

Project Title

CTDL Poultry farm – Broederstroom: New broiler farm operation

Project Name and Location

Ptn A/18 of Farm Hartbeesthoek 498 JQ – Broederstroom / Bojanala District

Co-ordinates: 25°50' 07.99"S 27° 48' 04.97"E

LPI Code: T0JQ 000 000 000 498 0018

Municipality: Madibeng / Bojanala District Municipality

District: Bojanala District Municipality

Project Description

Construction and operation of a new broiler farm operation consisting of 10 environmentally controlled chicken houses plus associated infrastructure with each house having a carrying capacity of 55 000 chickens. Total chickens on site: 550 000.

All 10 houses will be accommodated within a single bio-security area, with water supply from borehole and Eskom power supply.

Access to the property is from the R3/R400 provincial road via the N4 and Broederstroom access road

Date of Submission

January 2026

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NW-DEDECT Project Reference

Awaiting registration number

[Refer: Annex – EAPASA Certificate of EAP]

Comments by the NW DEDECT

**** Awaiting Comments ****

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Acronyms and Abbreviations:

EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAPASA	Environmental Assessment Practitioners Association of South Africa
EIA	Environmental Impact Assessment
FBAR	Final Basic Assessment Report
NW DEDECT	North West Department of Economic Development, Environment, Conservation and Tourism
PPP	Public Participation Process

ANNEXURES

Executive Summary

Mr Justin Gordon of CTDL Poultry is the owner of the of the current farm operation on Ptn A/18 of Farm Hartbeestpoort 498 JQ. Mr Gordon wishes to diversify and enter the world of large scale chicken farming, thus expanding the yield potential of the farm by constructing and operating a formal chicken farm operation to the land.

The development will consist of the following infrastructure components:

- 10 x environmentally controlled chicken houses [150m x 17m x3 3.4m]
- 10 x computer control rooms, one for each of the chicken houses;
- 10 x slow combustion coal burning heating systems, one for each of the chicken houses;
- 10 x sets of two feed silos [20 000kg capacity each], one set per chicken house;
- Electrical; water and feeder system for each chicken house;
- Bulk water reservoirs [x2] for the storage of bulk water for the chicken houses;
- Staff ablution and toilet facilities for showering in and out every day;
- Control room for the remote monitoring of the different chicken houses;
- Bio-security office; examination room and cooler facility for the holding of mortalities;
- Back-up generator for the supply of power during power outages;
- Coal bunkers for the holding of bulk coal for the heating system.

Each chicken house will accommodate 55 000 chickens with a total holding capacity of 550 000 chickens per cycle. The facility will produce 7 cycles per year with a total of 3 850 000 chickens being produced for the fresh meat market [broiler chickens].

There is only one portion of land identified as the PREFERRED area for development.



The area of development on the farm Ptn A/18 Hartbeesthoek 498JQ [Approx 16.2 Ha]



The **PREFERRED** site which is located back from the main access road for bio-security reasons and not in close proximity of any other chicken farm operations.

Minimal removal of trees and shrubs as the area is quite clear of indigenous vegetation.

The application is made in terms of NEMA **GNR327 Listing 1 Activity 5 [ii] [iv] and Activity 27**

The process being followed is that of an EIA / Basic Assessment with a full PPP Process and assessment of both **POSITIVE** and **NEGATIVE** Impacts as identified.

NOTE:

There is no chicken farm operation on the farm currently.

1. Introduction

The farm, known as **Ptn A/18 Hartbeestpoort 498 JQ**, is in the **Bojanala District**, and the area to be developed is around 16.2 Ha in size.



Photo 1: The farm Ptn A/18 Hartbeestpoort 498 JQ

In view of the ever increasing demand for fresh meat, especially chicken, the owner of the farm, has decided to construct eight [8] chicken houses on the farm, thus increasing the yield potential of the farm overall. With the [8] chicken houses the production yield will be increased by 400 000 broiler chickens every 32 – 35 day cycles / 2 800 000 total per year.

Land to be used: ± 16.2Ha [Indicated in WHITE]

NOTE:

The development will increase the yield potential of the farm

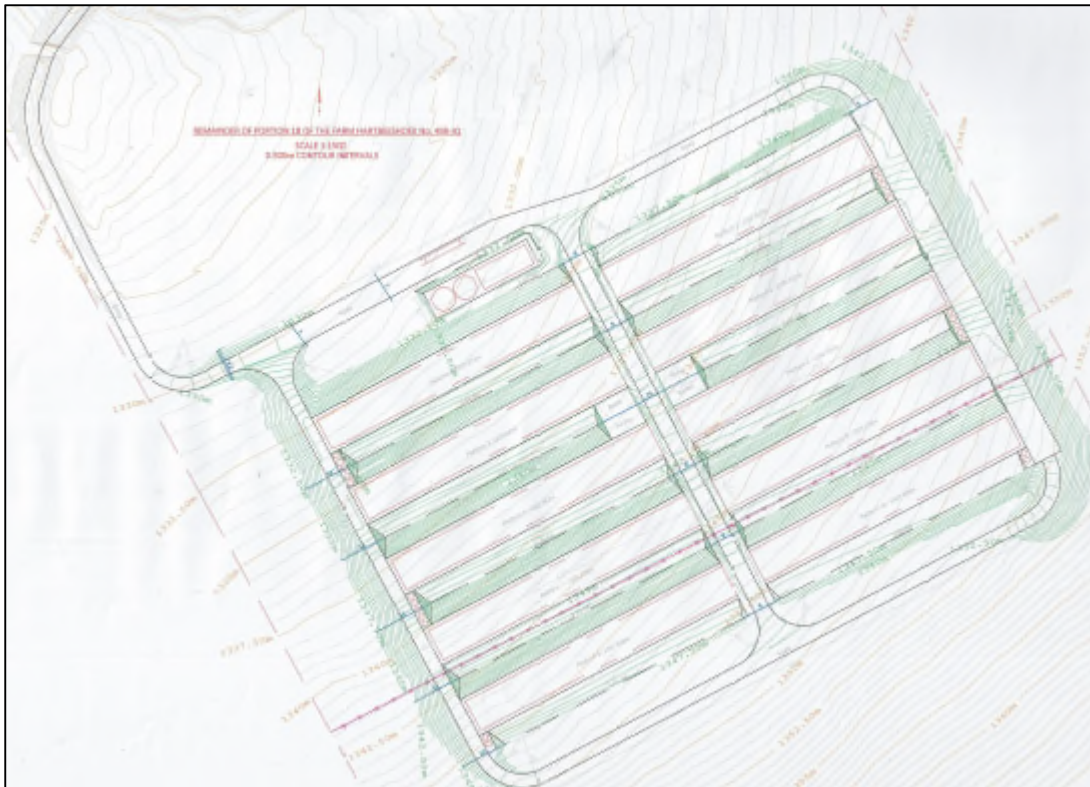


Photo 2: Artist impression of the houses on the *PREFERRED* site on the farm

1.1 Purpose of the project

The main purpose of the chicken houses is to provide an additional source of broiler chickens to the fresh meat market.

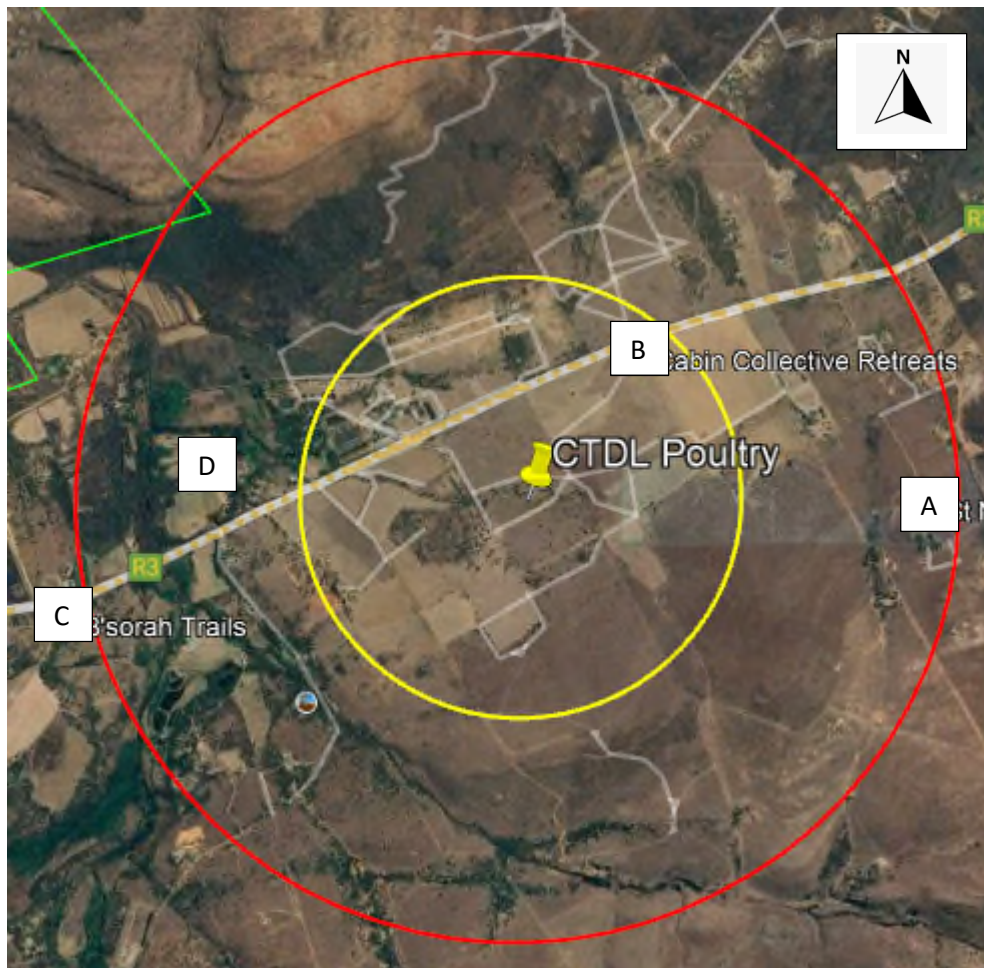
1.2 Objectives

The objective of the development is to provide larger numbers of adult chickens to the fresh meat broiler market as the demand for chicken is ever-increasing. At present South Africa imports in excess of 360 000 tons of chicken from other countries. With the ever decreasing value of the SA Rand the imported product is becoming very expensive. International markets are also “dumping” produce on our shores which damages our local industry. As such the local economy must counter the impacts by becoming self-sufficient.

1.3 Project location and context

The farm portion is located around 8 km south-south-west [SSW] of the town of Broederstroom, alongside the R3/R400 feeder road.

The surrounding area sees small scale farming and very much a rural setting.



- A – Church 1800m
- B - Tourism 947m
- C – Tourism 2168m
- D – Agricultural 852m

Photo 3 : Farm CTDL Poultry] in relation to surrounding area

1.4 The need for the EIA process

In terms of the National Environmental Management Act, Act 107 of 1998, [NEMA as amended], the activity of development and operation of facilities or infrastructure for the concentration of poultry in excess of 5000 units is a listed activity i.e. **GNR 327/7 April 2017**

Listing 1

Activity 5:-

- (ii) More than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days;
- (iv) More than 25 000 chicks younger than 20 day per facility outside an urban area.

Activity 27

- The clearance of an area of 1 Ha or more, but less than 20 Ha of indigenous vegetation, ...

The farm will also install bulk water storage reservoirs but according to **GNR 327/7 April 2017** the total storage will not exceed the minimum levels.

1.5 Sharing in existing infrastructure

Certain of the current infrastructure will not require duplication, and as such will be shared by the new chicken house operation i.e. access road; borehole and Eskom power supply point.

- a. **Water supply** – borehole supply will be used for the water requirements of the chicken farm operation.
- b. **Electricity supply** – the electrical supply to the farm will be positioned and installed to serve the development.
- c. **Access Gate & Road** – the current access gate and road will also be used by the new houses for their supplies and removal trucks and as such minimal new internal road and gates will be required.
- d. **Footprint area** – the area being identified for the development is:
±16.2 Ha of the farm and will accommodate the 10 new chicken houses; feed silos; slow combustion heating systems; coal bunker storage; parking areas for trucks and equipment; a diesel generator for power backup and a general manager's office.

NOTE: The houses will be built together in a single bio-security fenced area with its own access control.

1.6 Identification of the appropriate site

In order to consider the site for the chicken houses the following needed to be considered:

- The position of the current infrastructure on site [Eskom and boreholes];
- Current other uses [i.e. crops] of land on the farm and already impacted land;
- Access to the current infrastructure and the available adjacent land;
- Ease of access for large trucks and trailers to the property;
- Use of existing roads so as not to disturb the environment any further;
- Contours and levels

It would not make financial sense to locate the houses in an area where the entire support infrastructure i.e. water; electricity and access must be duplicated or where existing use must be removed in order to accommodate the chicken houses.

In view of the above the decision to locate the new houses on this specific portion of land is the correct call. In fact it is **the only PREFERRED option in terms of site selection** for this farm.

1.7 Need and desirability

Food security is of prime importance to South Africa. Any development for a stronger supply of food, especially if it is sustainable and will save the country on expensive imports [make food more readily available to the population] should be supported. South Africa has a very strong need to reduce the import of chicken meat from other countries and this additional source of supply will assist in reducing our dependence on imports.

1.8 What about alternatives

Alternatives or considering alternatives, especially in the sphere of technology are always advisable. However, the developer on Ptn A/18 of Hartbeestpoort intends to use the most modern of environmentally enclosed and controlled chicken house technology for the rearing of day-old chickens.

In addition the PREFERRED area to be used is located away from the main access road for bio-security reasons and the area is secluded and well away from any other chicken farm operation in the wider area.

1.9 What about the No-Go Option

In terms of Governments goals the No-Go option should not be considered i.e.

- In terms of food security the development will add to goal of SA being self-sufficient;
- In terms of employment opportunities the development will provide much needed employment opportunities to a province sporting the highest unemployment figures for SA;
- In terms of agricultural advancement the addition of a modern chicken farm operation will form part of the overall agricultural expansion of the province;
- In terms of a poultry farm the development will contribute to the greater expansion of poultry farming for South Africa;
- In terms of Environmental Legislation the development and its activities as determined within the parameters of the NEMA Legislation, and when authorised, will operate as a modern poultry farm under the guidance and parameters of the Act.

2. Legal and Regulatory Framework

In South Africa, the legal requirements for conducting an Environmental Impact Assessment (EIA) are primarily governed by the National Environmental Management Act, Act 107 of 1998 [NEMA as amended] and its associated Regulations. NEMA sets out the framework for EIA in the country and establishes the key legal requirements for the process. The fundamental legal requirements for conducting an EIA in terms of NEMA are:

a. Mandatory EIA for a Listed Activity

NEMA categorises activities into two main groups: *listed* and *specified* activities. For listed activities, an EIA is mandatory, and they are defined in a list of activities set out in the NEMA EIA Regulations. Should a project fall under any of the listed activities, then an EIA is required.

b. Submission of a Basic Assessment Report

For projects classified as “*basic assessments*” in the NEMA regulations, the project proponent must submit a Basic Assessment Report to the competent authority. Such a report must outline the environmental impacts of the proposed project and also any mitigation measures employed.

c. Public Participation

Public Participation is a fundamental aspect of the EIA process in South Africa. The NEMA EIA regulations require that the public, including affected and interested parties, have the opportunity to comment on the EIA report and that their comments are considered in the decision-making process.

d. Compliance and Monitoring

Projects that receive an Environmental Authorisation (EA) must adhere to the conditions set out in their authorisation as well as the dictates of the Environmental Management Programme (EMPr) for the activity[ies] applied for.

e. Review and Appeals

The NEMA Act provides for a review process, also referred to as the Appeals Process whereby any party may request a review of an environmental authorisation [EA] or decision [RoD]. Appeals on Basic Assessment Authorisations [as in this application] would normally be forwarded to relevant authority and the MEC for Environment in the province.

f. Penalties and Enforcement

Non-compliance with NEMA and the conditions of an environmental authorisation may result in penalties, fines, and/or legal action.

g. Sustainability and Sustainable Development

NEMA emphasises the principles of sustainable development. It requires that the environmental; social and economic aspects of a project be considered in the decision-making process in order to achieve sustainability.

h. Integration with Other Legislation

NEMA requires that the EIA process consider other relevant laws and regulations as well, thus ensuring that it is integrated with other environmental and developmental initiatives.

These legal requirements ensure that the EIA process is robust and comprehensive, with a focus on transparency, public participation, and sustainability. It is essential for a project proponent to understand and comply with the NEMA requirements when planning and conducting EIAs for a project. In addition, these requirements may evolve as environmental regulations and standards are updated, so it is crucial to stay informed about any changes in the legal framework.

Other legislations to be considered are:

- National Heritage Resources Act, 1999 – Act 25 of 1999
 - This Act helps in the preservation of our heritage be it old buildings; graves; ancient structures and artefacts. As such any such structures or finds must be reported to SAHRA and clearance obtained in order to proceed with development.
- Animal Health Act, 2002 – Act 7 of 2002
 - The farming with chickens is heavily regulated and the Act provides for certain “safe handling” and special actions to be taken in times of illnesses. For that reason the development and design of a chicken farm is required to obtain authorisation from the state before construction commences.
- Agricultural Product Standard Act, 1990 – Act 119 of 1990
 - This Act regulates the quality of product being delivered to market or end user. It ensures safety through inoculation; correct feeding cycles; bio-security and a wide range of other safety measures.
- Conservation of Agricultural Resources Act, 1983 – Act 43 of 1983
 - This Act ensures that there is a balance between what is being produced on a farm and the actual potential of the land. Natural grazing must be protected for grazing animals, as would the protection of trees and shrubs be important for those animals requiring such feed.
- Occupational Health and Safety Act, 1993 – Act 85 of 1993
 - This Act ensures that whatever is constructed and operated complies with the standards pertaining to electrical connections; safe building; protection of the wellbeing of users ; protection against wind and weather etc.
- All Provisions of the National Water Act, 1998 – Act 36 of 1998
 - Protection of water resources are very important. Be it the correct use; the right to use; the right to discharge or the right to abstract. All is measured against the parameters as set out in the NWA, and for this reason a multitude of uses needs specific licensing and authorisation.
- National Environmental Management Biodiversity Act, 2008 – Act 10 of 2004
 - Many of the areas in South Africa are prime support areas in terms of biodiversity. The result is that not all developments can merely be authorised. Impacts need to be determined and ways planned as to minimise impacts and possible damage to the environment.
- National Environmental Management Act, 2008 – Act 59 of 2008
 - The Act which determines if a license is required from the provincial authority and what measures should be taken in order to protect the environment; minimise impacts and protect the greater environment.
- Local Council by-laws pertaining to farming activities
 - Local Council Land Use Scheme
 - The municipality will need to authorise the plans for the development.

- Local Council Development Plan
 - The land use and intended farming activity must fall within the zoning of the land i.e. agricultural.
- North West Provincial Government: Veterinary Services
 - They provide guidance of bio-security and health planning for poultry farming.
- South African Veterinary Strategy [2016 – 2026]
 - This strategy looks at bio-security; animal health; protocols to be followed during health security scares; treatment of serious health issues and the overall protection of livestock within the farming fraternity.

3. Description of the Proposed Project

Detailed project information is essential to thoroughly understand the project, its components, and its intended purpose. This includes project size, location, scope, design, and intended operations. Without a comprehensive understanding of the project, it is not possible to assess its potential environmental impacts accurately.

3.1 Information about the project

The project entails the development; construction and operation of ten [10] environmentally controlled chicken houses and associated infrastructure, each house with a holding capacity of 55 000 chickens [**TOTAL HOLDING CAPACITY: 550 000**]

Associated infrastructure entails:

- Electrical and water connection;
- Water and feeding distribution pipes and feeding systems;
- Bulk silos for the holding of animal feed stock;
- Slow-combustion coal burning units for heating during cold spells;
- Ventilation doors and vent fans;
- Day/night lighting systems;
- On-site computer system for the automation of the entire management system;
- Staff ablutions and shower facilities;
- Management control and monitoring room;
- Bio-security laboratory and fridge system for mortalities;
- Bio-security fence line and access control gate system.

3.2 Size of the chicken houses

Length: $\pm 150\text{m}$

Width: $\pm 17\text{m}$

Height: $\pm 3.4\text{m}$

3.3 Location

The development will be done on around 16.2 Ha portion of land known as Ptn A/18 of Farm Hartbeestpoort 498 JQ, Bojanala District..

The farm access gates and internal roads service this portion of land as well and as such there is only the need to develop a new internal access road / gate to the undeveloped portion of the farm.

3.4 Scope

The scope of the project entails the design and construction of ten [10] environmentally controlled chicken houses of 55 000 holding capacity each, together with its associated infrastructure required to operate a chicken farm operation for the rearing of broiler chickens for the fresh meat industry.

3.5 Design

The design of the new chicken houses will be for environmentally controlled chicken houses that are totally enclosed with a computer-controlled environment. Ventilation; feeding; water; light and temperature will all be computer-controlled.



Photo 4: Environmentally controlled chicken house designs [example]

3.6 Intended Operation

The intention of the proposed development is the provision of adult chickens for processing at an abattoir as fresh meat for the local market. The operation will be for the rearing of day-old chicks to the adult bird stage before being processed at an abattoir.

The final number of chickens on site, once all the houses are operational will be 550 000 chickens per cycle @ 7 cycles per year / 3 850 000 total per year.

3.7 Project components

The new chicken houses [10] will consist of:

- Foundation and concrete slab as the basis for the chicken house;
- Steel frame which will support the roof structure of the chicken house;
- 1.5m height brick wall from foundation up;
- Insulated wall panels with air vents;
- Steel superstructure for the insulated panels and specially insulated roof panels;
- Drag-and draw fan system to introduce airflow through the facility.

In addition, each house will also have:

- Two bulk feed silos [15 – 20 000 kg capacity] for each of the houses for the storage of the animal feed;
- A coal-fired slow combustion heating facility for each of the chicken houses for heating air during cold spells;
- Water and electrical connections for the operation;
- A specialist computer system for each of the houses that will monitor light; air; water; temperature; O² levels and feeding cycles.
- The operation will also have ablation facilities for staff to shower-in and shower-out as well as an office complex for management.

3.8 Construction

During the construction phase the following will occur:

- Levelling of the land where the chicken houses are to be built;
- Construction of the foundations and floor slab;
- Installation of the upright support structure for the roof structure;
- Building of the 1.5m high brick wall from foundation upwards;
- Installation of the roof structure and roof panels;;
- Installation of electricity and lights together with the feeder and watering system;
- Installing the facility computer system and automation components.

3.9 The Operational Phase

The operational phase will follow a basic pattern for each batch of day old chicks coming on site i.e.

- Disinfection of the entire chicken house;
- Placement of the bedding (saw dust shavings) on the floor;
- Placement of the watering points and feeding points within the entire chicken house;
- Arrival and off-loading of day-old chicks into the chicken house;
- Twice daily monitoring and checking of the chicks for any sign of illness or disease;
- Immediate removal of any mortalities from the chicken house;
- Continuous monitoring of temperatures and the opening or closing of vents to regulate airflow and temperature;
- Checking of watering points and the availability of water;
- Specific feeding cycles and sleeping cycles to maximise growth potential;
- Regular weighing of chickens at specific time schedules to ensure optimal growth is obtained;
- The removal of adult chickens to the abattoir for processing;
- Cleaning team coming on site to clean out the old bedding and bird droppings from the house;
- Disinfection of the entire chicken house with a “dry foam” spray; ***
- Placement of new bedding;
- Bringing in a new batch of day-old chickens for rearing.

*** **NOTE:** The chicken houses are no longer washed out with large volumes of water. The modern way is the use of a “dry foam” from bio-degradable products which is sprayed onto the floor; walls and ceiling and the resultant powder is merely swept up with the final chicken waste for onward disposal. No large volumes of sludge and water is being swept from the chicken houses any longer.

From the start of day-old chicks introduction to adulthood takes around 35 – 38 days.

Cleaning, disinfection and making ready the new bedding takes around 3 days.

The entire cycle may be repeated at least 7 times in a single year.

3.9.1 Supply of animal feed

Supply of bulk animal feed is brought on site by bulk transport trucks that can carry up to a maximum of 20 000 kg. These trucks top-up the bulk silo holders on site from where the chickens are fed on a regular basis.

3.9.2 Supply of day old chicks

There are a number of suppliers of day old chicks in South Africa and rearing facilities make use of a number of these supplies at any given time so as to spread risk and ensure that they have chickens from a number of suppliers on site at any given time.

3.9.3 Removal of mortalities

The company will enter into an agreement with a specific company who removes mortalities on a regular basis for processing into animal feed.

Chicken houses are checked twice a day for sick or dead birds. Mortalities are immediately removed and kept refrigerated while waiting for removal by the end user. No dead animals are allowed to lie outside in the sun where they may attract flies and create smells.

3.9.4 Removal of old bedding and chicken manure

At the end of each rearing cycle the entire chicken house is cleared of all bedding and chicken manure. This “waste” is taken by trucks from the site to farms that utilise the

manure mix as fertilizer or even as additional feed to goats. No chicken waste is allowed to be stockpiled or rot in the sun as this may cause a severe outbreak of flies.

3.9.5 Cleaning and Sanitising of chicken houses

At the end of each rearing cycle the entire chicken house is cleared of all bedding and chicken manure. While the waste is removed by truck to an end user the entire inside of the chicken houses is disinfected with a dry foam spray [ceiling; walls and floors] and all water lines and feeding points are disinfected and washed out. The dry foam and dust form part of the chicken waste that is removed from the site. **Large volumes of water spray down is no longer the practice** and as such whatever little water is used inside the house is allowed to dry naturally by evaporation and no large volumes of water is swept out of the houses any longer.

3.9.6 Flies and Fly Infestation Control

Flies develop in areas of wet chicken manure. For this reason, the houses are constantly ventilated to keep animal droppings dry.

Ensuring that watering points and pipes are not leaking goes a long way in keeping the houses dry on the inside.

A contact spray is sprayed on the outside of the chicken houses that kill flies on contact while a special additive to the chicken feed prevents larvae from developing in the chicken droppings. This type of fly control is ongoing and standard practice in the poultry industry.

3.9.7 Waste: Volumes; Handling; Threats & Smells

There are a number of waste streams being generated on a chicken farm at various times during the cycle of rearing.

The waste streams; volume; handling and threats are more broadly discussed in the document *Waste Stream Protocols*

3.9.8 Bio-Security Risks

Chicken farming is a “delicate” operation where small matters can easily become major catastrophes. For this reason, chicken farm operations are subject to extremely strict bio-security rules and regulations.

- **Human influences** – Humans are one of the primary concerns for a chicken farm operation as they are the carriers of pathogens from outside into the “sterile” internal operation of the farm. So in order to minimise any impacts from humans the following are standard operating procedures in terms of human influences:
 - The chicken houses are fenced in within a bio-security area where all access of humans is controlled. Only staff are allowed in.
 - All staff entering must follow a shower-in and clothing change regime and once leaving the secure area must shower-out and change into their “outside” clothing.
 - No food, drinks, clothing or articles from outside are allowed into the bio-security area.
 - All staff will operate with two sets of clothing and boots for safe entry into the actual broiler houses.
 - Any vehicle coming on-site is sprayed down and disinfected.
- **Outside factors** – factors such as stray animals; birds and other chickens are not allowed to enter; mingle with or come in contact with the flock within the bio-security area. In order to ensure this the following is put in place:

- Total fencing of the area that will stop stray animals from coming into contact with the flock.
- Wire mesh at all opening vents and air-flow areas to prevent any bird or outside chicken from coming into the broiler houses.
- Plastic ribbon curtain at the entrance door to prevent unwanted birds from flying in.
- Only inoculated day-old chicks from reputable providers are taken on for the rearing cycle.

As South Africa does not inoculate for Avian Influenza [AI] at present, any occurrence of the disease spells a major disaster. In cases where the Avian Influenza strikes the State Vet Services steps in and a strict protocol is followed whereby the entire flock is culled and the entire operation placed under quarantine for a set period of time. Everything is washed down and sanitised and final swab tests are done by the State Vet to determine if the facility is clear of the virus.

The unfortunate reality of Avian Influenza is that the pathogen/the bug is an airborne pathogen which travels with moving air, especially during the hot and dry months. Only one effective remedy for this pathogen is natural rain, as rain will clear the air of dust and the pathogen.

- **What are the risks of Avian Influenza occurring?**

The answer to the question is “how long is a piece of string”. If the pathogen is around and the conditions are perfect for it to spread then wind and dust will allow the pathogen to spread on natural airflow. For this reason, chicken farm operations check their flocks at least twice a day; inoculate on a regular basis; sanitise ongoing with each action taken; do not allow equipment from one house to be used in another house; enforce personal hygiene and shower regimes are enforced on all staff; remove mortalities from the bio-security area and examine mortalities to find reasons for deaths; ensure that all houses are secure and free of unwanted birds or other animals at all times.

- **Call the State Vet when suspecting Avian Influenza**

Avian Influenza is not a sin to be hidden. At the first sign of possible Avian Influenza call the State Vet. Get every bit of assistance as you do not want to see it spreading to other chicken farms. **KILL THE BUG**. Follow the dictates of the State Vet and implement every aspect as directed by the State Vet. The sooner the operation is back online the sooner the business is back in line.

- **What are the risks to the surrounding area?**

The only risk from an infected operation is that the bug may spread to other chicken farm operations. **It does not hold any danger to humans unless the contaminated birds are consumed.** All contaminated birds must be destroyed. Normally the State Vet will advise that a large deep trench be prepared, lined with lime at the bottom and that each layer of dead birds be covered with lime as well. Such trenches must be monitored so that scavenger birds do not fly in and pick up any dead birds nor that they feed on these birds as they can spread the disease. Trenches must be filled in daily and compacted. Economically the workforce from the surrounding community is at risk as some farming operations never recover from a serious incident and employment losses occur which impacts the social structure of the area.

Instilling a strict bio-security regime for the operation, maintaining the strict regime; updating and adjusting the regime as and when required is key to the success and ongoing performance of the chicken farm operation. Bio-security is certainly the main key to a safe and prosperous operation.

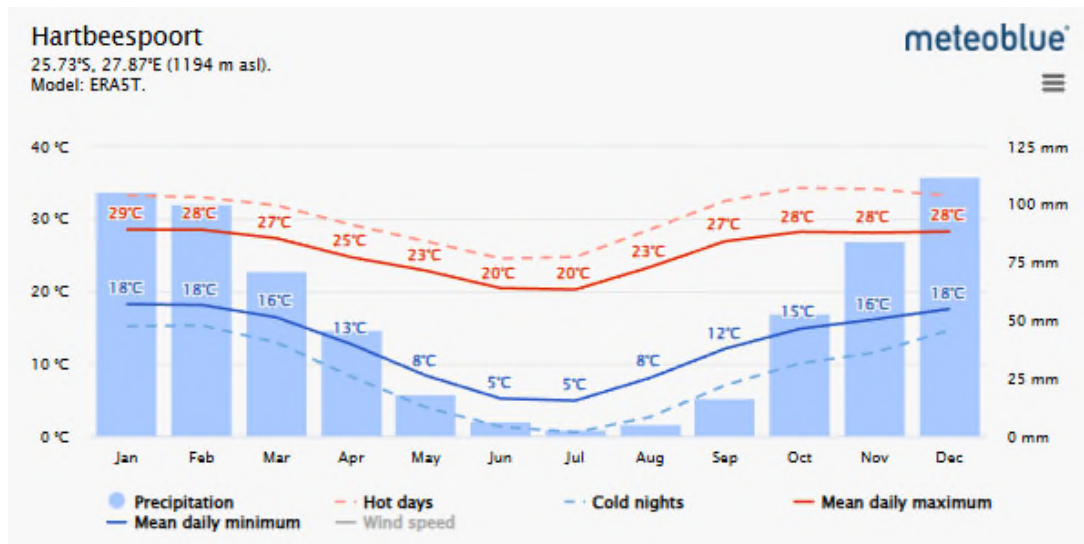
3.9.9 Use of access routes

The access roads to the farm are mostly tarred / surfaced roads i.e. N4; R3/R400; R512; R104 and R511. These gravel roads are provincial roads and maintenance of these roads are the responsibility of the provincial government. There are no restrictions for the use of these roads and all vehicles may access and use these roads as long as they are road worthy and fully licensed.

4. Baseline Environmental Information

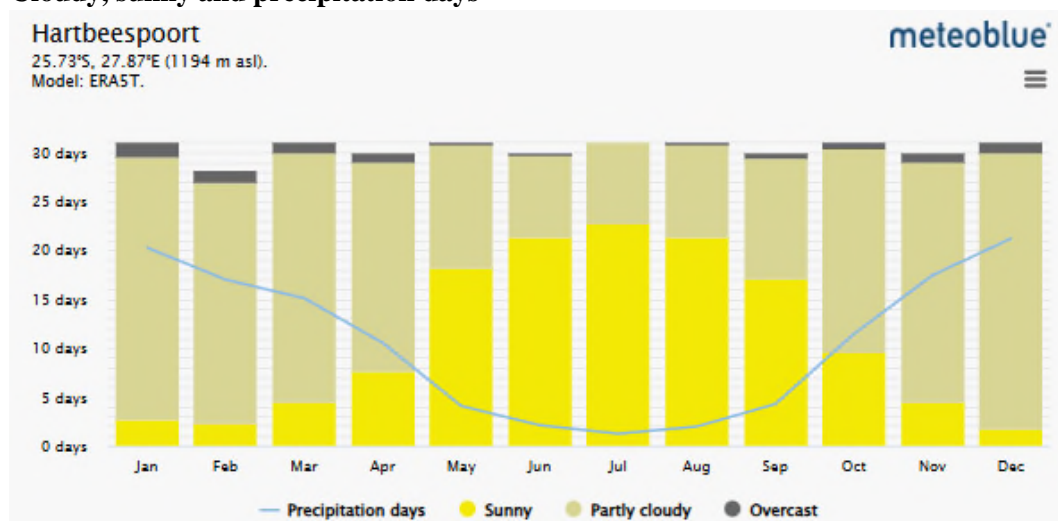
Baseline environmental information, often referred to as “baseline” is a foundational component of an Environmental Impact Assessment (EIA) and other possible studies. It refers to the comprehensive and systematic collection of data that characterises the existing state of the environment in and around a project area before the project’s activities or developments take place. This information is crucial because it serves as a reference point against which potential environmental changes impacts cause by the project can be evaluated and assessed.

4.1 Average temperatures and precipitation

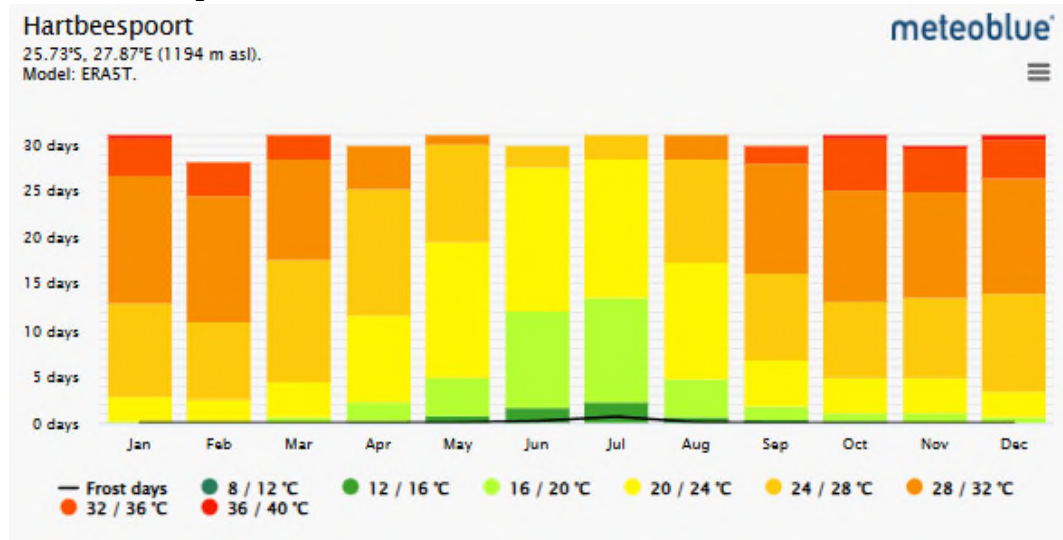


Source: meteoblue.com/historyclimate/climatemodelled/lichtenburg_south-africa

4.2 Cloudy, sunny and precipitation days

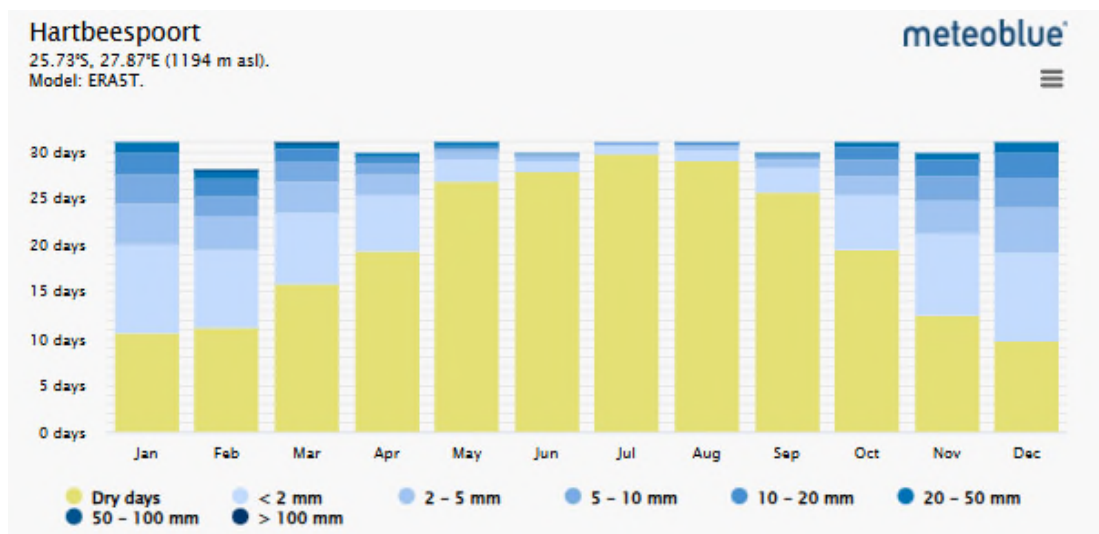


4.3 Maximum temperatures

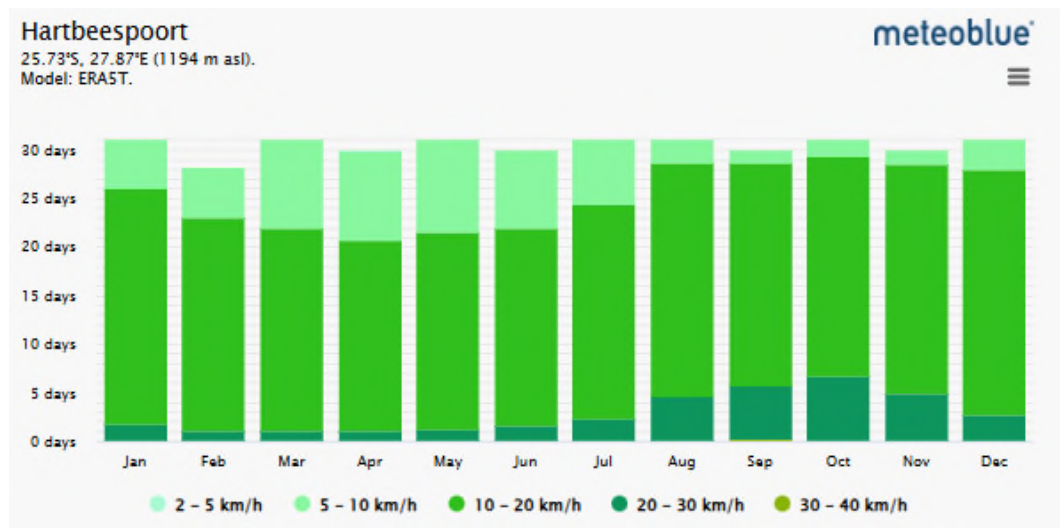


Coldest months will be March through September and will most likely be the months when the most additional heating from the slow combustion units will be required.

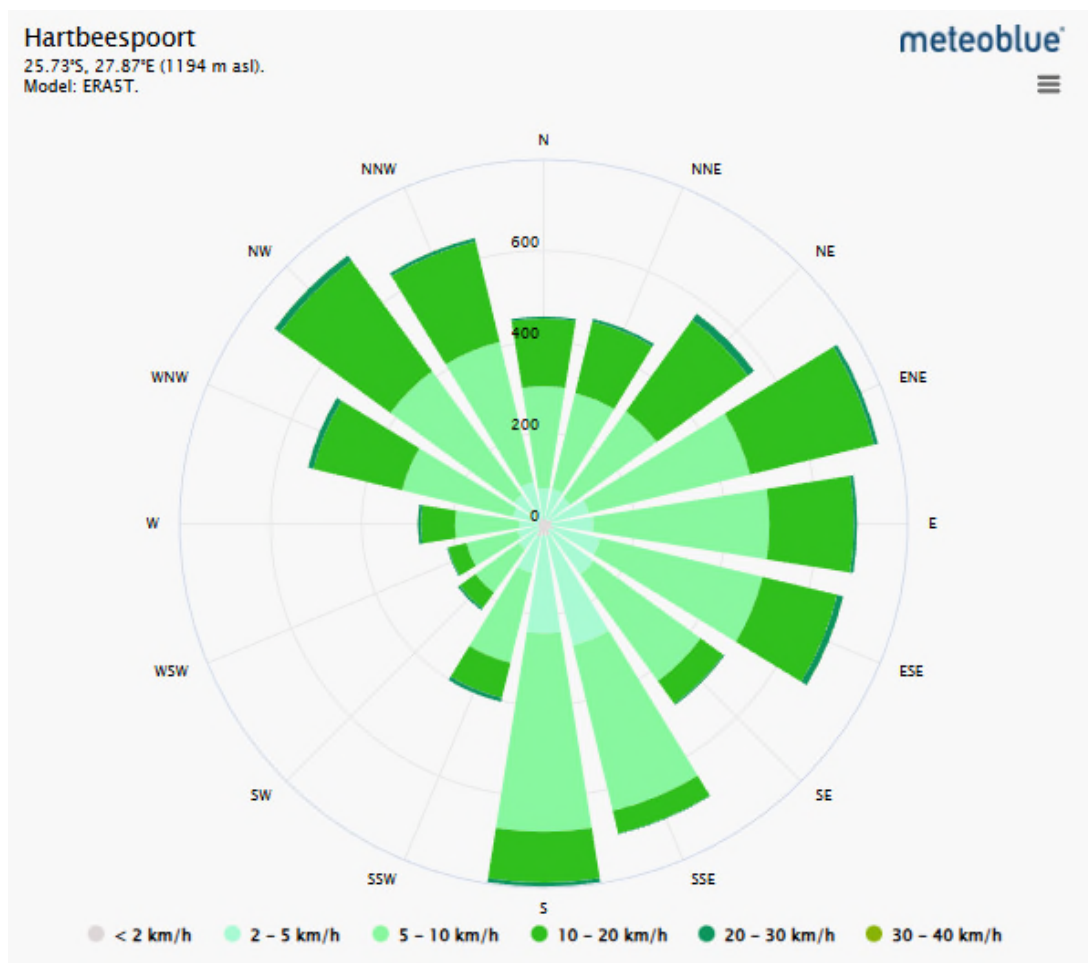
4.4 Precipitation amounts



4.5 Wind speed



4.6 Wind Rose



4.7 Animal feed calculations

The industry norm for calculation of animal feed for broiler production is 2.6 – 2.7Kg of feed per chicken per cycle.

At 550 000 chickens on site per cycle the animal feed use will be around 1430 tons per cycle.

4.8 Water consumption calculations

The industry norm for calculation of water requirements for broiler chickens are:

Amount of feeding x 1.8 = litres of water per chicken

2.7 kg of feeding x 1.8 = 4.86 litres of water per chicken

550 000 chickens x 4.86 litres = 2 673 m³ of water per cycle

4.9 Animal Waste calculations

The industry norm for calculation of animal waste generated at a broiler house where wood shavings are used as bedding are:

1 Kg of waste per chicken per cycle

55 000 chickens per chicken house = 55 000 Kg of waste / 55 metric tons of waste per cycle

per chicken house = 550 tons per cycle / 10 houses

4.10 Ecosystems; habitats and sensitive resources

Within a three [3] kilometre radius of the farm and the intended development the following can be observed:

A – Church at around 2km distance

B – Tourism related facilities

C – Agricultural facilities

D – Main access road / tar

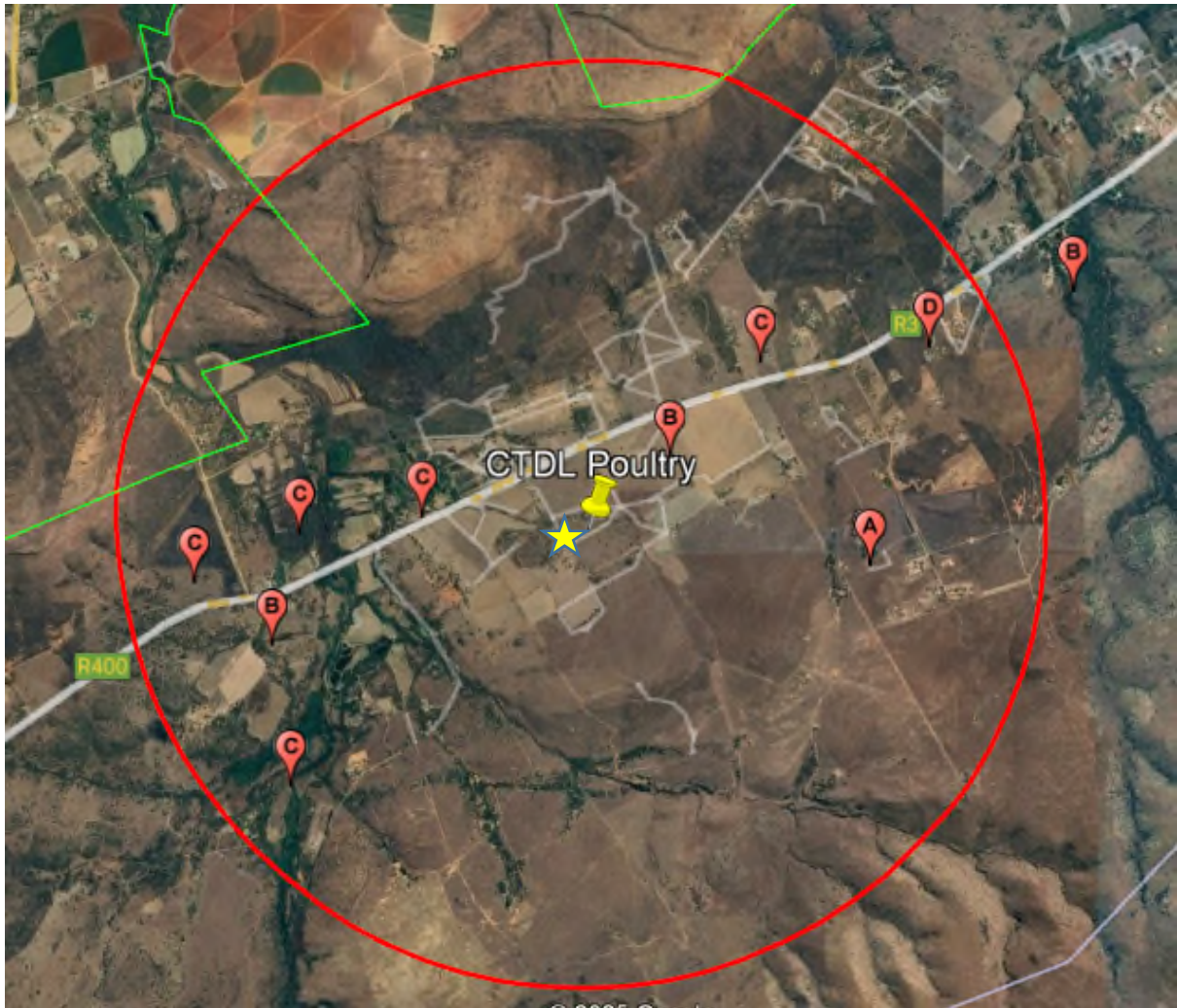


Photo 5: 3km radius RED. Mostly a rural area with one main access road [TAR] passing through

5. Environmental Impact Assessment Methodology

The environmental impact assessment forms the basis for the Environmental Impact Assessment Report [EIAR] as well as directs the structure of the Environmental Management Programme [EMPr] which will ensure that effective management measures are tabled. The process is aimed at either avoiding, successfully managing or mitigating identified impacts so that it does not lead to environmental degradation or contamination.

The significance of identified impacts is determined by using an accepted methodology from the Department of Environmental Affairs & Tourism Guideline document on EIA Regulations [April 1998]. As with all impact methodologies, the impact is defined in a semi-quantitative way and is assessed according to the methodology prescribed in the table below.

Table 1: Scale utilised for the evaluation of the Environmental Ratings

Evaluation Component	Rating	Scale	Description / criteria
MAGNITUDE of negative impact (at the indicated spatial scale)	10	Very high	Bio-physical and/or social functions and/or processes might be <i>severely</i> altered.
	8	High	Bio-physical and/or social functions and/or processes might be <i>considerably</i> altered.
	6	Medium	Bio-physical and/or social functions and/or processes might be <i>notably</i> altered.
	4	Low	Bio-physical and/or social functions and/or processes might be <i>slightly</i> altered.
	2	Very low	Bio-physical and/or social functions and/or processes might be <i>negligibly</i> altered.
	0	Zero	Bio-physical and/or social functions and/or processes will remain <i>unaltered</i> .
MAGNITUDE of POSITIVE IMPACT (at the indicated spatial scale)	10	Very high	Positive: Bio-physical and/or social functions and/or processes might be <i>substantially</i> enhanced.
	8	High	Positive: Bio-physical and/or social functions and/or processes might be <i>considerably</i> enhanced.
	6	Medium	Positive: Bio-physical and/or social functions and/or processes might be <i>notably</i> enhanced.
	4	Low	Positive: Bio-physical and/or social functions and/or processes might be <i>slightly</i> enhanced.
	2	Very low	Positive: Bio-physical and/or social functions and/or processes might be <i>negligibly</i> enhanced.
	0	Zero	Positive: Bio-physical and/or social functions and/or processes will remain <i>unaltered</i> .
DURATION	5	Permanent	Impact in perpetuity. –
	4	Long term	Impact ceases after operational phase/life of the activity > 60 years.
	3	Medium term	Impact might occur during the operational phase/life of the activity – 60 years.
	2	Short term	Impact might occur during the construction phase - < 3 years.
	1	Immediate	Instant impact.
EXTENT (or spatial scale/influence of impact)	5	International	Beyond the National boundaries.
	4	National	Beyond provincial boundaries, but within National boundaries.
	3	Regional	Beyond 5 km of the proposed area and within the provincial boundaries.
	2	Local	Within a 5 km radius of the proposed area.
	1	Site-specific	On site or within 100 meters of the site boundaries.
	0	None	Zero extent.
IRREPLACEABLE loss of resources	5	Definite	Definite loss of irreplaceable resources.
	4	High potential	High potential for loss of irreplaceable resources.
	3	Moderate potential	Moderate potential for loss of irreplaceable resources.
	2	Low potential	Low potential for loss of irreplaceable resources.
	1	Very low potential	Very low potential for loss of irreplaceable resources.
REVERSIBILITY of impact	0	None	Zero potential.
	5	Irreversible	Impact cannot be reversed.
	4	Low irreversibility	Low potential that impact might be reversed.
	3	Moderate reversibility	Moderate potential that impact might be reversed.

	2	High reversibility	High potential that impact might be reversed.
	1	Reversible	Impact will be reversible.
	0	No impact	No impact.
PROBABILITY (of occurrence)	5	Definite	>95% chance of the potential impact occurring.
	4	High probability	75% - 95% chance of the potential impact occurring.
	3	Medium probability	25% - 75% chance of the potential impact occurring
	2	Low probability	5% - 25% chance of the potential impact occurring.
	1	Improbable	<5% chance of the potential impact occurring.
	0	No probability	Zero probability.
Evaluation Component	Rating scale and description / criteria		
CUMULATIVE impacts	<p>High: The activity is one of several similar past, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p>Medium: The activity is one of a few similar past, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p>Low: The activity is localised and might have a negligible cumulative impact.</p> <p>None: No cumulative impact on the environment.</p>		

Once the Environmental Risk Ratings have been evaluated for each potential environmental impact, the Significance Score of each potential environmental impact is calculated by using the following formula:

SS (Significance Score) = (magnitude + duration + extent + irreplaceable + reversibility) x probability.

The maximum Significance Score value is 150.

The Significance Score is then used to rate the Environmental Significance of each potential environmental impact as per Table 2 below. The Environmental Significance rating process is completed for all identified potential environmental impacts both before and after the implementation of the recommended mitigation measures.

Table 2: Significance Score utilised for the evaluation of the Environmental Risks Rating

Significance Score	Environmental Significance	Description / criteria
125 – 150	Very high (VH)	An impact of very high significance will mean that the project cannot proceed, and that impacts are irreversible, regardless of available mitigation options.
100 – 124	High (H)	An impact of high significance which could influence a decision about whether or not to proceed with the proposed project, regardless of available mitigation options.
75 – 99	Medium-high (MH)	If left unmanaged, an impact of medium-high significance could influence a decision about whether or not to proceed with a proposed project. Mitigation options should be relooked at.
40 – 74	Medium (M)	If left unmanaged, an impact of moderate significance could influence a decision about whether or not to proceed with a proposed project.
<40	Low (L)	An impact of low is likely to contribute to positive decisions about whether or not to proceed with the project. It will have little real effect and is unlikely to have an influence on project design or alternative motivation.

+	Positive impact (+)	A positive impact is likely to result in a positive consequence/effect and is likely to contribute to positive decisions about whether or not to proceed with the project.
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In order to ensure that assessments are correctly calculated [assessed] an interactive XL Spreadsheet is utilised and the final scores coded in colour.

Table 3: The interactive spreadsheet

PHASE	POTENTIAL ENVIRONMENTAL IMPACT	ACTIVITY	ENVIRONMENTAL SIGNIFICANCE BEFORE							CUMULATIVE	STATUS	RECOMMENDED MITIGATION MEASURES / REMARKS	ENVIRONMENTAL SIGNIFICANCE AFTER								
			M	D	S	I	R	P	TOTAL				SS	M	D	S	I	R	P	TOTAL	SS
TOPOGRAPHY																					
									0											0	0
									0	0										0	0

M = Magnitude D = DURATION S = SEVERITY / EXTENT I = IRREPLACEABLE

R = REVERSIBILITY P = PROBABILITY

Table 4: Colour Codes for the final ratings

VH	H	MH	M	L
125-150	100-124	75-99	40-74	<40

L = LOW M = MEDIUM MH = MEDIUM HIGH H = HIGH VH = VERY HIGH

6. Identification of Potential Environmental Impacts and their Mitigation

It is essential to separate the two types of impacts that may occur i.e. **POSITIVES** and **NEGATIVE**. When assessing the current operation as well as the intended additional phase of the operation, then the following impacts are applicable:

NEGATIVES

6.1 Dust

The creation of dust can be an irritant not only to the farm but also to properties adjacent to the operation as well as those alongside the road, especially when the access road is a gravel road. Large vehicles travelling at speed can create a fair amount of dust which can settle on crops; animals or even on humans.

The rating for **DUST** is calculated at **90 / MEDIUM HIGH NEGATIVE** impact.

Mitigation: Restricting the speed of trucks and other vehicles can assist in reducing the dust being created. Additional signage indicating a reduced speed can assist. Insisting on the use of tarred roads rather than gravel roads, when available, will go a long way in reducing the dust being created. The majority of the access road [R503] is tar and as such only a distance on the final gravel road is in fact on a dirt road to the chicken farm area.

The rating for **DUST** after mitigation is calculated at **42 / MEDIUM NEGATIVE** impact.

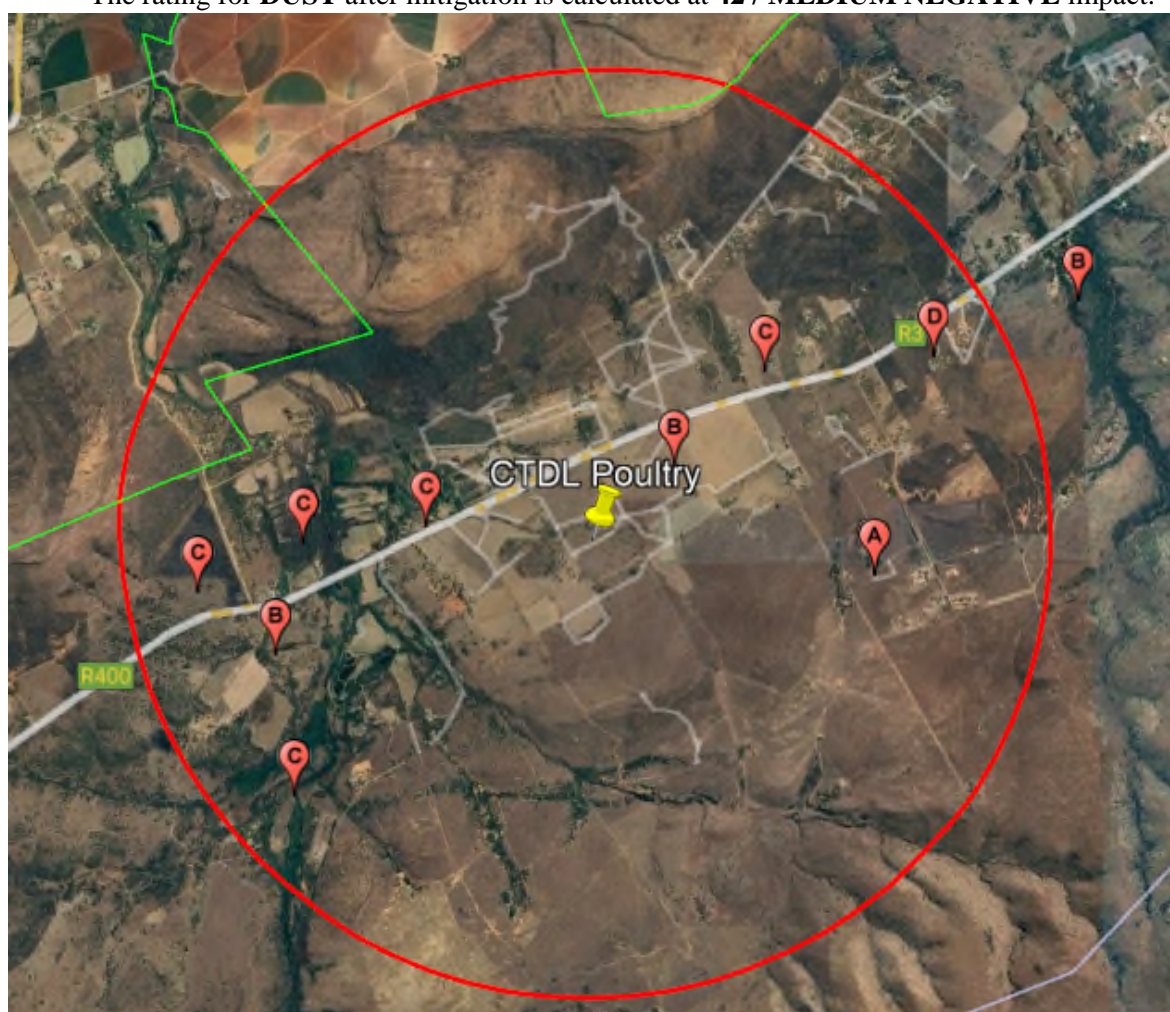


Photo 6: The main feeder routes [TAR R3/R400] for trucks to come to the farm

6.2 Noise

The expected noise coming from the operation will be during either delivery or removal of stock from the farm by trucks. Such noise permeates the area, especially those living close to the access roads in the area.

The rating for **NOISE** is calculated at **45 / MEDIUM NEGATIVE** impact.

Mitigation: Restricting speed and times of delivery / uplifting of stock will restrict the times of actual noise generation. Consolidating deliveries into single vehicles rather than a multitude of vehicles will go a far way reducing the occurrence of noise.

The rating for **NOISE** after mitigation is calculated at **36 / LOW NEGATIVE** impact.

6.3 Smells and odours

Smells and odours coming from a chicken farm operation can be very unpleasant and a major irritant to people. Smells and odours come from chicken manure and it is therefore essential to ensure that the chicken houses remain dry and well ventilated and that no manure stockpiling takes place at any time.

The rating for **SMELLS & ODOURS** is calculated at **64 / MEDIUM HIGH NEGATIVE** impact.

Mitigation: Ensure that there are no water leaks in the chicken houses; Ensure that the sided of the houses are opened to allow ventilation and drying of the droppings to occur. Ensure that all old manure and bedding removed from the chicken houses at the end of a rearing cycle, are taken off site as fertiliser immediately upon removal. That no chicken manure is left in a stock pile open to the elements where rain and breeding flies can get to it.

The rating for **SMELLS & ODOURS** after mitigation is calculated at **36 / LOW NEGATIVE** impact.

6.4 Flies

Flies and the breeding of vast numbers of flies can easily occur on a chicken farm when a number of aspects are allowed to deteriorate i.e. water leaking onto the bedding and causing the bedding to become a wet slurry; urine and droppings to form a favourable breeding ground for flies; stockpiles of manure being left outside open to rain and wind; mortalities allowed to decay in the sun.

The rating for **FLIES** is calculated at **54 / MEDIUM NEGATIVE** impact.

Mitigation: Ensure good ventilation through the chicken houses. Do not allow waste heaps / stock piling of manure to occur in the open where rain and flies can get to it. Ensure that the farming practice has a popper fly control programme in place and that regular spraying of the required pesticides takes place.

The rating for **FLIES** after mitigation is calculated at **24 / LOW NEGATIVE** impact.

6.5 Coal

Bulk coal will be delivered on site for the slow combustion heating system at each of the chicken houses. Such coal must be stored in a coal bunker which has a **cement floor**; is **sloped** to ensure that no water is retained in the bunker and also be provided with a **roof** to stop the ingress of rain water. No stockpiling is allowed on the bare open ground. Ash from the slow combustion units must be stored in an enclosed bunker awaiting removal to a registered landfill.



Example: *Coal deposits in a coal bunker*

The rating for **COAL** is calculated as **135 / HIGH NEGATIVE** impact.

Mitigation: The bulk coal for the farm must be stored in a bunker area which is either covered by a roof to prevent the ingress of water i.e. rain or else the bunker must be covered with a solid tarpaulin sheet to prevent water from entering. Where there is no coal bunker a bunker must be built and be provided with a cement floor with a slope to prevent water from accumulating in the bunker. Where coal has been dumped on the bare soil, such polluted soil must be removed and deposited at an accredited landfill site.

The rating for **COAL** after mitigation is calculated at **24 / LOW NEGATIVE** impact.

6.6 Bottom Ash

Bottom ash, as waste, cannot be dumped in the open where wind and water may disperse such waste. Bottom ash must be containerised and disposed of at an accredited landfill site or used as a road surface infill if so authorised. If bottom ash is taken by a third party then records must be kept of who takes the ash; volumes taken; address where the ash is going to and final use of the ash.

The rating for **BOTTOM ASH** is calculated as **72 / HIGH NEGATIVE** impact.

Mitigation: The bottom ash must be contained and either disposed of at an accredited landfill or used as a road infill once authorised to do so by the authorities. Bottom ash may not be discarded into the open for wind and water to disperse.

The rating for **BOTTOM ASH** after mitigation is calculated at **8 / LOW NEGATIVE** impact.

6.7 Road surface damage

Road surfaces, especially gravel roads in the rural areas, are heavily impacted by large heavy vehicles. The same can be said for tarred roads although the impact is less. However, where potholes exist heavy vehicles will cause more damage more easily. As regular maintenance of roads in South Africa is problematic the issue of continuous deterioration is problematic.

The rating for **ROAD DAMAGE** is calculated at **54 / MEDIUM NEGATIVE** impact.

Mitigation: By instructing delivery vehicles to follow a specific route i.e. tar roads, the impact on gravel roads [D1403] in the area will be greatly reduced. Through the implementing of speed restrictions with the appropriate signage the damage to both gravel and tar roads will be reduced. By consolidating deliveries into one larger vehicle [where possible] the number of trips to and from the farm will be reduced while also saving on operational costs. By determining proper forward planning in ordering bulk feed supplies the number of trips to the farm will be greatly reduced.

The rating for **ROAD DAMAGE** after mitigation is calculated at **28 / LOW NEGATIVE** impact.

6.8 Animal Health

The health of the birds are of prime importance. Utilising inoculated chicks eliminates the chances of diseases developing in the chicken house. The threat to the chickens come from outside chickens and other birds finding their way into the chicken houses. South Africa at

present does not inoculate for Avian Bird Flu. This is however being addressed by State Veterinary Health and we may soon see the practice of inoculation against Avian Bird Flu also taking place in South Africa. The correct bio-security regime for the farm will also help in keeping the birds healthy and protect the business.

The rating for **ANIMAL HEALTH** is calculated at **48 / MEDIUM-NEGATIVE** impact.

Mitigation: Strict bio-security regimes to be implemented from foot baths to staff showering in and out of the operation. No cross using of equipment between the different houses at any time. Staff must work chicken house specific in order to avoid any cross contamination. Regular checks to ensure that the wire mesh protecting the chicken houses have not been breached and thus allow other birds from outside coming inside. Daily checking of the fence perimeter of the houses will ensure immediate detection of any possible problem areas.

The rating for **ANIMAL HEALTH** after mitigation is calculated at **10 / LOW-NEGATIVE** impact.

6.9 Water

The abstraction of water other than for a usage “1” i.e. household and animal watering is protected by Section 21 of NWA. Although the current usage is “USE 1” excessive usage caused by indiscriminate spillage; leaks and wasteful use can impact the underground reserve in a negative way.

Borehole supply will provide the required water for the chicken farm operation. Water requirements, once all eight the houses are operational, will be 2 478m³ per cycle or 70,8 m³ per 24 hour / 35 days cycle

The rating for **WATER** is calculated at **54 / MEDIUM NEGATIVE** impact.

Mitigation: The use of water must at all times be controlled to ensure a dry environment within the chicken houses. Daily checks for water leaks or faulty watering points will eliminate wet area from occurring and wastage of water. Controlling the flow of water will ensure that no pipes are over-pressurised and cause bursting and subsequent wastage. Indiscriminate use of water and wastage may not be allowed. Monitoring of borehole levels and checking recharge rates will ensure that over abstraction does not take place.

The rating for **WATER** after mitigation is calculated at **12 / LOW NEGATIVE**.

6.10 Employment

Employment opportunities in South Africa is in short supply, especially in the rural areas of the country. The operation will be staffed by taking from the local employment pool rather than “importing” staff from other areas.

The rating for **EMPLOYMENT** is calculated at **36 / LOW POSITIVE**.

Mitigation: The chicken houses will require staff. It is important to try and protect the employment opportunities for local residents of the area rather than bringing in people from outside of the area.

The rating for **EMPLOYMENT** after mitigation is calculated at **33 / LOW POSITIVE**

6.11 Food & Food Security

Food security for South Africa is a very important aspect and is high on the list of targets by Government. As it is the country imports vast amounts for chicken from South Africa and with the ever increasing value of the US Dollar against the SA Rand the prices are continuously escalating.

The rating for **FOOD** is calculated at **54 / LOW POSITIVE**.

Mitigation: Food security is of prime importance and the additional capacity on the farm will make proper inroads into food security. It will introduce large quantities of additional fresh chicken meat to the market and thus decrease the need for costly imports.

The rating for **FOOD** after mitigation is **34 / LOW POSITIVE**

6.12 Unwanted elements in the area

Any development will bring an influx of job seekers and the farm is bound to get walk-in job seekers coming onto the property to try and get employment. With that comes some concern for safety and security in the area.

The rating for UNWANTED ELEMENTS is calculated at **26 / LOW NEGATIVE**

It is the intention of the farm to employ only local labour and train only local labour all of whom will form part of the existing workforce of the farm. The development will require minimal additional employment opportunities.

The rating for UNWANTED ELEMENTS after mitigation is **10 / LOW NEGATIVE**

6.13 Chicken Waste

Chicken waste is the main reason for flies being present around the operation. Wet chicken manure is the perfect breeding ground for flies and as such the area should be kept clear of such waste.

The rating for CHICKEN WASTE is calculated at **72 / MEDIUM NEGATIVE**

Correct ventilation; regular ventilation; no leaking water pipes in the houses and control of humidity all assist in minimising the effect of breeding grounds for flies. Dried waste also does not cause odours and smells to permeate the surrounding area. No waste dumps and prompt removal of waste from the site will ensure a clean environment.

The rating for CHICKEN WASTE after mitigation is **24 / LOW NEGATIVE**

6.14 Removal/transportation of chicken waste

All waste from the farm operation is taken off-site and used as fertiliser on agricultural lands by other farmers. Removal is done by truck and such trucks may disperse some of the waste into the receiving environment due to speed and wind flow over the truck.

The rating for CHICKEN WASTE REMOVAL is calculated at **48 / MEDIUM NEGATIVE**

All trucks must be enclosed or covered with a tarpaulin to ensure that wind does not disperse the waste. Totally enclosed trucks will ensure that the waste is kept secure inside.

The rating for REMOVAL OF CHICKEN WASTE after mitigation is **10 / LOW NEGATIVE**

6.15 Cumulative IMPACTS

Table 5: There were **12 POSSIBLE NEGATIVE** Impacts identified, rating it cumulatively as follows:

	Very High	High	Medium High	Medium	Low
Score	1375 – 1650	1100 – 1364	825 - 1089	440 - 814	<440
Before MIT				618	
After MIT					246

Conclusion: The possible NEGATIVE IMPACTS can be mitigated to an impact rating of LOW.

Table 6: There were **2 POSSIBLE POSITIVE** Impacts identified, rating it cumulatively as follows:

	Very High	High	Medium High	Medium	Low
Score	1375 – 1650	1100 – 1364	825 - 1089	440 - 814	<440
Before MIT					90
After MIT					87

Conclusion: The possible POSITIVE IMPACTS has a final rating of LOW.

6.16 Environmental Attributes

The environmental attributes associated with the alternatives focussing on the geographical; physical; biological; social; economic; heritage and cultural aspects are as follows:

Geographical: The development will be on an area where the development will not impact current planting regimes of the farm.

Physical: The entire operation is in close proximity of one another, with only one gate, via a single access road for all deliveries and removals.

Biological: Having the entire operation together in a single area will make use of specific bio-security regulations which are easy to enforce.

Social: As long as the business remains healthy and the operations have no infections / diseases, will the business thrive, employment opportunities will continue and salaries paid.

Economic: The South African Government is set on seeing the country being self-sufficient. As long as the business is kept healthy those goals can be achieved.

Heritage & Cultural: Not Applicable

Overall Viewpoint: The placement of the houses in an area where it will contribute to a better yield from the farm is more acceptable than allowing land to lie dormant and not produce any product.

7. The Public Participation Process

The PPP process, is a crucial aspect of an Environmental Impact Assessment (EIA). The EIA is a systematic process that evaluates the potential environmental impacts of a proposed project or development. Public Participation in this process is important for several reasons:

- **Transparency & Accountability:**
Involving the public in the EIA process ensures transparency and accountability. It allows the affected communities and stakeholders to understand the project's potential impacts and the steps taken to mitigate them.
- **Informed Decision-Making:**
Public participation provides an opportunity for people to voice their concerns, opinions and suggestions. This input can help decision-makers consider a wider range of perspectives and make more informed choices regarding the project.
- **Community Empowerment:**
Engaging the public empowers local communities and stakeholders. It gives them a sense of ownership and control over the development that might affect their environment and well-being.
- **Identification of Issues:**
The public often has intimate knowledge of the local environment and its specific issues. They can identify environmental and social aspects that may not be apparent to the project proponents. This can lead to a more comprehensive assessment.
- **Conflict Resolution:**
Public participation can help identify and address conflicts early in the process. By addressing concerns and grievances in the planning phase, it can prevent costly disputes and legal challenges later on.
- **Improved Project Design:**
Input from the public can lead to project modifications and design improvements that minimise negative environmental impacts. It can also lead to projects that better align with the needs and aspirations of the community.
- **Legal Requirements:**
In many jurisdictions, public participation in the EIA process is a legal requirement. Failure to engage the public adequately can result in legal challenges and project delays.
- **Enhanced Public Awareness:**
The PPP process can help educate the public about the project and its potential impacts. This increased awareness can foster responsible environmental stewardship and support for sustainable development.

In summary, the PPP Process during an EIA is crucial for ensuring that proposed projects are evaluated comprehensively, that concerns, insights and stakeholder inputs are considered, and that the decision-making process is fair and accountable. It ultimately contributes to more sustainable and responsible development.

7.1 What was undertaken in support of the PPP requirements?

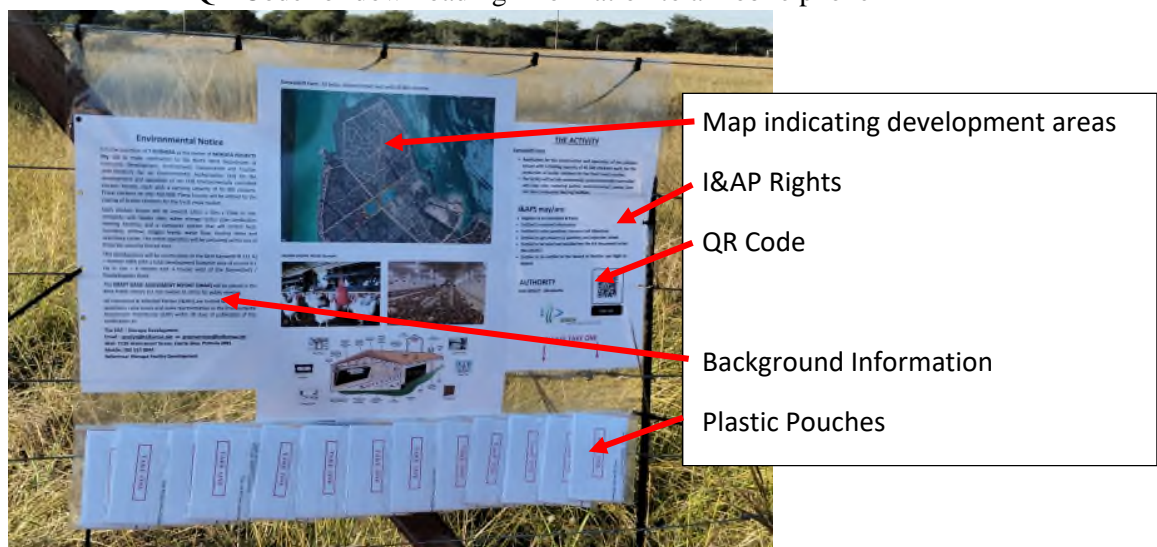
7.1.1 Advertisements in the newspaper

Advertisement in BRITS POS and CITIZEN

7.1.2 Site Notice

A Site Notice was placed on the fence line of the farm displaying:-

- the full description of the intended activity;
- a colour picture of the farm and the intended area of development;
- The rights of I&APs;
- Name of the consultant;
- QR Code for easy download of information;
- Individual plastic pouches attached, each containing:
 - Background information
 - I&AP Registration Form
 - Contact details of the EAP
 - QR Code for downloading information to a mobile phone



Example of a Site Notice on a Farm Fence line

7.1.3 Background Information & I&AP Registration Forms

These forms were attached to adjacent properties in the area to try and entice potential I&APs to register and raise questions and make inputs.

7.1.4 Draft document - Availability

The Draft Basic Assessment Report is forwarded to the local library in Hartbeespoort where potential I&APs can view the document and then pose questions to the EAP. It is also made available on the website www.greenenviroSA.com under **CTDL POULTRY BROEDERSTROOM** for ease of access and download and also via a QR Code for download on a mobile phone.

7.1.5 Notifications to the Municipality and others

Written correspondence was forwarded to:

The Local Municipality; The Speaker of the house;
SAHRA

7.1.6 I&AP Register

At the time of this DBAR Report no registrations from any potential I&AP was received.

7.1.7 Issues & Response Report [I&R Report]

No issues raised or objections received from any person thus far.

7.1.8 Release of additional information

There is no additional information available at this stage of the application.

NOTE:

**Specialist Fauna & Flora / Site Verification investigation
will be undertaken in February 2026.**

8. Environmental Screening Results

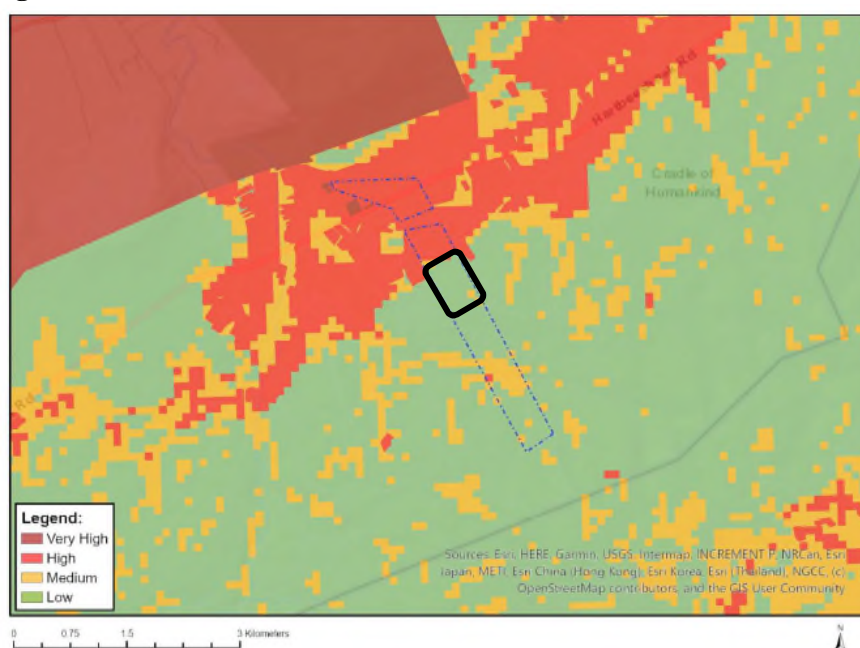
The DEA Screening Tool provided the following results:

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme	X			
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Source: DEA Screening Tool Results

8.1 EAP Assessment and Motivation

8.1.1 Agricultural Theme [HIGH]

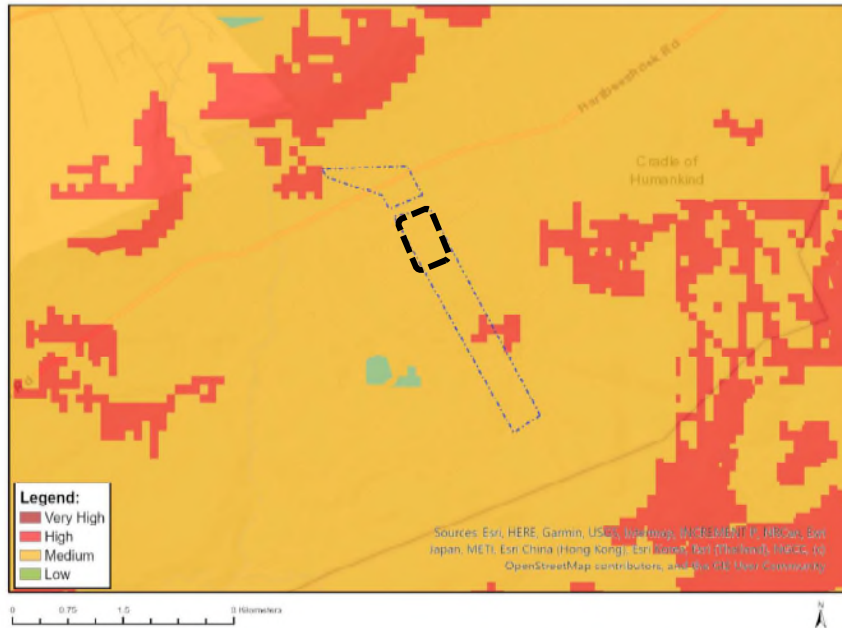


The sensitivity score for the area to be utilised is **HIGH**. The development is intended to go on the section of land indicated as **LOW**.

Assessment: The activity supports the Screening Tool findings and is in support of the actual Screening Rating.

8.1.2 Animal Species [MEDIUM]

According to the Screening Tool Report, the intended areas for development has an overall rating of **MEDIUM**. The area intended for development is not currently being used for any agricultural activity, and as such a Site Verification Fauna & Flora Assessment Study will be undertaken. Minimal clearance of vegetation is required. **STATEMENT:** No additional studies are required in terms of **ANIMAL SPECIES** as the overall rating is **MEDIUM**.



Refer to the Specialist Report as attached.

8.1.3 Aquatic Biodiversity Theme [VERY HIGHLOW]



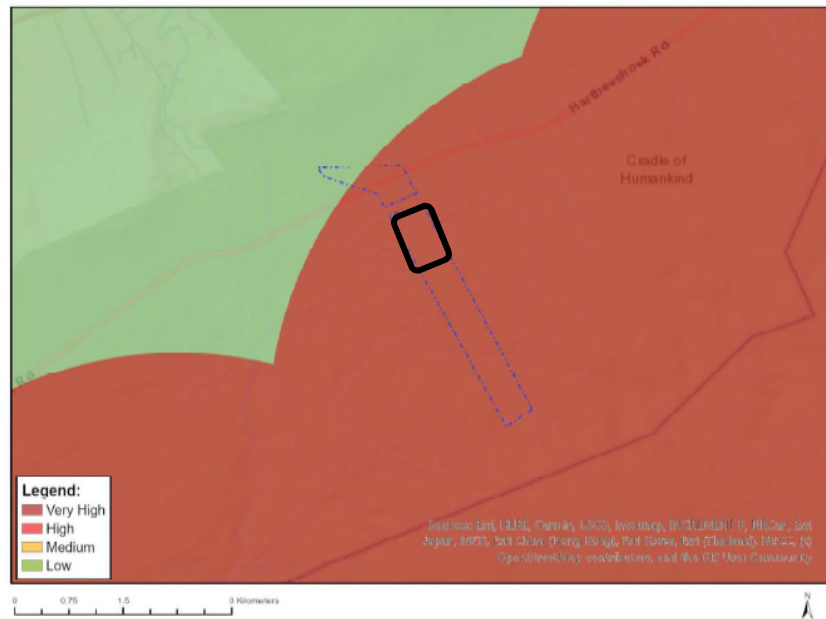
Aquatic Biodiversity rating for the development area is rated as **VERY HIGH**.

The area to be developed is not yielding any agricultural produce and by developing a small portion the farm will become a productive unit.

A full Site Verification and Fauna & Flora Investigation will follow in February 2026.

PENDING: Specialist Report

8.1.4 Archaeological and Cultural Heritage Theme [HIGH]

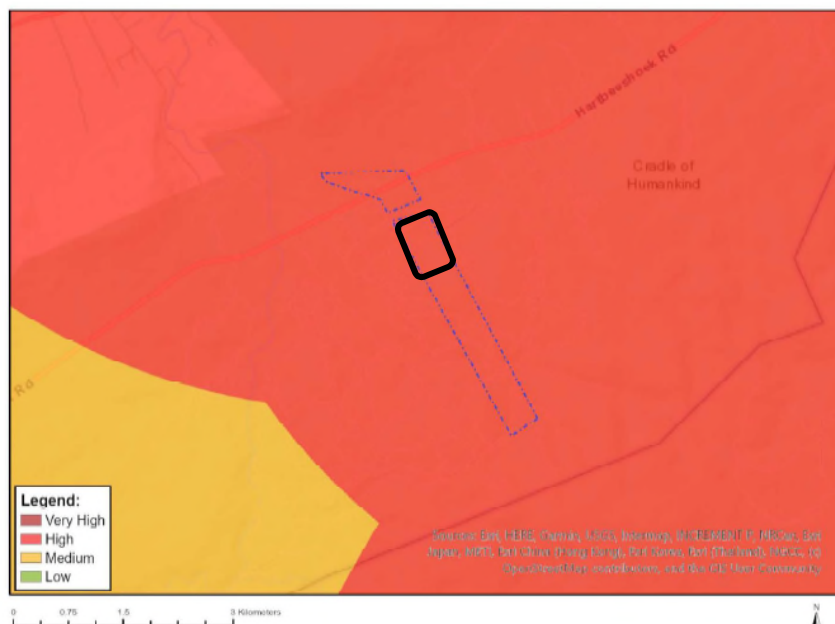


Archaeological and Cultural Heritage Theme rating for the area of development is indicated as **HIGH**.

The farm has no ruins or any indication of former habitation. Should any artefacts be uncovered during the foundation trenching then SAHRA will be informed; activities will stop while SAHRA needs to make a decision.

There is no need for any further investigation or studies in terms of this theme.

8.1.5 Civil Aviation Theme [HIGH]



The rating for Civil Aviation is given as **HIGH**.

According to the Screening Tool Report the farm has an aerodrome within 8km from the farm. The development will not be excessively high – standard roof pitch and height – and as such will not interfere with any flight path or approach path of air traffic in the area.

STATEMENT: No further studies in terms of this theme is required.

8.1.6 Defence Theme [LOW]

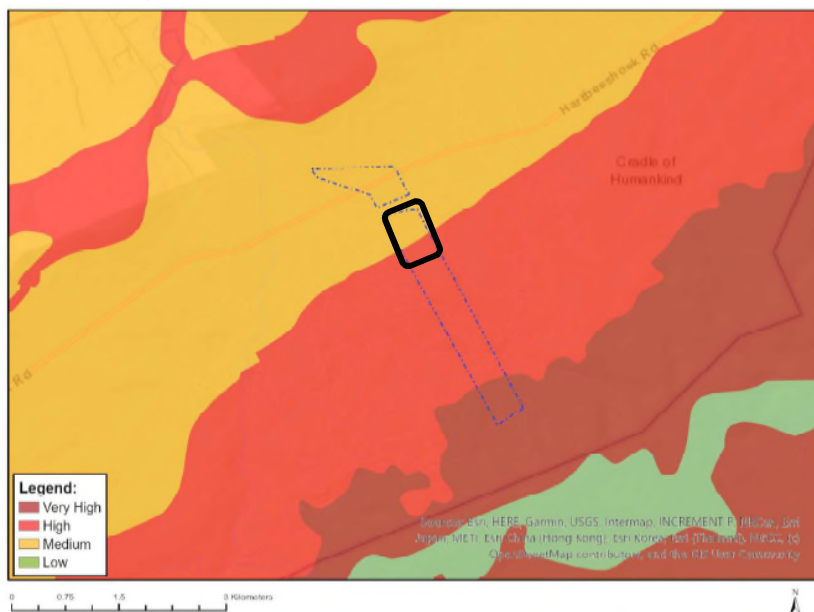


The Defence theme is given as **LOW**.

The farm does not form part of any border of SA or any neighbouring country. It has no importance in terms of security or strategic defence position.

STATEMENT: No further study is required in terms of this theme.

8.1.7 Palaeontology Theme [MEDIUM]

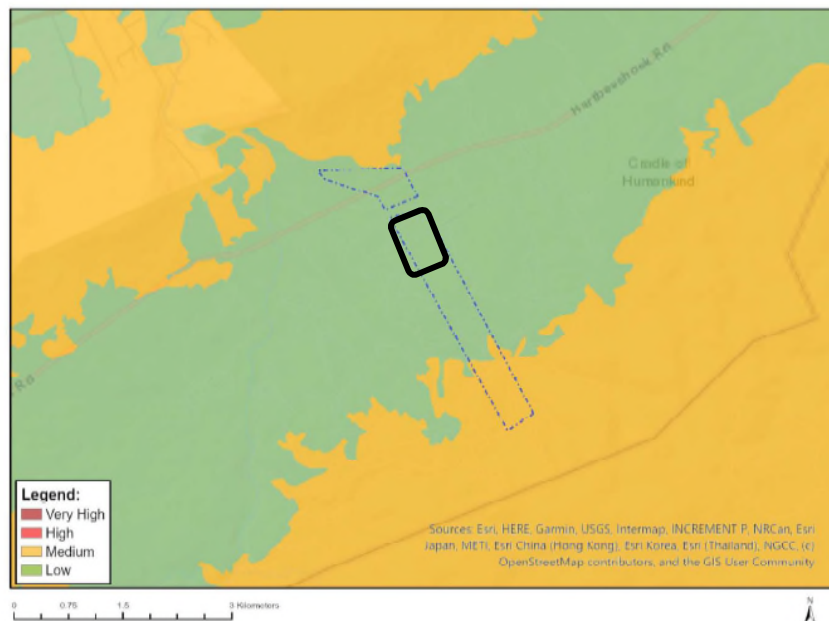


The Paleontology Theme is given as **MEDIUM**.

No fossils have been uncovered during previous agricultural activities. Should fossils be uncovered then the authorities will be notified; construction will be suspended and construction will only commence once the authorities have given the go-ahead to proceed.

STATEMENT: No further studies are required in terms of this theme.

8.1.8 Plant Species Theme [LOW]



The sensitivity in terms of Plant Species is given as **LOW**.

STATEMENT: Due to the LOW sensitivity rating in terms of plant species no further studies are required.

NOTE: Due to the need to do clearance of vegetation a Site Verification Fauna & Flora Study will be undertaken in order to verify species diversity and the need for special authorisation should any RED Data Species be present. [Report pending] – no additional studies required.

8.1.9 Terrestrial Biodiversity Theme [VERY HIGH]



The Terrestrial Biodiversity theme is given as **VERY HIGH** In order to ensure that the area is correctly assessed, a Specialist Site Verification [Fauna & Flora Study] was undertaken. [Report attached].

As the rating indicates CBA and ESA, specific attention to details pertaining to protection and sustainability of the environment was evaluated during the Specialist Investigation.

STATEMENT: As the farm lies within an ESA area, the EMPr for the intended operation must consider; address and mitigate all impacts to an acceptable level.

8.2 Storm Water and Management of Storm Water

The area has a definite slope towards the SSW and the area has a clear drainage line within the 3km radius line on the map..

The land slopes towards the east where water accumulates in a large farm dam.

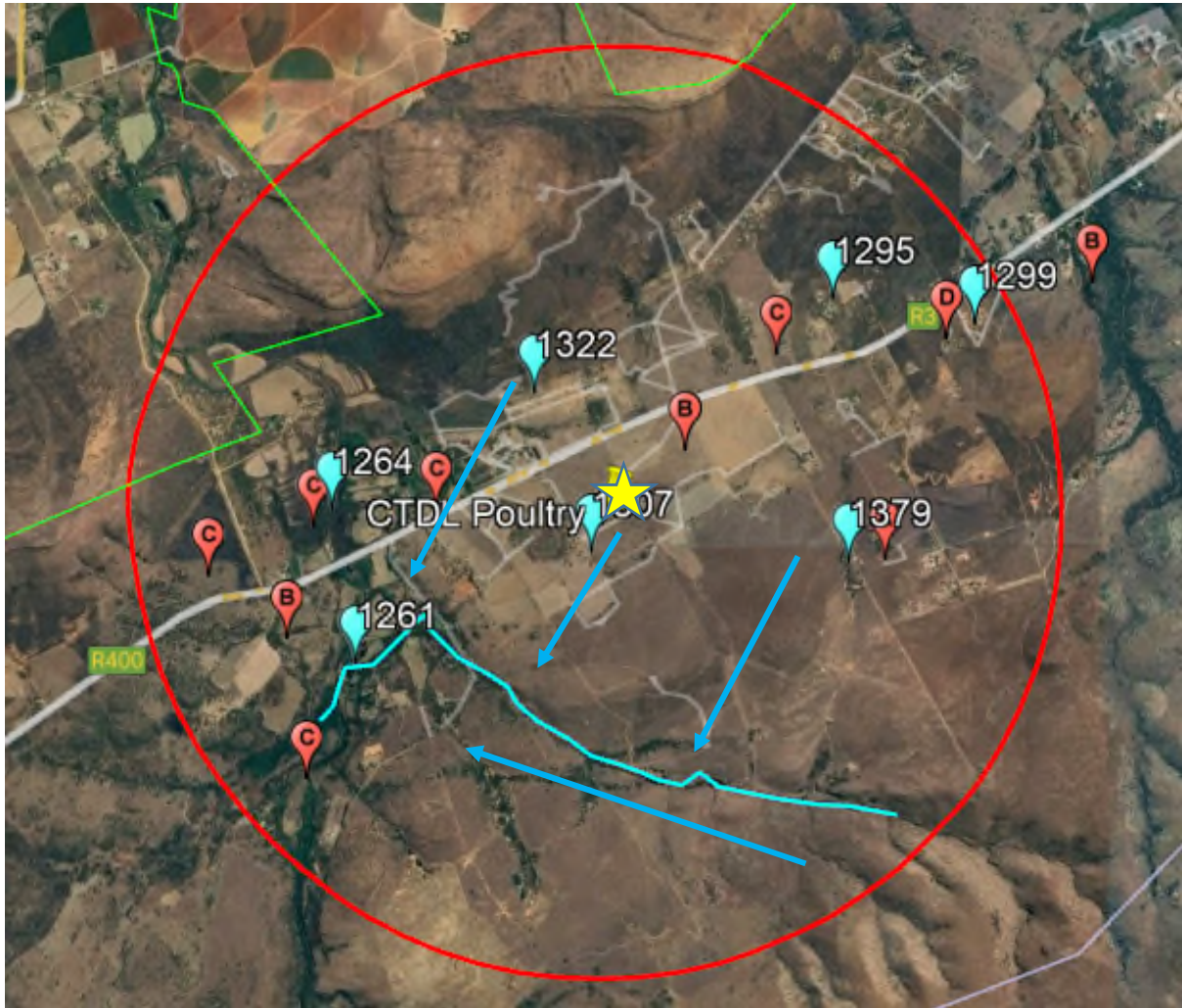


Photo 7: The drainage direction of stormwater

All chicken houses will have, as a standard feature, slightly raised concrete floors and a concrete apron all around the actual building. This will assist in allowing water to flow away from the houses into the adjacent lands and drainage directions of the overall topography. Recent major flood events in the area [December 2024 and January 2025] showed that this area does not become water logged.

The design of the buildings and the floor slab will take into account water and water issues which may arise.

The final designs and footprint will be determined once the environmental authorisation is in place.

8.3 Location on terms of protected areas

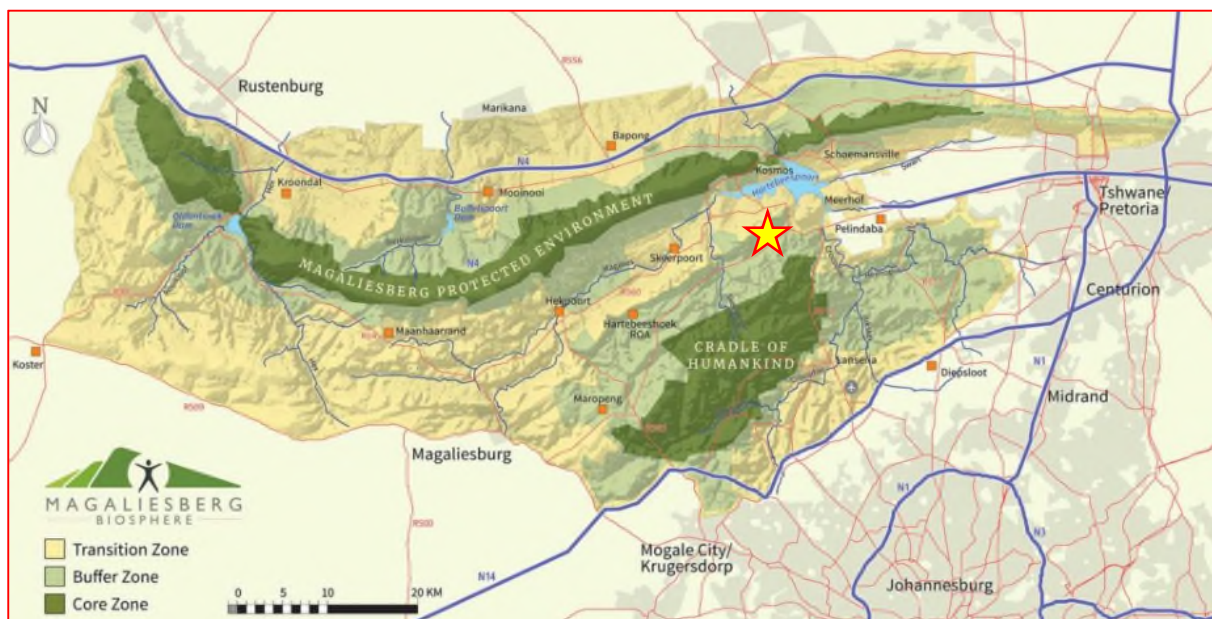
8.3.1 Cradle of Humankind

The CTDL Poultry Farm is around 5 km away from the Cradle of Humankind World Heritage Site.

As such the activity and its associated actions must be carefully considered in terms of the greater area and its importance in terms of a World Heritage Site.



CTDL Poultry in relation to The Cradle of Humankind World Heritage Site and the Magaliesberg Nature Reserve



The farm within the Buffer Zone of the Cradle of Humankind and the Greater Magaliesberg Biosphere

8.3.2 Magaliesberg Biosphere area

The Magaliesberg Biosphere is the total Magaliesberg Protected area as well as the Cradle of Humankind World Heritage Site. The development falls outside of the Magaliesberg Protected Area, however it still rests within the 5km radius / buffer zone of the Cradle of Humankind World Heritage Site.

The Magaliesberg Biosphere has three zones attributed to the overall area:

- **CORE Area** : Comprises of formally/legally protected areas. [MPE; Kgaswane and Cradle of Humankind] Minimal disturbance allowed. Enable research, education and recreation.
- **BUFFER Zone** : Clearly identified area that surrounds the core areas. Compatible with the functions of the core. Activities in this area must adhere to Magaliesberg Biosphere Principles and may include:-
 - Sustainable development
 - Tourism
 - Farming
- **TRANSITIONAL Zone** : Area of co-operation, must not harm the buffer or core areas.

8.3.3 Does the development adhere to the Magaliesberg Biosphere Principles?

The Magaliesberg Biosphere Principles are very clear on the requirements for development within the **BUFFER ZONE**:

Activities in this area must adhere to Magaliesberg Biosphere Principles and may include:-

- Sustainable development
- Tourism
- Farming

The proposed development is a state-of-the-art environmentally controlled broiler chicken farm development. It is a sustainable development and follows strict farming principles. As such the proposed development is in line with the principles as set down and the valuable agricultural land should thus be developed to produce much needed products for the South African market.

9. Conclusions and Recommendations

9.1 Summary

The identified impacts, both Negative and Positive have an overall rating score of LOW. The ratings clearly indicate that there are impacts but when weighed up against issues such as employment opportunities; food security; serving the greater South African economy by providing local produce then the LOW impact rating becomes insignificant.

One aspect do however stand out and that is the issue of **bulk coal storage** and **bottom ash** handling. Without fail the chicken farms in South Africa seem to disregard the importance of bunker coal space and the need of getting the coal on a concrete floor and have no water ingress take place. The application lends itself to the correct license conditions being included, one of which must be the handling of coal; the handling of bottom ash and the correct storage facilities of coal.

Food and food security is a major goal for the South African Government. The prime objective of effective farming and producing the best possible yield per hectare of farmland is food to the nation.

The proposed development of ten [10] environmentally controlled chicken houses, each with a carrying capacity of 55 000 chickens is supported on this agricultural land as it would greatly increase the potential [yield] of the overall farm.

9.2 Conclusions & Recommendations

This portion of land is not being optimally farmed.

The EMPr [to be finalised] should be made applicable to the entire operation i.e. existing farm and new development. This will ensure uniformity and a better control on aspects requiring monitoring and compliance.

It is recommended that the Environmental Authorisation be provided for the maximum period allowed with the starting date being Date-of-EA.

10. Environmental Management Programme (EMPr)

The required EMPr for the existing farm inclusive of the proposed development is being developed and will be enclosed as a separate document within the annexures of the Final BAR Report to the NW-DEDECT.

11. References

The following are documents relevant to the report:

- Dep. Environmental Affairs and Tourism Guideline Document on EIA Regulations, April 1998 [Impact Methodology]
- KwaZulu –Natal Department of Health [<http://www.kznhealth.gov.za>] Avian influenza [bird flu] fact sheet
- Web: mdpi.com/2076-0817/12/4/610 – Avian Influenza: Strategies to Manage an Outbreak

Signed this _____ day of _____ 2026 at Pretoria, Gauteng Province

RP Colyn – EAP/EAPASA 2019/1358

ANNEXURES

EMPr in terms of NEMA Act (107 of 1998)

Environmental Impact Regulations

APPENDIX 4 – EMPr

**EMPr for the development and operation of a Chicken
Farm Operation**

OVERVIEW

An Environmental Management Programme (EMPr) is a living document which is assembled to govern and direct an activity from inception, through construction into the final operational phase. Throughout the life of a project circumstances may change and as such the EMPr must be such that it may be altered, added to and changed in order to provide ongoing guidance to the operations but ultimately provide protection to the environment in which the activity is taking place.

As the EMPr is a guidance document to ensure environmental protection and compliance, the structure is such that it will initially “explain” the issue and then provide direct guidance framed in **RED** under the heading **OPERATOR ACTIONS**. These Operator Actions are the direct instruction[s] to the operator of what is expected and what should be implemented.

1. Project Description

The construction and operation of ten [10] new environmentally controlled and enclosed chicken houses, each with a carrying capacity of 55 000 chickens, inclusive of bulk feed silos; heating facilities; automatic feeder systems; integrated watering system and an advanced computer system to control humidity; temperature; air flow; oxygen levels and feeding times. All of the development will take place on a portion of land on the farm known as **Ptn 21 of Farm Knopfontein 101 IP / Coligny**.

The development is on a farm where there is an existing chicken farm operation at present.

2. Who is the EAP?

- RP Colyn / Green Environmental Consulting Services (Pty) Ltd / EAPASA EAP 2019/1358
- 1126 Waterpoort Street, Faerie Glen, Pretoria 0081
- Tel: 012 991 2575
- Mobile: 082 553 8844
- Email: rpolyn@telkomsa.net

2.1 Expertise of the EAP

- EIA Consultant since 1996
- EAP Registered / EAPASA 2020/1358

2.2 Map showing the existing and proposed additions

Refer Annexures – MAP – showing the farm and position of the new development.

2.3 Property Details

Ptn 21 of Farm Knopfontein 101 IP / Coligny / North West Province

3. Aspect of the activity contained in this EMPr

The EMPr will be looking at specific aspects in terms of:

- **Construction Phase**
 - Design of the chicken houses
 - Excavations and Foundations
 - Building materials and its storage
 - Waste and waste handling
 - Sanitation in terms of staff ablutions and health

- **Operational Phase**
 - Traffic and Dust
 - Delivery times of incoming and outgoing trucks
 - Light and Light pollution
 - Chicken waste and its handling / removal at the end of a cycle
 - Mortalities and its handling
 - Bio-Security and a Bio-Security Plan for the operation
 - Electricity and Water Supply
 - Supplies of day-old chicks to the facility

- **Closure Phase**
 - Actions and considerations should the facility need to close down permanently.

NOTE:

This EMPr will govern the operation, from inception and construction, through operational for the life time of the facility.

As a living document the EMPr may be amended as and when required, with all changes documented and the EMPr being the main document against which compliance must be determined via an independent audit.

SECTION A – Planning & Pre-Construction Phase

1. Management objectives in terms of impacts and risk that require consideration during the PLANNING & DESIGN Phase.

The main objective of assessment and consideration of risks and impacts is to:-

[a] avoid impacts as far as possible, and

[b] where impacts cannot be avoided to mitigate and minimise impacts and risks to a point where it becomes small in the bigger picture of development.

The following has been brought into consideration during the **PLANNING & DESIGN** of the proposed project and the impact management outcome required:-

- **Solar**
The inclusion of solar for water heating and where possible for solar power is being considered. Such installation will minimise the impact on electricity supply from the National Grid and will also be more carbon neutral in terms of emissions.
- **Rainwater**
Harvesting of rainwater where possible to offset against the use of water from borehole. Borehole water is a valuable resource and should be protected. Utilising rainwater saves on electrical power to run the pumps and save power from the National Grid.
- **External lights**
The consideration of down-lighters to minimise the effect of light pollution in terms of the adjacent properties. Lights are necessary for security, however there is no need to light up the surrounding properties but rather provide light at key points that are vulnerable.
- **Separation of Waste**
The separation of waste to promote recycling and re-use of waste items before being sent to landfill.
- **Integration of existing infrastructure**
The integration of the new development into the existing infrastructure [which is minimal] and the sharing of common infrastructure to minimise the development requirements and footprint.

2. Documentation and Actions required during Pre-Construction

The following is required to be in place and readily available as part of the “site office” set-up before the commencement of any construction activity:-

- **EA / Authorisation**
A copy of the formal NW-DEDECT approved Environmental Approval [EA], for the construction and development of ten [10] environmentally controlled and fully enclosed chicken houses each with a carrying capacity of 55 000 chickens per house;
- **EMPr**
A copy of the approved EMPr, to be on file at the Site Office;
- **Contractor Acceptance**
Signed acceptance of the approved EMPr by all contractors that will provide a service during the development /construction, on file at the Site Office;
- **Site Office**
A demarcated Site Office area with storage for documents and authorisations together with:
 - First Aid kit;

- Specific waste bins for biodegradable items i.e. plastics; metal and dangerous goods such as paint tins;
 - Ablution facilities for the construction workers;
 - Storage for cement and empty cement bags;
 - Fire extinguishers
- **Development Area**
 - Demarcated area where the development will take place;
 - Chevron [Red & White plastic] tape demarcating the bio-area[when ready] where no construction workers may pass into;
 - Demarcated area for the parking of construction equipment and the fuel bowser / fuel donkey together with drip trays and spill kit cleaning equipment.

Section B – Construction Phase

The possibility of impacts on the receiving environment is greatest during the Construction Phase. It is for that reason that the following has been identified and requires special attention and where necessary mitigation to minimise impacts on the environment.

The design of the ten [10] chicken houses will be for environmentally controlled and fully enclosed type houses where an advanced computer system controls temperature; air flow; oxygen levels; feeding times and heating in the event of a cold spell.

a) Determination of the best position / portion of land to be used

A Specialist review of the land was undertaken to determine the best possible portion of the farm to be utilised. The study identified a portion of land that was formerly cultivated land [many years ago] and as such will see minimal impacts in terms of indigenous trees being removed.

b) During Construction

- **Excavations and Foundations**

All excavations or open foundation areas must be clearly marked and made safe as part of the overall H&S of the site. Trenches must be infilled and compacted to prevent soils subsiding or posing a danger to those working on site.

- **Staff training and briefing**

All construction staff are to receive an introductory briefing on protection of the environment; waste handling; safety and health issues. Attendance and training to be documented and all staff to sign off that training was done. Training to be done by the ECO and person in charge of the construction crew.

Regular weekly refresher sessions at the start of business to be undertaken to ensure that construction staff remain current. Attendance to be documented and kept on file.

- **Ablutions and personal wash areas**

Portable ablutions for the construction staff to be cleaned and sanitised on a daily basis.

Portable ablutions to be serviced and refreshed by a service company at least once a week.

Proof of servicing to be kept on file.

The use of the adjacent environment as a toilet convenience is not permitted.

- **Trees & Shrubs**

The removal of any vegetation may only occur in the identified portion of land, as per the EA authorisation.

- **Cement wash-down**

A specific area must be provided for cement wash-down to take place. This area must be allowed to dry and the dried cement removed for disposal. No indiscriminate wash-down is allowed.

- **Rubble and refuse**

Daily cleaning of the construction site will reduce the risk of rubble blowing around and polluting the adjacent area / other properties.

Rubble must be sorted into the correct bins as to their nature i.e. bio-degradable; glass; plastic; cardboard and metal. The use of different coloured bins for the different types of waste stream is encouraged.

Cement bags must be kept aside and must be disposed of at an appropriate site.

No burning of waste or cement bags to take place on site at any time!
No burying of waste or cement bags to take place anywhere on site!

- **Building rubble**

The construction will produce solid building rubble i.e. broken bricks and concrete. Such items should be placed in a proper waste skip [obtainable from the municipality or private contractor], and should be removed and emptied when full to an approved landfill site. Building rubble not utilised as infill should be disposed of at an approved landfill site and not left as rubble heaps on the property or merely disposed of onto vacant land. All waste removal to an approved landfill site must be documented and a receipt obtained for future audit purposes.
 - **Audits and Audit Reports**

An Internal Audit must be undertaken at least **once a week** to ensure that the construction phase adheres to the approved EMPr. The audit must be undertaken by the on-site Environmental Control Officer [ECO]. These Audit Reports must be kept on file for external audit purposes or inspections by the NW-DEDECT when undertaken.

A **monthly External Audit** must be undertaken by the EAP / External ECO or another independent auditor as the next level of checking of compliance and adherence to the approved EMPr. Such audits must be accompanied by a formal report and the reports must be kept on file for auditing by the NW-DEDECT.
 - **Non-Compliance; Issues & Remedies**

All issues; non-compliance and remedies must be recorded and kept on file for audit purposes. Where remedies are suggested and changes to the actual EMPr is made, such changes must be fully documented and the signed off as part of the overall audit programme.
 - **Environmental Incident Register**

The on-site ECO must keep a formal **Environmental Incident Register** where all complaints received; information of plaintiff along with contact details and the remedy provided must be recorded. This will ensure that similar incident do not occur again.
- c) **After Construction**
- Certain aspects need specific attention at the end of construction before operations commence in terms of the rehabilitation of the environment.
- **Building rubble**

All building rubble not used as infill during construction must be removed from site to an approved landfill.

No burning or burying of rubble allowed on site and no trash heaps to be left unattended.
 - **Excess soils**

Excess soils not utilised during the construction of the new houses must be levelled out, any rubble removed for disposal. No waste soils may be dumped without authorisation.
- d) **Ensuring Compliance**
- As the Construction Phase is the time where most impacts may occur and where there is likely to be unwanted impacts, the following must be adhered to:-
- **EMPr**

Ensuring that each contractor receives a copy of the EMPr before starting to work on site; signs acceptance of the EMPr and all signed document to be kept on file at the on-site ECO station.

All contractors must receive a list of fines for non-compliance and sign acknowledgement of the information.

- **Audits**

Environmental Audit by an independent person to be undertaken once a month in addition to the weekly audits undertaken by the on-site ECO. The independent audit report must contain a list of irregularities [if there are any] as well as the rectifications required.

- **Daily checks**

The on-site ECO must undertake daily checks to ensure compliance of the EMPr; ensure staff training; address issues as they arise and assist in solving problems as and when they arise. Careful record keeping of all actions must be kept for audit purposes.

e) Who are the main players?

The following are the main players during the Construction Phase in terms of enforcing and maintaining the EMPr:-

- **ECO [on-site]**

The on-site ECO must ensure daily enforcement and compliance as well as record keeping of all actions; rectifications and adjustments made to the approved EMPr.

The on-site ECO must also ensure that the construction phase undergo a weekly internal audit to ensure compliance.

- **EAP / External Auditor / Independent ECO**

The EAP / External Auditor must ensure monthly audits; an audit report and assist in rectifying issued as and when they arise. All reports and amendments to the EMPr must be documented and kept on file at the on-site ECO station.

Section C – Operational Phase

During the Operational Phase certain aspects require careful attention in order to protect the receiving environment. The following aspects have been identified.

- **Traffic & Dust**

Traffic and dust creation goes hand in hand. The operation must enforce speed control where possible and advise deliveries to adhere to speed limitations in order to minimise dust creation and also the noise coming from large trucks.

- **Traffic times**

Being a rural area the noise of vehicles may be bothersome. As such deliveries and uplifting of stock should ultimately be scheduled for normal day light hours in order to minimise disturbances.

- **Waste**

No chicken waste or mortalities collected may be left outside to develop odours; attract flies or cause an environmental nuisance. Bins, readily available, should be at hand to receive any form of rubble [i.e. municipal waste] where it must be removed to an approved landfill site. Waste separation should be done prior to deposition in order to assist in recycling of waste of value i.e. glass; plastic and cardboard.

Bins must be sanitised on a weekly basis to ensure that they remain odour free and do not allow the breeding of flies.

- **Chicken Waste**

Chicken waste is a major source of smells and fly infestations.

All chicken waste collected at the end of a rearing cycle must be removed from site on the day that the waste is collected.

Timeous planning for the uplifting by end users must be made so that they can uplift the waste on the day that it becomes available.

Waste heaps **are not allowed** to lie outside the chicken houses where water and heat can cause flies to breed uncontrolled.

No burying of chicken waste is allowed to occur on the farm.

NOTE: Records must be kept of who takes/buys the chicken waste; where its final destination [address] will be and what will the waste be used for [i.e. fertiliser/source of feed for goats etc.]

- **Flies**

To maintain an environment where flies do not abound the operation should:-

- Employ a formal fly spray regime to control flies on the farm [normally contact spray];
- Ensure that feed has the required dosage of larvae control substance included to prevent larvae from developing;
- That all water points are properly working and does not cause leaks / wet areas in the chicken house;
- That roofs are clear of leaks to prevent the chicken waste becoming wet and being a place where flies can abound.

- **Mortalities**

All chicken houses must be checked for sick or dead birds at least twice a day.

All mortalities must be removed to the cold storage area, awaiting removal by the contracted lion farm or animal feed manufacturer.

All mortalities removed from the farm must be transported in an enclosed container.

Equipment used to collect and gather mortalities must be disinfected after each use to protect the flock from any disease.

NOTE: Records of mortalities taken; by whom; final destination and final use to be documented and saved for audit purposes.

NOTE: No incineration of mortalities are allowed on site. Should incineration be considered then the appropriate application and an Air Emissions License Application be done.

- **Bio-Security**

The area around the operation must be clearly demarcated as a Bio-Security Area with proper access control; footbaths and sanitiser for all entering or leaving the site is a requirement.

The site must have a biosecurity plan in place, and the staff must be trained in its requirements.

- **Supply of day-old chicks**

There are a number of suppliers of day-old chicks to rearing facilities in South Africa.

All day-old chicks must arrive having undergone their first set of inoculations.

No “outside chicks” from unknown sources should be allowed on site, as this may be dangerous to the rest of the flock.

- **Access points**

All access points to the farm must provide, as a minimum standard, foot baths and sanitising liquid for all incoming and outgoing staff.

- **Entrance Notices**

All access points to the farm must display the required information boards to announce bio-security area; the need to sanitise and the right of access being controlled.

- **Ablution facilities**

The farm must supply proper ablution facilities for staff to **shower in** and **shower out** at the end of a working day. This forms part of the bio-security regime for the operation.

- **External Lighting**

All external lighting to be down-lighter type lights where possible in order to prevent light pollution and light being a nuisance to adjacent properties.

- **Electricity and Water Supply**

Electricity supply; connections and installations must be approved and duly signed off along with the required COC Certificates.

- **Incineration**

The incineration of mortalities on site is not allowed. Incineration requires an additional Air Emissions License to be obtained from the NW-DEDECT.

- **Coal Bunkers**

All coal bunkers must be supplied with a cement floor and either a roof or a sturdy tarpaulin to prevent the ingress of water taking place.

NOTE: The dumping of coal and ash on the bare ground is not allowed.

All coal dumps must be provided with a proper coal bunker.

All bunkers must either be covered by a roof or by a tarpaulin.

Water ingress is not allowed.

a) Compliance to Environmental Management Standards

There are certain standards and practices that the operation must follow at all times:-

- **EMPr**

It is important to scrutinise and follow the dictates of the approved EMPr at all times. This will ensure complete compliance; regular evaluation of the operation and its environmental standards and amendments being implemented to ensure that the environment is always the No.1 priority.

- **Bio-Security**

Bio-security and adhering to the rules of the bio-security plan for the operation are of prime importance.

Staff must be fully trained in all aspects of the bio-security plan and know exactly what is allowed and what is not.

Record keeping of training is essential and will form part of the audits in future.

- **Audits**

It is essential to ensure that the operation undergoes an external independent audit in terms of its environmental compliance, at least once a year. Such an audit must be accompanied by a formal report and suggested remedies [should there be any].

Formal record keeping is required for inspections by the NW-DEDECT.

Once in every five [5] year cycle a formal external audit report must be forwarded to the NW-DEDECT Compliance Division for insight and compliance.

NOTE: In the event that an environmental audit reveals major non-compliance issues to be present, the independent environmental auditor can issue a non-compliance notice requesting remedy within a period not exceeding 30 days followed by a second audit to ensure compliance. Should the issues persist then the environmental auditor must report the non-compliance to the relevant authority with a request for inspection and further actions.

b) Ensuring Compliance

In order to ensure compliance and the enforcement of the EMPr as approved during the operational phase the following must be adhered to:-

- **EMPr**

The developer/operator must provide a signed acceptance of the approved EMPr and this acceptance letter must be placed along with the EA and EMPr onto the company environmental file.

- **Operational Documents**

An environmental file containing [a] Environmental Authorisation; [b] EMPr; [c] Signed EMPr acceptance letter by the developer and [d] Incident Report Form, must be available on site at all times for any inspection by the NW-DEDECT.

- **Audits**

Monthly internal audits by the operator / farm manager to ensure compliance. The operation will be provided with a check-list called **Aspects for Environmental Compliance / Operations** against which compliance must be checked.

Also refer to - Aspects for Environmental Compliance / Operations

After the first year of full capacity operations, the operations will receive an environmental audit by an independent consultant, inclusive of a report and a list of non-compliance issues. All non-compliance issues will be remedied and the correct procedures will be brought in place.

All audit reports; non-compliance issues; remedies and other actions undertaken will be kept on the on-site environmental file for inspection purposes. A copy of the Audit Report must be forwarded to NW-DEDECT once every 5 years [Compliance Division].

c) Who are the main players?

The following are the main players during the Operational Phase in terms of enforcing and maintaining the EMPr:-

- **Farm Manager**

The Farm Manager [on behalf of the owner] must ensure daily enforcement and compliance as well as record keeping of all actions; rectifications and adjustments made to the approved EMPr.

The Farm Manager must also ensure that the operational phase undergoes a monthly internal audit to ensure compliance.

- **EAP / External Auditor**

The EAP / External Auditor must ensure that a yearly audit is undertaken; an audit report is provided and assist in rectifying issues as and when they arise. All reports and amendments to the EMPr must be documented and kept on file at the Farm Manager's office.

d) Special Precautions

It is an acceptable practice that chicken mortalities are taken away by other farming activities such as lion farms; crocodile farms and piggeries where the mortalities are used as supplement feeding.

- a. No mortalities may be buried without authorisation from the authorities as such action poses a threat to underground water reserves;
- b. No mortalities may be incinerated as the action of incineration triggers activities under NEM:AQA and NEM:WA where additional licensing and an AEL will be required.

WHEN IN DOUBT ASK YOUR ENVIRONMENTAL CONSULTANT
ILLEGAL ACTIVITIES MAY INCUR FINES FROM THE AUTHORITIES

Section D – Closure Phase

NOTE: Closure is not contemplated and as such is NOT APPLICABLE for this EMPr.

Should a situation arise where the developer decides to close down the operation and scrap the activity, then the NW-DEDECT should be contacted in order to follow the correct procedure for closure and rehabilitation.

As there is no intention to proceed to closure no financial provision has been made for rehabilitation.

Section E – Roles & Responsibilities

Planning & Pre-Construction Phase

Impact Management Outcome: Design for renewables and other aspects to protect the environment						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Plan for renewables i.e. solar; rainwater harvesting; sola heaters down lighter	Owner Architect	Through design	During design before construction	Owner Architect	ECO throughout the construction phase	ECO Signoff of installations as per architect design

Impact Management Outcome: Legal Authorisations and infrastructure						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Ensure that EA; EMPr and signed EMPr from contractors are on file; Ensure ablution facilities are available; Ensure H&S are in place	Owner ECO	Site office with documents; Installation of temporary toilets on site	Before the onset of Construction Phase	Owner Contractor ECO	Ongoing throughout the set-up and Construction Phase	ECO audit reports ; External Audit Reports

Construction Phase

Impact Management Outcome:						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Owner / Operator to sign acceptance of the EMPr and copy on file	Owner Farm Manager	Signed documents on file	Before construction and operational phase	Farm Manager Owner	Quarterly	Documents of file
File with copy of approved EMPr on site	Farm Manager	Copies on file	Before construction and operational phase	Farm Manager	Quarterly	Documents of file
Incident record keeping on file on site	Farm Manager	Record keeping on file	Before the construction and operational phase	Farm Manager	Quarterly	Documents of file
Audit after 1 year and record on file	Farm Manager External Auditor	Records on file	At end of first year of operations	Farm Manager Owner to arrange	Yearly	Documents of file

Impact Management Outcome: Construction Compliance						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
External Audits monthly with full report on file	Owner Farm Manager	Documents on file in office	Monthly	Owner Farm Manager	Monthly	Reports on file
Issues & Remedies to be implemented	Owner Farm Manager	Report on file in office	Monthly	Owner Farm Manager	Monthly	Reports on file

Impact Management Outcome: Construction Activities						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Daily staff briefings on environmental safety	ECO	Daily morning briefing sessions	From onset of the construction activities	Eco External Audit	Daily Monthly	ECO Report External Audit Report
Sanitising of ablution facilities	Contractor ECO	Daily in the morning	From onset of construction	Contractor ECO	Daily	ECO Report External Audit Report
Rubble clearing	Contractor ECO	Collection daily at close of work	From onset of construction	Contractor ECO	Daily	ECO Report External Audit Report
Sorting of Waste Streams	Contractor ECO	Daily when rubble is collected	From onset of construction	Contractor ECO	Daily	ECO Report External Audit Report
Availability of waste drums and coloured waste bins	Contractor ECO	At start of construction	From onset of construction	Contractor ECO	Daily	ECO Report External Audit Report
Waste removal to landfill must be documented and proof retained	Contractor ECO	At start of construction	From onset of construction	Contractor ECO	Daily as required	ECO Report External Audit Report
Audit Reports must be retained on file	ECO	At start of construction	From onset of construction	ECO	Weekly and monthly	ECO Report on file External Audit Report on file
Non-compliance and remedies to be kept on file	ECO	From start of construction through audit reports	From onset of audits	ECO Contractor	Daily	ECO Audits External Audit Reports

Impact Management Outcome: Implementation of impact management actions – Construction Phase						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Day by day checks and remedies	ECO	Check list and internal audits	From start of construction	ECO	Daily	Records and internal audit reports
Monthly independent audits	EAP External Auditor	External audits with report	From start of construction	EAP External Auditor	Monthly	External Audit Reports and recommendations

Impact Management Outcome: Implementation of impact management actions – Construction Phase						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Day by day checks and remedies	ECO	Check list and internal audits	From start of construction	ECO	Daily	Records and internal audit reports
Monthly independent audits	EAP External Auditor	External audits with report	From start of construction	EAP External Auditor	Monthly	External Audit Reports and recommendations

Impact Management Outcome: Avoiding pollution or degradation						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Regular Internal and External Audits to monitor compliance	ECO External Auditor	ECO Reports EAP Audits once a month	From onset of construction phase	ECO External Auditor	Daily, weekly and monthly	ECO Report External Audit
Regular staff training and record keeping of training given	ECO Contractor	ECO Contractor	From onset of construction phase	ECO Contractor	Weekly	ECO Report External Audit
EMPr to each contractor against signature	ECO	ECO	From onset of construction phase	ECO	Start of each contract	ECO Report External Audit
Waste separation to take place in support of recycling	ECO Contractor	ECO Contractor	From onset of construction phase	Contractor ECO check	Daily	ECO Report External Audit
No burning of cement bags or burying of bags on site	ECO Contractor	ECO check Contractor	From onset of construction phase	Contractor ECO	Daily	ECO Report External Audit
No removal of any trees unless authorised by the EAP for the project	ECO Contractor EAP	ECO check Contractor	From onset of construction phase	Contractor ECO EAP	Ongoing for construction phase	ECO Report External Audit
Cement tools wash down in designated area only	ECO Contractor	ECO Contractor	From onset of construction phase	Contractor ECO	Daily	ECO Report External Audit
Ensure that ablutions are clean and serviceable. No use of the bushes or adjacent environment as a toilet	ECO Contractor	ECO	From onset of construction phase	ECO	Daily	ECO Report External Audit

Impact Management Outcome: Rehabilitation of the environment						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Removal of rubble not used as infill to landfill	Contractor ECO	By truck to landfill and receipt for deposition	Upon start of construction	Contractor ECO	As and when rubble is large enough for removal	ECO Report External Audit Report
No burning or burying of waste allowed	Contractor ECO	Daily checks by ECO	Upon start of construction	Contractor ECO	Daily checks by ECO	ECO Report External Audit Reports
Waste soils to be used in foundations or disposed at an approved site	Contractor ECO	Daily checks if soils are not being used	Upon start of earth works on site	Contractor ECO	Ongoing throughout construction	ECO Report External Audit Report
Must be infilled and compacted to ensure safety	Contractor ECO	Checked at end of construction	At end of construction	Contractor ECO	Whenever a trench needs closing in	ECO Signoff External Audit Report
Removal of the temporary site office and mobile toilets to final clean-up	Contractor ECO	End of construction phase removal by contractor	At end of construction	Contractor	End of Construction Phase	ECO Report External Audit Report

Operational Phase

Impact Management Outcome: Operational aspects						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Environmental Incident Register at reception	Owner Farm Manager	Environmental File at reception	As from the Construction Phase throughout the life span of the facility	Owner Farm Manager	Ongoing daily	Internal Audit quarterly External Yearly
Communicate Health Regime for safety of birds and employees	Farm Manager	Farm Manager Weekly training	From start of operations	Farm Manager	Weekly staff training	Record keeping
Light; signage, display boards are operational and clear	Farm Manager	Physical checking	Weekly checks & maintenance	Farm Manager	Weekly checks and maintenance	Record keeping
Communicate best route for deliveries to minimise dust generation	Farm Manager	Communicate when placing an order	At time of ordering stock i.e. feed; coal; day old chicks	Farm Manager	When making orders	Record keeping
Communicate speed restrictions to delivering companies	Farm Manager	Communicate when placing an order	At time of placing an order	Farm Manager	When making orders	Record keeping
Communicate bio-security rules to delivery companies	Farm Manager	Communicate when placing an order	At time of placing an order	Farm Manager	When making orders	Record keeping
All houses to be checked twice a day for mortalities	Farm Manager Staff	Physical walk through	Daily in the morning and afternoon	Farm Manager Staff	Daily	Record keeping
Mortalities to be removed to refrigeration pending removal	Staff working in the chicken houses	Physical removal and transferring mortalities to refrigeration	Twice a day as and when mortalities are encountered	Farm Manager Staff	Daily morning and afternoon	Record keeping
Ablution facilities to be disinfected and provided with warm water and soap for staff	Farm manager Staff	Physical clean down and replenishing of soap	Daily in the morning and in the afternoon	Farm Manager Staff	Daily morning and afternoon	Record keeping
All access points to have foot baths	Farm Manager	Physical filling and checking	Twice per day	Farm Manager Staff	Daily	Record keeping
Timeously notify 3 rd party users of the animal waste on date that waste must be removed from site	Farm Manager	Call and arrange for removal	As and when clean-out is contemplated	Farm Manager	When cleaning out	Record keeping
All old bedding and manure to be removed from site upon clean-out – no stock piling to occur	Farm Manager	Physical collection and removal from the houses for old bedding	As and when clean-out is being done	Farm Manager	When cleaning out	Record keeping
Implement as secure fly spray regime to combat flies	Farm Manager Farm Vet	Add additives to the feed as prescribed	Weekly operation	Farm Manager Company Vet	Weekly	Record keeping
Use contact spray on outside of the houses to combat flies	Farm Manager Farm Vet	Spray down as prescribed by the company Vet	Weekly operation	Farm Manager Company Vet	Weekly	Record keeping
Undertake daily farm area clean-up of rubble	Farm Manager Staff	Physical walk through	Daily pick-up	Farm Manager	Daily	Record keeping
Ensure rubble sorted at source for recycling purposes	Farm Manager Staff	Physical sorting as and when rubble is collected	Daily	Farm Manager Staff	Daily	Record keeping
Ensure weekly removal of waste to landfill	Farm Manager	By vehicle to the landfill	Once a week to landfill	Farm Manager	Weekly	Record keeping
Ensure waste removal is done against receipt	Farm Manager	Person taking waste must request a receipt	When waste goes to landfill	Farm Manager	Weekly when removal is done	Record keeping
Waste bins to be disinfected once a week	Farm Manager Staff	Physical wash down and disinfection inside	Weekly at least once	Farm Manager	Weekly	Record keeping

Impact Management Outcome: Prescribed Standards & Practices						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Ensure Health & Safety and Bio-security rules communicated to staff Sign-off on record	Farm Manager	Staff training and sign-off of training	From start of operations	Farm Manager	Weekly training	Record keeping sign-off on training
Internal Audit of aspects as contained in the approved EMPr	Farm Manager	Record keeping of audits undertaken	From start of operation	Farm Manager	Quarterly	Record keeping
Undertake internal audit quarterly and external audit once a year	Farm Manager EAP	Records of audits on file	From start of operations	Farm Manager EAP	Internal quarterly External Yearly	Record keeping
Ablution facilities must be sanitised and kept clean – service twice a day	Farm Manager	Check and record keeping	From start of operations	Farm Manager	Daily morning and afternoon	Record keeping
Coal bunkers must have either roof or tarpaulin	Farm Manager	Physical check	From start of operation	Farm Manager	Daily	Part of regular audit

Impact Management Outcome: Operational compliance						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Quarterly external audits in 1 st year of operations	Owner Farm Manager	External audit with full report	Once operations start	Owner Farm Manager	Quarterly	Report and findings on file
After 1 st year only yearly external audits	Owner Farm Manager	External audit with full report	After 1 year of operations	Owner Farm Manager	Yearly	Report and findings on file

Impact Management Outcome: Operational Activities						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Waste must be containerised and not be left outside to create problems	Owner Farm Manager	Daily checks Daily removal	From the onset of the operational phase	Owner Farm Manager	Daily	Internal Audits Yearly external audit
Waste separation for ease of recycling	Owner Farm Manager	Daily checks	From the onset of the operational phase	Owner Farm Manager	Daily	Internal Audits Yearly external audit
Exit / entrance points must provide sanitising and footbaths	Owner Farm Manager	Equipment at the gates	Prior to the onset of operational phase	Owner Farm Manager	Daily	Internal Audits Yearly external audit
All exit / entrance points must have correct signage	Owner Farm Manager	Signage at the gates	Prior to the onset of the operational phase	Owner Farm Manager	Daily	Internal Audits Yearly external audit
Proper ablution facilities and showers for staff on site	Owner Farm Manager	To be constructed during the construction phase	Must be available from onset of the Operational Phase	Owner Farm Manager	Daily	Internal Audits Yearly external audit
Exterior lights must be down-lighter to prevent light pollution	Owner Farm Manager	To be installed during construction phase – ongoing maintenance	During construction phase	Owner Farm Manager	Ongoing maintenance and upkeep	Internal Audits Yearly external audit

Impact Management Outcome:						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Owner / Operator to sign acceptance of the EMPr and copy on file	Owner Farm Manager	Signed documents on file	Before construction and operational phase	Farm Manager Owner	Quarterly	Documents of file
File with copy of approved EMPr on site	Farm Manager	Copies on file	Before construction and operational phase	Farm Manager	Quarterly	Documents of file
Incident record keeping on file on site	Farm Manager	Record keeping on file	Before construction and operational phase	Farm Manager	Quarterly	Documents of file
Audit after 1 year and record on file	Farm Manager External Auditor	Records on file	At end of first year of operations	Farm Manager Owner to arrange	Yearly	Documents of file

Impact Management Outcome: Implementation of impact management actions – Operational Phase						
Impact Management Actions	Implementation			Monitoring		
	Responsible Person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Uphold the dictates of the approved EMPr	Owner Farm Manager	Signed EMPr and acceptance by signature	From time of operations	Owner Farm Manager	Quarterly for 1 st year then yearly	Documents on file
Monthly external audits	Owner EAP	Full audit with report	From time of operations	Owner Farm Manager EAP	Monthly	Records on file
Guidance and remedies where required	EAP	Written Report	After each audit	EAP Farm Manager	Monthly or as and when required	Record on file
Record keeping of all findings and remedies suggested	Owner Farm Manager	Reports on file	After each audit	Owner Farm Manager	Monthly	Records on file

Additional Aspects to be added:

None at this time ----

NOTE: The EMPr is a living document and allows for additions to be made as and when circumstances arise that demand changes or additions. ALL additions or changes must be documented and properly dated in order to maintain a date line and proper paper trail.

- This EMPr has been accepted by the developer/owner of the proposed activity for on behalf of:
M PREECE Poultry - Knopfontein
.....and will be circulated, against signature to all contractors involved in the construction process.
- Such signed documents will be kept on file for audit purposes by the relevant authorities.

Signed for and on behalf of the developer:

Signature

Name

Date

EAP (RP Colyn / EAPSA 2020/1358) for M PREECE of Knopfontein Poultry Farm

Aspects for Environmental Compliance – CONSTRUCTION

ITEM	YES	NO
Is the construction site clearly demarcated?		
Is there a clearly demarcated barrier between the existing infrastructure and the new area to indicate where construction workers may not go?		
Is there a footbath and disinfectant for all arrivals on site?		
Is the site office in place?		
Is there a bulk skip on site?		
Are there bins for waste separation on site?		
Has staff received training on environmental issues?		
Are ablutions in place and being serviced?		
Has an area for cement wash down been set aside?		
Has an area been demarcated for the keeping of building sand; stone; cement etc?		
Has an area been demarcated where staff may prepare food and tea / coffee?		
Is the environment clear of rubble and waste?		
Are all documentation i.e. EA; EMPr; Contractor Acceptance docs on file and on site?		
Has an Incident Record File been opened and kept on site?		
Are copies of waste removal receipts kept on file on site?		
Are copies of ablution services kept on file on site?		
Are all excavations / trenches safe and clearly marked?		
Are the weekly audits and monthly external audits on file and on site?		

Aspects for Environmental Compliance - OPERATIONAL

ITEM	YES	NO
Is the environmental file with all authorisations on site?		
Is traffic speed being regulated?		
Are delivery trucks following the best possible routes via tar roads to minimise dust?		
Are vehicle activities restricted to day light hours?		
Is the site free of waste?		
Is daily site clean-up being done?		
Is the area clear of chicken waste?		
Are the take-off agreement in place and on file?		
Are mortalities kept refrigerated pending removal?		
Are mortalities removed in enclosed containers?		
Is the operation following a fly spray regime?		
Is the operation adding medication to feeding to prevent fly larvae from developing?		
Is the operation following a bio-security plan?		
Are access point to the premises provided with foot baths and sanitiser?		
Are ablution facilities clean and serviced?		
Are the coal bunkers cover and kept closed to prevent ingress of water?		
Are the coal ashes kept covered pending removal to landfill?		
Is internal audits being undertaken by the farm manager?		
Is external audits being undertaken by the independent auditor?		
Coal bunkers – roof or covered?		
Coal bunkers – no water ingress?		
Coal Ash bunkers – available to accept ash from the heating system?		