inspector, meat examiner, animal health technician or such other duty qualified person as may be prescribed.

[7] *Food & Agriculture Organisation of the United Nations, 2017.*

e) An abattoir must be managed in accordance with a prescribed hygiene management and evaluation system.
f) Any person entering an abattoir must adhere to the prescribed hygiene requirements.
g) What to use in an abattoir must conform to the prescribed standard.
h) An animal presented for slaughter to an avatar must be handled humanely during loading, transportation, offloading, housing, immobilization and killing as prescribed in accordance with the requirements of the Animal Protection Act (Act No 71 of 1962).
i) No dead animal or animal suffering from a condition that may render the meat unsafe for human and animal consumption may be presented at an abattoir for slaughter.
j) An animal presented for slaughter must be examined by a person contemplated in paragraph (c) before slaughter and must be accompanied by information as to its ownership.
k) An animal presented for slaughter in accordance with an animal health scheme in terms of the Animal Diseases Act 1984 (Act No 35 of 1984) may only be accepted for slaughter if the animal is identified in accordance with the requirements of the scheme in question.
l) Any person suspecting that an animal is infected with a controlled animal disease as prescribed by or under the Animal Diseases Act 1984 must convey that suspicion without delay to a veterinarian in the employ of the Department or province.
m) Meat and animal products must be inspected, marked and dealt with in accordance with the prescribed methods by a person contemplated in paragraph (c).
n) Meet may only be removed from an abattoir if it's duly marked and the method of removal therefore poses no risk to the safety of the meat for human and animal consumption.
o) The owner of the abattoir must keep the prescribed records relating to the number of animals slaughtered, the origin of the animals slaughtered, details of the examinations carried out while the animal was still alive and inspections carried out after the animal has been slaughtered and the designation of the meat and animal products, and must at the request of a person contemplated in paragraph (c) furnish such information to that person.
p) The owner of an abattoir with prescribed laboratory facilities must ensure access to the laboratory by the national executive officer, a provincial executive officer, authorized person and an assignee.

q) The use, application and presence of specified substances and residues in meat and animal products must be detected and monitored in accordance with the prescribed methods.
r) The treatment, removal or disposal of condemned material, effluent, refuse and emissions must be carried out in accordance with the prescribed procedures, and
s) Animals may not be slaughtered for research purposes anelace eresearch protocol has been submitted and approved by the national executive officer.

15.2 Health and Safety

The Applicant must ensure compliance with the Occupational Health and Safety Act (Act No 85 of 1993). The following is important to note:

General duties of employer to the employees:

1. Every employer shall provide and maintain, as far as reasonable practicable, a working environment that is safe and without risk to the health of his employees.
2. Without the derogating from the generality of an employer's duty under subsection (1) the matters to which those duties refer include in particular (but not be limited to):
    a. The provision and maintenance of systems of work, plant and machinery that, as far as is reasonably practicable, or safe and without risks to health
    b. taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety or health of employees, before resorting to personal protective equipment
    c. making arrangements for insuring, as far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of particles or substances
    d. establishing, as far as is reasonably practicable, what hazards to the health or safety of persons or attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant which is used in his business, and he shall, as far as reasonably practical, further establish what precautionary measures must be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons, and he shall provide the necessary means to apply such precautionary measures

e. providing such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practical, the health and safety at work of his employees
f. as far as it's reasonably practical, not permitting any employee to do any work or produce, process, use, handle, store or transport any article or substance go to operate any plant or machinery, unless the precautionary measures contemplated in paragraphs (b) and (d) or any other precautionary measure which may be prescribed, have been taken
g. taking all necessary measures to ensure that requirements of this Act or complied with by every person in his employment or on premises under his control with plant or machinery is used
h. enforcing such measures as may be necessary in the interest of health and safety
i. ensuring that work is performed and that plant all machinery is used under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures take an bother employer or implemented; and
j. Causing all employees to be informed regarding the scope of the authority as contemplated in section 37 (1)(b) of the said Act.

The Occupational Health and Safety Act aims to provide for the health and safety of persons at work and for the health and safety of persons in connection with the activities of persons at work and to establish an advisory for occupational health safety.

15.3 General Operations of the Abattoir

15.3.1 Emergency / Contingency Preparedness

Responsible management and operation and the adoption of best practice during the operation of the abattoir must take place.

- All relevant municipal and provincial water authorities ought to be immediately notified in case of a form of water pollution / contamination.
- Maintenance and management roles should be clearly defined.
- All new operational staff and maintenance contractors to undergo general environmental awareness training before working on site, as well as health and safety induction all staff to be suitably qualified and have the necessary training.

15.3.2 Chemical Management (if required)

Proper chemical management is required to minimize or eliminate the risk of environmental damage, as well as the risk of fatalities, illnesses, injuries and incidents arising from the storage , handling, transport and disposal of hazardous material.

- Compliance with the Occupational Health and Safety Act of 1993.
- An emergency plan must be made to comply with Section 30 (Control of emergency incidents) of the National Environmental Management Act (NEMA) , No 107 of 1997).
- All new operational staff and maintenance contractors to undergo general environmental awareness training before working on site, as well as health and safety induction. Staff to be suitably qualified and have the necessary training.
- Emergency response equipment for spillage containment, fires, explosion, burns etc. must be made available.
- Material Safety Data Sheets (MSDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site.

OBJECTIVE: Chemical Management		
Project components	Operational Phase	
Activity	• Storage and Use of chemicals on-site for cleaning purposes and treatment of waste / effluent	
Potential Impact	• Spillages can result in water resource pollution • Wrongful use can result in human / animal/ vegetation harm	
Mitigation Target	• To minimize risk of pollution • Ensure correct storage and use of chemicals	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Ensure that all chemicals are securely stored and locked in a ventilated container.	Applicant	Duration of the operation
Expired chemicals must be disposed of as directed on the label and as per the regulated requirements.	Applicant	Duration of the operation
Ensure that personnel are adequately trained to handle chemical substances as well has have a good understanding as to how to clean-up a spill.	Applicant	Duration of the operation
Ensure that a chemical register is maintained on-site and records of use and disposal is kept.	Applicant	Duration of the operation
Monitoring	• The applicant to monitor all chemical uses on site. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

15.3.3 Fire Management

Fire safety is a very real risk and must be stringently controlled. No fires will be permitted on site for any reason. If required, a designated smoking area will be provided and clearly demarcated & post, with a facility for safe containment and disposal of cigarette butts.

The following measures must be implemented:

- **No open fires** or allowed anywhere on the site
- adequate firefighting equipment must be available on site and in good working order (including at least one type (all purposes) 2.5kg fire extinguisher and three fire beaters per working area). the persons on site must be trained in the use of such equipment.
- the operator must provide a list of authorities involved in firefighting in the region. This list must include emergency contact numbers and must be visible at the site office.

OBJECTIVE: Fire Management		
Project components	Operational Phase	
Activity	• Open fires and smoking areas	
Potential Impact	• Uncontrolled spread of fire • Fire can cause stored chemicals to explode	
Mitigation Target	• Allocate designated smoking areas that is clearly marked with cigarette disposal containers. • Ensure that firefighting equipment is on-site and that personnel is trained in firefighting.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Allocate designated smoking areas that is clearly marked and contain cigarette disposal containers.	Applicant	Duration of the operation
Provide firefighting equipment on-site & ensure that they are serviced on a regular basis.	Applicant	Duration of the operation
Ensure staff/ personnel are trained to do firefighting.	Applicant	Duration of the operation
Monitoring	• The applicant to monitor all firefighting equipment and ensure that they are serviced on a regular basis. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

15.4 Pollution and Waste Management

The operational management must include a responsible and integrated waste management approach to ensure that soil and water resources adjacent to the property are protected and not contaminated with pollutants. Pollutants might take the form of solid waste (letter and household general waste) or contaminated stormwater run-off, which is likely to be directed into on-site drainage systems and subsequently into nearby water courses.

Prescribed management procedures include the following:

OBJECTIVE: Condemned Material Management		
Project components	Operational Phase	
Activity	• Material resulting from slaughtering activities	
Potential Impact	• Contamination of water resources receiving environment. • Contamination of the workplace and impact on worker health.	
Mitigation Target	• No impact on the surrounding environment. • Ensure that spillage incidents are limited and treated as soon as possible.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
All “dead on arrival” chickens must be disposed of as condemned material in terms of Part VIII of GN 3505 of the Meat Safety Act.	Applicant	Duration of the operation
Condemned materials not distant for further processing (i.e. for pet foods etc.) must be placed in leakproof bins / plastic holders in preparation for final disposal at an appropriate registered landfill site..	Applicant	Duration of the operation
The bins must be transported / collected / disposed of daily for appropriate treatment at a registered waste treatment facility or as approved by the relevant authority.	Applicant	Duration of the operation
Ensure bins and containers are leak proof.	Applicant	Duration of the operation
If transporting, ensure the material is taken directly to the waste facility and no spillage occurs.	Applicant	Duration of the operation

Ensure all equipment is cleaned afterwards within the waste facility or the abattoir washing areas.	Applicant	Duration of the operation
The applicant to monitor all operations and ensure that employees comply with the required guidelines / regulations	Applicant	Duration of the operation
Monitoring	• Regular on-site inspections of facility and disposal facility and management thereof. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

OBJECTIVE: Effluent Management		
Project components	Operational Phase	
Activity	• Effluent (resulting from wash down, facility cleaning, water mixed with blood) as a resulting of slaughtering activities	
Potential Impact	• Contamination of water resources • Contamination of the workplace and impact on worker / residents health.	
Mitigation Target	• No impact on the surrounding environment. • Ensure that spillage incidents are limited and treated as soon as possible.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Provide for sufficient onsite effluent treatment facility. Effluent is to be pumped to a holding tank/facility and treated.	Applicant	Duration of the operation
Treated effluent must be sampled on a regular basis (in line with the required norms and standards and guideline requirements) to ensure that use of the treated effluent pose no environmental risk to the receiving crops and environment.	Applicant	Duration of the operation
All holding areas must be cleaned / squeegeed and / or dry swept to remove gross solids prior to wash down. This reduces the influence generation.	Applicant	Duration of the operation
The use of drain covers must only be considered as a safety measure and must not be used as solid trap. All wastewater will be disposed of via the onsite effluent treatment facility.	Applicant	Duration of the operation

Ensure that bins / holders and tanks are all leak proof.	Applicant	Duration of the operation
Effluent quality must comply with the requirements from the Department of Water and Sanitation and the relevant municipal bylaws.	Applicant	Duration of the operation
If transporting, ensure the effluent material is taken directly to a registered waste treatment facility and no spillage occurs.	Applicant	Duration of the operation
Undertake regular sampling of the treated effluent to ensure conformance to the required standards.	Applicant	Duration of the operation
The applicant to monitor all operations and ensure that employees comply with the required guidelines / regulations.	Applicant	Duration of the operation
Monitoring	• Regular on-site inspections of facility and disposal facility and management thereof. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

OBJECTIVE: Waste Management		
Project components	Operational Phase	
Activity	• Daily operation and generation of general waste / office waste.	
Potential Impact	• Illegal dumping in surrounding area. • Contamination of environment where the illegal dumping is taking place.	
Mitigation Target	• No impact on the surrounding environment. • Ensure that waste separation and recycling is implemented where practicable.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Refuse will be collected and disposed of as is acceptable in the area – taking cognizance not to cause any environmental harm.	Applicant	Duration of the operation
Where practicable – waste recycling must be promoted.	Applicant	Duration of the operation
Adequate refuse bins for personnel must be provided to encourage waste separation.	Applicant	Duration of the operation
Monitoring	• Regular on-site inspections of facility and disposal facility and management thereof. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

OBJECTIVE: Domestic Sewerage		
Project components	Operational Phase	
Activity	• Daily operation of toilet facilities	
Potential Impact	• Spillage from the sewerage infrastructure may cause harm to the environment	
Mitigation Target	• No impact on the surrounding environment. • Correct disposal of sewerage.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Sanitation must connect to a sufficient system i.e. septic tank system that is cleaned on a regular basis.	Applicant	Duration of the operation
Monitoring	• Regular on-site inspections of facility and disposal facility and management thereof. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

The above measures must be implemented to avoid pollution on the property and properly manage the waste generated during the operation of the abattoir

15.4.1 Organic Biodegradable Waste

The abattoir will produce 3 forms of organic biodegradable waste which will require disposal. This will include blood from the slaughter line, waste (that cannot be consumed) and manure found in the lower intestines. It should be noted that minimal amounts of manure or likely to be generated on site, ask the chickens will not be fit for 9 to 12 hours prior to slaughter (in accordance to the Poultry Regulations of 2006) And will spend a minimal time onsite prior to the slaughter. Furthermore, the number of chickens processed by the abattoir will be relatively high (up to 800 per day).

All solid waste will be removed daily and transported or disposed of at the agreed waste facility.

Organic material which will be transported to or collected by the relevant treatment facility must ensure that no nuisance spillage and odors, as far as possible occurs. In order to achieve this, the following must be undertaken as a minimum. Where treatment facilities have existing protocols in place, these must be followed correctly.

OBJECTIVE: Blood & Manure Management		
Project components	Operational Phase	
Activity	• Blood & manure resulting from slaughtering activities	
Potential Impact	• Contamination of water resources • Contamination of the workplace and impact on worker health.	
Mitigation Target	• No impact on the surrounding environment. • Ensure that blood spillage incidents are limited and treated as soon as possible.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Blood from the blood sump must be put into a sealed tank for treatment and disposal.	Applicant	Duration of the operation
Care must be taken to avoid spillages.	Applicant	Duration of the operation
The effluent in the tank must treated to biologically breakdown the blood and must be checked/ monitored on a daily basis	Applicant	Duration of the operation
The blood sump must not exceed capacity.	Applicant	Duration of the operation
Blood must be removed daily to minimize odor and pests.	Applicant	Duration of the operation
Tanks must be cleaned out within the waste facility or the abattoir washing areas.	Applicant	Duration of the operation
The applicant to monitor all operations and ensure that employees comply with the required guidelines / regulations	Applicant	Duration of the operation

Any excess manure should be distributed to local former, either by the applicant, or by arrangement with a company that specializes in fertilizer supply.	Applicant	Duration of the operation
All organic material that is identified by a veterinary inspector as hazardous must be immediately isolated and if possible frozen. Such items must be placed in a leak proof bin or plastic container and taken to licensed hazardous waste facility.	Applicant	Duration of the operation
Monitoring	• Regular on-site inspections of facility and disposal facility and management thereof. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

The wastewater from the facility will be treated in accordance with the relevant guideline documents and ultimately be used as fertilized effluent on selected crops on the farm.

15.4.2 Solid Waste

OBJECTIVE: Solid Waste Management		
Project components	• Operational Phase	
Activity	• Daily operation of facility	
Potential Impact	• Health impacts • Spreading of diseases • Localized contamination of soil & water resouce	
Mitigation Target	• Ensure the facility is maintained in a neat and tidy condition and the site shall be kept free of litter. • No impact on the surrounding environment.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
At all places of work the proponent shall provide litter bins, containers and refuse collection facilities for later disposal.	Applicant	Duration of the operation
Solid waste may be temporarily stored on site in a designated area prior to collection and disposal.	Applicant	Duration of the operation
Recyclable waste must be recycled wherever possible	Applicant	Duration of the operation
it is recommended that recycling bins are placed at the central point in the development, with access for all residents and visitors to encourage recycling of most of the general household waste that is produced.	Applicant	Duration of the operation
Monitoring	• Regular on-site inspections of facility and disposal facility and management thereof. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

15.4.3 Odour

OBJECTIVE: Odour Management		
Project components	• Operational Phase	
Activity	• Daily operation of facility	
Potential Impact	• Health impacts • Nuisance odours	
Mitigation Target	• To avoid nuisance odours affecting adjacent users and personnel.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
Proper waste management measures must be adhered to on site.	Applicant	Duration of the operation
Airtight bags and bins must be used for sources of nuisance odours.	Applicant	Duration of the operation
Good Housekeeping on the site to ensure that waste is removed regularly.	Applicant	Duration of the operation
No animals to overnight on site.	Applicant	Duration of the operation
Monitoring	• Regular on-site inspections of facility and disposal facility and management thereof. • An incident reporting system will be used to record non-compliance to the integrated EMPr & IWWMP	

16. DECOMMISSIONING PHASE MANAGEMENT PLAN

It is not likely that decommissioning of this facility will take place in the near future. However, in the event that decommissioning does occur, all relevant legislation and policies must be complied with for that given.

In general, in the future event that the facility will be decommissioned, the following must be undertaken:

OBJECTIVE: Decommissioning of buildings and infrastructure		
Project components	• Decommissioning Phase	
Activity	• Demolition of buildings and related infrastructure	
Potential Impact	• Environmental impacts due to facilities / storage tanks that have not been cleaned out. • Physical disturbance to the area.	
Mitigation Target	• To rehabilitate the area to an acceptable land use or to use the facility for another use.	
Mitigation: Action / Control	**Responsibility**	**Timeframe**
All building rubble must be disposed of at an acceptable land fill site.	Applicant	Duration of the operation
Any spills. Old tanks need to be removed, disposed of appropriately and the area cleaned.	Applicant	Duration of the operation
The footprint of the area must be rehabilitated to an agreed land use.	Applicant	Duration of the operation
Monitoring	• ECO to inspect the site and ensure that the final rehabilitated area complies with the end land use for the area.	

17. MONITORING & REPORTING

The purpose of a monitoring program East to determine if environmental management is yielding the desired results, relative to management goals and objectives. This entails:

- The detection of environmental change, using indicators, against a set of benchmarks from the hub of monitoring programs;
- The results of a monitoring program inform which steps, if any need to be implemented to ensure that an activity remains consistent with the management objectives;
- Monitoring effort should be proportional to the type and significance of impacts that have been predicted for the receiving environment.

ECO monitoring reports must be made available to the competent authority on a regular basis or on request.

The Type and frequency of monitoring must include:

- during construction photographs must be taken at each ECO site visit or as specified in the environmental program or determined by the ECO.
- during the operational phase, monitoring must be undertaken in terms of the *Department of Water & Sanitation Guidelines for the Handling, Treatment and Disposal of Abattoir Waste (2001)* and any other monitoring specified by them in severity and the Department of Agriculture in terms of their permits.
- Incident Reports
- Water quality monitoring must be undertaken to ensure that the concentration limits entering into the local disposal system and treatment facility is within acceptable parameters.

18. COMPLAINTS

The direct contact details for the abattoir manager/ Applicant must be provided on the property / the facility. The Applicant is committed to maintaining ongoing relationships with neighbors and will periodically seek their feedback on environmental performance. The applicant will record and investigate any complaints made either directly to the abattoir or to any other government official. Direct communication will be made to adjacent neighbors prior to undertaking infrequent, odorous activities such as irregular cleaning activities or in the event of an “upset condition” that was outside of normal activity

19. NON-COMPLIANCE

Any person is liable on conviction of an offence in terms of regulation 49 (a) of the National Environmental Law Second Amendment Act (Act 30 of 2013) & NEMA to imprisonment for a period not exceeding 10 years or a fine not exceeding R10 million or an amount prescribed in terms of the Adjustments of Fines Act (Act No 101 of 1991).

It is the responsibility of the ECO to report matters of non-compliance to the Employer's representative, who in turn is tasked with reporting such matters to the Holder of the Environmental Authorization (EA). It is the responsibility of the Holder of the Environmental Authorization, and not the ECO, to report such matters of non-compliance to the competent Authority.

19.1 Procedure for reporting non-compliance

The Holder of the environmental authorization shall comply with environmental specifications and requirements of this EMPr, any Approval / Licence issued and Section 28 of NEMA, On an ongoing basis and any failure on his spot to do so will entitle the authorities to impose a penalty.

In the event of non-compliance, the following recommended process shall be followed:

- The competent Authority shall issue a Notice of Noncompliance to the Holder of the EA , stating the nature and magnitude of the contravention.
- The Holder of the EA shall act to correct the transgression within the period specified in by the authority.
- The Holder of the EA shall provide the competent authority with a written statement describing the actions to be taken to discontinue the nonconformance, the actions taken to mitigate its effects and the expected results of the actions.
- In the case of the Holder of the EA failing to remedy the situation within the predetermined timeframe, the competent authority may recommend halting the activity.
- In the case of noncompliance giving rise to physical environmental damage or destruction, the competent authority shall be entitled to undertake or to cause to be undertaken such remedial works as may be required to my good such damage at the cost of the project Applicant.
- In any event of a dispute, differences of opinion, etc. between any parties in regard to or arising out of interpretation of the conditions of the EMPr & IWWMP disagreement regarding the implementation or method of implementation of

conditions of the EMPr & IWWMP, etc. any party shall be entitled to require that the issue be referred to specialists and / or the competent authority for determination.

- The competent authority shall at all times after right to stop work and /or certain activities on site in the case of noncompliance or failure to implement remediation measures

20. FINALISATION OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND INTEGRATED WASTEWATER MANAGEMENT PLAN

The EMPr & IWWMP Is a dynamic document which must be updated when required. It is considered critical that this EMPr & IWWMP be updated to include site specific information from time to time. This will ensure that the construction and operation activities of planned and implemented taking sensitive environmental features into account as far as possible and as soon as they arise.

General Management Strategy

- Appointment of the Environmental Control Officer

Mitigation Measures during the Construction Phase

All appropriate mitigation measures should be implemented by the Applicant for the duration of the construction phase.

Overall Goal: Undertake the construction phase in a way that:

- Ensure that all construction activities are properly managed in respect of environmental aspects and impacts
- Enables construction activities to be undertaken without significant disruption to other land uses and activities in the area, in particular concerning noise impacts.
- Minimise the impact on heritage sites should they be uncovered.
- Establishes an environmental baseline during construction activities on the site, where possible.

Roles and Responsibilities for the Construction Phase

As the applicant/proponent, Estian de Swart, must ensure that the project complies with the requirements of all environmental authorizations and permits, and obligations

emanating from other relevant environmental legislation. While the applicant has a duty of care in this regard, the contractor will be held directly responsible for all these permits. This obligation is partly made through the development of the Integrated EMPr and IWWMP and the implementation thereof. Mr. De Swart will retain various key roles and responsibilities during the construction phase. These are outlined within the Integrated EMPr and IWWMP compiled for construction activities on Paula Farm 1063, Brandfort.

Objectives

In order to meet this goal, the following objectives have been identified, together with the necessary actions and monitoring requirements.

Appendix A: Locality of the proposed development

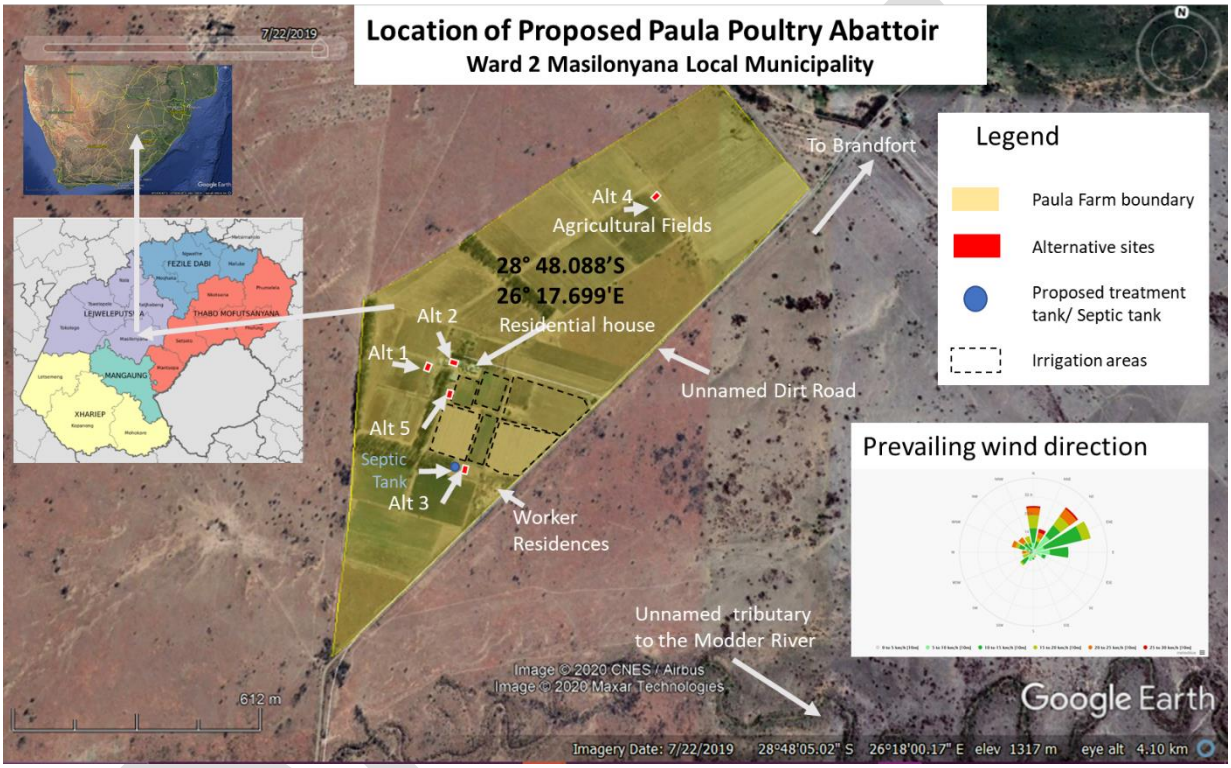

Figure 2: Location of Paula Farm and the proposed abattoir.

Appendix B: Contractor Environmental Checklist

Contractor Environmental Checklist

Site:
Phase of Work:_____

Environmental Aspect	Yes/No	Comments
How many workers are on site?		
All new personnel on site or Are aware of the contents of the EMPr & IWWMP and have been through the environmental awareness course?		
Contractors camp is neat and tidy and the libraries facilities are of an acceptable standard.		
Sufficient and appropriate firefighting equipment is visible and readily available.		
Waste control and removal system is being maintained.		
Refuse bins in place and maintained .		
Toilets are in place and clean.		
Demarcation and other fences are being maintained.		
What machinery are on site?		
Drip trays are being utilized where there is a risk of incidental spillage.		
No leakages (oil / diesel) are visible from construction vehicles.		
No go areas, remaining natural features and trees have not been damaged.		
Dust control measures (if necessary) are in place and or effectively controlling dust.		
Noise control measures (if necessary) is in place and is working effectively.		
Erosion control measures if necessary are in place and are effective in controlling erosion.		
Stockpiles are located within the boundary of the site, not exceeding 2 meters in height and are protected from erosion.		

Appendix C: ECO Construction Site Environmental Inspection Report

Project Name		**Report No:**		**ECO:**	
Contractor;		Date:		Rating Criteria:	1. Poor 2. Average 3. Good

Environmental Aspect	**Rating**	**Finding & Recommendation**
Demarcation: Boundaries of "no-go" areas, construction sites, offices, temporary storage areas as well as libraries facilities must be demarcated and maintained for the length of the construction period.		
No-Go Areas: Identified no-go areas, must be demarcated for protection from construction damage (including secondary impact) • All areas outside of the demarcated construction site and access road is regarded as no-go areas • special attention to identified areas with significant vegetation		
Construction Camp & Site Offices; Must be demarcated, organized and free of day-to-day letter (Good Housekeeping standards)		
Site Access and entrance: only approved entrance an access roads may be used full stop no new roads or parking areas may be developed without the approval of the ECO		
Mandatory Site Equipment: Mandatory site equipment must be in place, while maintained and in accordance with the EMPr & IWWMP requirements. This include: • Sufficient refuse bins, well placed and cleaned regularly • sufficient fire extinguishers, readily available maintained and functional • drip trays must be used at all fuel and oil storage and refueling sites • toilets and sanitation facilities must be kept clean, neat and hygienic		

Waste Control: The contractor is expected to control all construction related waste material and general litter on actual construction sites in its immediate surroundings. waste management must be in accordance with the EMPr & IWWMP of acceptable standards, with regular removal of general waste, as it is waste and construction waste .		
Stockpiling and temporarily storage: My only be placed on pre-approved sites, demarcated, stabilized and organized and neat		
Construction Vehicle Maintenance: Construction vehicles must be in good working order and well maintained to prevent oil and fuel leakages and to reduce noise levels		
Dust Control: Adequate control measures must be in place to prevent dust nuisance or pollutions. Areas of concern must be watered regularly during construction and periods of strong winds, BUT must take water saving into account		
Erosion Control: Erosion resulting from works must be controlled. • temporary and permanent drainage areas must be maintained • erosion damage and damage in drainage courses must be reinstated		
Noise Control: effective noise control measures must be in place and acceptable working hours must be kept		
Archaeological & Heritage Finds: Should any archaeological heritage remains be exposed during excavations or any activity on site, this must immediately be reported to the engineer, the ECO and the relevant heritage authority		
Environmental Conduct: Environmental conduct of construction personnel must be acceptable for example no burning or burying of refuse, now littering and cement bags or any other construction waste material laying around		
Environmental Checklist:		

The contractor must ensure that the weekly environmental checklist is completed at the end of each week and it must be available at the site offices		
Rehabilitation: On completion of the project or face, all areas impacted by the construction activities must be reinstated and or rehabilitated to the satisfaction of the ECO with emphasis on the following: • start officers must be removed and the areas rehabilitated or reinstated to the satisfaction of the ECO • Laboures facilities must be removed and the areas rehabilitated or reinstated to the satisfaction of the ECO • All construction site areas must be rehabilitated or reinstated to the satisfaction of the ECO • all temporary fencing and demarcation must be removed and the areas reinstated to the satisfaction of the ECO all remaining construction materials must be removed and the air is rehabilitated or reinstated to the satisfaction of the ECO • any additional disturbed areas must be rehabilitated or reinstated to the satisfaction of the EC oh		
Fixed Point Photos: Photographs must be taken by the ECO, site engineer or site manager, prior to, during and immediately after construction as visual reference. These photographs must be stored with other records relating to the EMPr & IWWMP		

ECO Comments

End of Report

_____

ECO Signature

Appendix D: Environmental Complaints Register

No	Date	Name of Complainant	Contact No	Nature of Complaint	Signature	Action taken to rectify complaint6

Appendix E: Declaration of Understanding

Name & Surname:	
Representing:	
Contract:	
1. Declare that I have read and understood the contents of the Environmental Management Program & Integrated Wastewater Management Plan	
2. I also declare that I understand my responsibilities in terms of enforcing and implementing the Environmental Specifications for the aforementioned Contract.	
Signed (Contractor)	
Place:	
Signed (Applicant)	
Place:	
Date:	
Witness 1:	
Witness 2:	

Appendix F: Environmental Authorisation and Water Use License

Appendix G: Guide to Water and Waste-Water Management in the Poultry Abattoir Industry