Basic Assessment Report for the Proposed Poultry Farm on the Farm Honingnestkrans JR 296

Report Prepared for

Top Tech Feeds (Pty) Ltd
GDARD Reference Number: 002/12-17/E0277
Report Number 509128

Report Prepared by

April 2017
Basic Assessment Report for the Proposed Poultry Farm on the Farm Honingnestkrans JR 296

Top Tech Feeds (Pty) Ltd

SRK Consulting (South Africa) (Pty) Ltd.
Block A, Menlyn Woods Office Park
291 Sprite Avenue
Faerie Glen
Pretoria 0081
South Africa

e-mail: pretoria@srk.co.za
website: www.srk.co.za
Tel: +27 (0) 12 361 9821
Fax:+27 (0) 12 361 9912

SRK Project Number 509128
April 2017

Compiled by: Andrew Caddick
Senior Environmental Scientist
Email: acaddick@srk.co.za

Authors:
Andrew Caddick

Peer Reviewed by: Manda Hinsch
Partner

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.

2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.

3. A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.

4. A draft Basic Assessment Report (1 hard copy and two CD’s) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.

5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.

6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.

8. An incomplete report may lead to an application for environmental authorisation being refused.

9. Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.

10. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.

11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.

12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.

13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

**DEPARTMENTAL DETAILS**

Gauteng Department of Agriculture and Rural Development  
Attention: Administrative Unit of the of the Environmental Affairs Branch  
P.O. Box 8769  
Johannesburg  
2000

Administrative Unit of the of the Environmental Affairs Branch  
Ground floor Diamond Building  
11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377  
Department central telephone number: (011) 240 2500
If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

The submission of the Basic Assessment Report (BAR) to the Competent Authorities will be within the 90 days from submission of the Application. The Application was submitted on

Is a closure plan applicable for this application and has it been included in this report? 

if not, state reasons for not including the closure plan.

The application for the proposed Poultry Farm is a new activity. The applicant does not expect to decommission the Poultry Farm in the near future. As soon as it has been decided that the Poultry Farm will be decommissioned, an application for closure and decommissioning will be submitted to the competent authority.

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity?

Y

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person?

Y

A copy of the Stakeholder database can be found in Appendix E

If no, state reasons for not attaching the list. 

Not Applicable

Have State Departments including the competent authority commented?

N

If no, why?

All Organs of State having a jurisdiction on any aspect of the proposed project were notified on the proposed project. These Organs of State will be kept on the Stakeholder database throughout the Basic Assessment Process. Proof of notification can be found in Appendix E.
Environmental Authorisation for the Proposed Poultry Farm located on Portion 41 of the Farm Honingnestkrans 269 JR.

1. Introduction

Top Tech Feeds (Pty) Ltd (Top Tech) would like to construct eight broiler houses and associated infrastructure with a footprint size of approximately 1 400 square meters each. Four broiler houses will be constructed adjacent to the other four, with 22 meter servitude between them. Each house will have the capacity to accommodate approximately 20 000 chicks from day one. Two broiler houses will be kept vacant at any point in time, for cleaning and maintenance. The broiler houses will be semi-automated, with an automated feeding system. Site layout plans can be found in Appendix A.

The associated infrastructure will include, but not limited to, the following:

- Feed silos;
- Water storage units for drinking water;
- Possible water storage units to capture rainfall from the roofs of the buildings;
- Additional storage facilities for chemicals, control room and wash room;
- Biosecurity access control entrance;
- Temporary manure stockpile shelter;
- Ablution facilities for workers.

Where possible the floor of the coops should be cemented, which is impervious to water. This ensures that the house can be adequately cleaned and disinfected after each batch. The floor should also be flat and even, because an uneven floor will cause leg problems in the birds. On the floor bedding must be spread. The function of the bedding is to absorb the moisture from the faeces and urine of birds.

1.1. Waste Management

It is expected that the mortality rate of the broiler houses will be at approximately 5%. All carcasses will be disposed of at the closest licensed landfill site. Manure generated from the broiler houses will be used as fertilizer on the applicants and possibly neighbouring farms. Manure will not be stored or a period longer than 72 hours. Should any excess manure be generated, which cannot be used by surrounding farmers, this will be bagged and sold as cattle feed or disposed of at the nearest licensed landfill site.

The floors of the chicken houses are strewn with a loose material such as straw or wood chips to allow for easy clean-up of chicken droppings. The chicken houses will be well ventilated to help air out odours.

Poultry manure contains considerable amounts of nutrients such as nitrogen, phosphorus, and other excreted substances such as hormones, antibiotics, pathogens and heavy metals which are introduced through feed. Leaching and runoff of these substances has the potential to result in contamination of surface water and groundwater resources. The storage and handling of the manure will require strict control and management to ensure minimal impact on the surrounding environment will occur. This has been addressed in the Environmental Management Programme (EMPr).

Chicken manure will be removed from the houses after each cycle. It is estimated that approximately 15 m³ of water will be required to wash the floors of each house following each cycle. This wastewater will be collected via a dedicated system of inlets within the poultry houses and piped to a settling chamber and containment facility, located below the site. Water from the wash-down process will be kept separate from other waste water at all times.
1.2. **Water Management**
Water for cleaning and livestock watering will be provided by an onsite borehole. The borehole is in the process of being registered with the Department of Water and Sanitation (DWS). Any other irrigation needs will be sourced from the existing allocation from the Bon Accord Irrigation Scheme.

1.3. **Chicken Loading and Unloading**
There will be an on-going receipt and dispatch of consignments of chickens on a 7 week cycle by truck. Chickens will be caught by hand, placed in crates and transferred by trucks to the farm.

1.4. **General Support Infrastructure**
General support infrastructure will be required during the operation of the proposed Poultry Farm. These may include offices, workshop, and storerooms.

1.5. **Access Road**
An access road already exists. The entrance to the proposed Poultry Farm will be from the R101. No additional access roads will be created. Pathways will be constructed over very short distances to access the broiler houses from the entrance.

1.6. **Bio-Security Infrastructure**
Micro-organisms (Pathogens) that cause disease are bought to a poultry farm through many ways. Pathogens can be carried in the air by people, vehicles, wild birds, flies and rats. The poultry feed and drinking water can also be contaminated. All staff will undergo training before the farm starts operating. Strict biosecurity measures are important in a poultry farm as diseases are easily transmitted. In order to ensure that no diseases are brought to the site and that people who exit the site do not contract any disease, there will be strict access control:
- Casual visitors will be kept out;
- The gates will be kept locked and the property will be fenced off;
- The buildings will be completely closed in a light tight environment;
- Managers/visitors/service personnel should preferably restrict themselves to only one farm per day;
- People will be inducted prior to entry i.e. disinfection of people (i.e. footbath at every coop) and also undergo disinfection when exiting the farm;
- Clean overalls and gumboots will be provided after disinfection; and
- Vehicles will be sprayed with disinfectants when entering and exiting the farm.

The waste water from disinfection processes will be channelled to a septic tank and will be pumped out by a private contractor and removed from the farm, as and when necessary. Staff will shower on site and wear clean Personal Protective Clothing (PPE). Sanitizers will be kept around the facility to prevent the spread of diseases, impacting on the Poultry supply and neighbouring land uses.

1.7. **Odour Management**
Mechanical ventilation plays an integral role in poultry farming as it reduces the ammonia level in the coops. The reduction of ammonia in the coops results in significant reduction of odour problems and is essential for environmentally acceptable agricultural systems. The ventilated manure belt battery solves environmental problems. Rapid drying of manure virtually eliminates organic changes in the manure. This reduces ammonia emission. Manure will be dried by ventilation to reduce odour and will then be removed from the coops every three days after which manure will be packaged and then transported or collected to/by farmers and nurseries. The manure will leave the farm within three days.

1.8. **Ventilation**
Heat stress in poultry is a serious problem for the industry. Mortality during extremely hot weather can be significant, especially when combined with high humidity. Under normal conditions, chickens have the ability to cool themselves with physiological and behavioural mechanisms but these mechanisms fail at
extreme high temperatures. The initial temperature required is 32° C which should be gradually decreased over a three week period to 26° C. Thereafter the house is kept at environmental temperature. The design of the ventilation system is thereof of critical importance during hot weather. Air movement inside the coops must be effective in removing dust, air and odours.

1.9. Common Diseases and Vaccinations

The most common diseases amongst poultry farms are the following:

- New castle disease;
- Avian influenza;
- Infectious Bronchitis; and
- Mycoplasma.

Vermin is one of the factors that can lead to a decrease in productivity in a poultry farm. Vermin is described as parasites, infestations and undesirables (insects, rats) which lead to mortalities of chickens needs to be managed. Vaccination is an important way of preventing diseases. Different regional epidemic situations require suitably adapted vaccination programmes. Vaccination will be guided by the advice of a qualified veterinarian and poultry health service. Only healthy chickens should be vaccinated. Chickens will be vaccinated either through drinking water, spray or eye drop.

Cleaning and decontamination are key components of routine biosecurity in a poultry farm. Decontamination against disease organisms such as: viruses, bacteria, parasites and moulds that may be present at a poultry farm or at the end of a disease outbreak. The usual methods for decontamination include the use of disinfectants, detergents/soap, sunlight and heat (direct flame or steam). Cleaning is referred to as the removal of foreign materials like dust, soil and organic material such as: droppings, blood and secretions.

1.10. Chicken Feed Storage

The chicken feed, comprising of grain and soya, is stored in large feed containers. Feed will be purchased from external feed suppliers and transported in bulk to the proposed Poultry Farm via truck. The mixed feed will be conveyed from the tank to the houses using a channel unit.

2. Biophysical Environment

This section details the biophysical status quo of the surrounding environment.

2.1. Climate

The Pyramid area receives approximately 685 mm of rain per year. Most rainfall occurs during the summer months (October – March). The lowest rainfall is experienced in August (3.2 mm) with the highest rainfall experienced in February (113.1). Figure 1 provides an illustration of the average rainfall throughout the year in the Pyramid area.
The average maximum temperatures for the Pyramid area range from 21°C in June and July to 30°C between December and February. The average minimum temperatures in the Pyramid area range from 5°C in June and July to 18°C in January and February. Figure 2 illustrates the monthly average temperature throughout the year.

The predominant wind direction is equally North - North West and North – North East with an average speed of 9 kilometres per hour (km/h) (Windfinder, 2016). Figure 3 provides an illustration of the wind rose obtained from the closest weather station at the Wonderboom Airport.
2.2. Topography

The topography can be considered as generally flat with ridges and hills to the South and North as illustrated in Figure 4.

2.3. Geology and Soils

The geology of the study area comprises sedimentary rocks of the Ecca Group (Karoo Supergroup) overlaid by shale, with sandstone-rich units present towards the basin margins in the south, west and northeast and coal seams in the northeast.
The soils in the project area are categorised as freely drainage and structure less soils with less than 20 mm holding capacity. The soils in the project area are classified as red soils with a high base status (CM) with a low susceptibility to water erosion.

2.4. **Sensitive Areas**

The proposed footprint is found approximately 780 m from an Ecological Support Area as defined by the Gauteng Conservational Plan Version 3.3.

2.5. **Flora**

The Vegetation Type that is typically found in the area is the Marikana Thornveld of the Central Bushveld Bioregion, which is listed as endangered according to the South African National Biodiversity Institute (SANBI). This vegetation type is consistent with a tropical bush and savanna type bushveld. The immediate footprint of the proposed development is currently cultivated with lucern (*Medicago sativa*) which is harvested as a foraging crop for livestock. The vegetation type of the project area is illustrated in Figure 5.

In terms of the Gauteng Conservational Plan, the proposed footprint does not fall within any Critical Biodiversity Areas or areas of importance to Ecological Support.

![Figure 5: Illustration of the Vegetation Type within the Proposed Development Footprint](image)

2.6. **Fauna**

No fauna of significance was found on the site and the surrounding areas. The only animals found on site are domesticated animals, goats and cows.

2.7. **Conservation Areas**

No conservation areas were found on the site in proximity to the site. The Wallmansthal Sandf Property is situated approximately 5.5 km east of the proposed Poultry Farm with the De Onderstepoort Private Nature Reserve approximately 4 km south west.

2.8. **Heritage**

No natural areas or areas of cultural or heritage importance can be found on the site. The site is already developed with infrastructure such as dwellings and a borehole existing on site. The footprint area is...
currently cultivated.

2.9. Surface Water and Wetlands
The proposed project is situated within the A23E quaternary catchment of the Limpopo Water Management Area (WMA). Two non-perennial tributaries of the Apies River run on either side of the proposed Poultry Farm at a distance of 1.8 km west and 1 km east. An irrigation dam is situated in the corner of the property which is utilised by the applicant for irrigational purposes and supplied through the Bon Accord Irrigation Scheme. No wetlands are situated on the farm. Sparsely distributed farm dams can be found within the vicinity.

2.10. Geohydrology
The groundwater level of the borehole on site was measured at 1.85 metres below ground level (mbgl) with a borehole depth of 30 m. The quality of the water as analysed in October 2016 shows to be moderate with a few variables exceeding the Department of Water Affairs guidelines for domestic use, namely:

- Electrical Conductivity;
- Total Dissolved Solids;
- Total Hardness;
- Calcium;
- Magnesium.

All of the hydrocensus boreholes have fresh and clean groundwater quality and Magnesium and bicarbonate ions are generally the dominating cation and anion respectively.

2.11. Socio Economic Profile
The proposed project is situated approximately 800 m south west from the Pyramid Estate and 2.5 km north east within the northern regions of the Tshwane Metropolitan Municipality. The proposed project is situated within Ward 49 of the Tshwane Metropolitan Municipality. The surrounding areas can be classified as rural.

2.11.1. Population
The population of Ward 49 reaches approximately 35424 with a density of 2 people per hectare and a household size of 3.5 persons per household (Tshwane Metropolitan Municipality, 2015).

2.11.2. Education
Five percent of adults have no schooling while twenty one percent of adults are schooled up to grade 12. In general, the level of education in the region is low. The level of education is illustrated in Figure 6.
Figure 6: Education Levels of Ward 49 (StatsSA, 2011)

Approximately twenty-eight percent of economically active persons are unemployed and sixty-five percent are employed, leaving a seven percent of discouraged work seekers (Tshwane Metropolitan Municipality, 2015).

Select the appropriate box

The application is for an upgrade of an existing development  
The application is for a new development  
Other, specify

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES

If yes, describe the legislation and the Competent Authority administering such legislation

The proposed Poultry Farm will utilise an existing borehole on site for cleaning and providing drinking water to the chickens. The licensing process of this borehole with the Department of Water and Sanitation (DWS) is underway.

If yes, have you applied for the authorisation(s)?
NO

If yes, have you received approval(s)? (attach in appropriate appendix)
NO
## 2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations:

<table>
<thead>
<tr>
<th>Title of legislation, policy or guideline</th>
<th>Administering authority</th>
<th>Promulgation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applicable Legislation</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Applicable Policies and Guidelines</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tshwane Metropolitan By Laws.</td>
<td>Municipal</td>
<td>Varied</td>
</tr>
<tr>
<td>City of Tshwane Integrated Development Plan.</td>
<td>Municipal</td>
<td>2011</td>
</tr>
<tr>
<td>City of Tshwane Spatial Development Framework.</td>
<td>Municipal</td>
<td>June 2012</td>
</tr>
<tr>
<td>Gauteng Province Provincial Environmental Management Framework.</td>
<td>Provincial</td>
<td>26 November 2014</td>
</tr>
<tr>
<td>Western Cape Department of Environmental Affairs and Tourism. 2010. EIA Guideline and Information Document Series: Guideline on Need and Desirability.</td>
<td>Provincial</td>
<td>2010</td>
</tr>
<tr>
<td>Gauteng Conservation Plan.</td>
<td>Municipal</td>
<td>October 2011</td>
</tr>
</tbody>
</table>

Description of compliance with the relevant legislation, policy or guideline:

<table>
<thead>
<tr>
<th>Legislation, policy of guideline</th>
<th>Description of compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constitution of the Republic of South Africa Act, 1996 (Act No. 108 of 1996).</td>
<td>This EIA process for the proposed Poultry Farm focuses on the minimisation of environmental impacts resulting</td>
</tr>
<tr>
<td>Title of legislation, policy or guideline:</td>
<td>Administering authority:</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).</td>
<td>from the construction, operation and decommissioning of the proposed Poultry Farm in order to fulfil the requirements of Section 24 of the constitution.</td>
</tr>
<tr>
<td>National Environmental Management Act EIA Regulations GN R982, 4 December 2014.</td>
<td>An application for Environmental Authorisation for the proposed development is submitted in terms of GNR 982 of NEMA EIA Regulations, 4 December 2014, promulgated under NEMA.</td>
</tr>
<tr>
<td>National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004).</td>
<td>No endangered or threatened species are located within the footprint of the proposed Poultry Farm. This existing land use and degraded nature of the area, leaves minimal opportunity for species diversity.</td>
</tr>
<tr>
<td>National Environmental Management Air Quality Act, 2004 (Act No. 39 of 2004).</td>
<td>No listed activities are triggered in terms of GNR. 893 printed in terms of the National Environmental Management Air Quality Act, 2004 (Act No. 39 of 2004). The Environmental Management Plan, however still focuses on the minimisation of any emissions resulting in deterioration of the air quality.</td>
</tr>
<tr>
<td>National Environmental Management Waste Act, 2008 (Act No. 59 of 2008).</td>
<td>No waste listed activities will be triggered for the proposed Poultry, however during the construction and operation of the proposed Poultry Farm, the basis of the National Environmental Management Waste Act, 2008 (Act No. 59 of 2008) hierarchy focusing on waste reduction and reuse will be implemented.</td>
</tr>
<tr>
<td>Animal Disease Act, 1984 (Act No. 35 of 1984).</td>
<td>The EMPr will strive to prevent the spread of diseases resulting from the proposed Poultry Farm. Mitigation measures have been included to reduce the risk of disease.</td>
</tr>
<tr>
<td>Legislation, policy of guideline</td>
<td>Description of compliance</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Animal Health Act, 2002 (Act No. 7 of 2002)</td>
<td>The chickens will be securely housed at the proposed Poultry Farm. The chickens will be handled humanly and kept in a healthy state prior to slaughter. No slaughtering will be conducted at the proposed Poultry Farm.</td>
</tr>
<tr>
<td>Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983).</td>
<td>The objectives of this act are to make provision for the conservation of the natural agricultural resources of South Africa, through the maintenance of the production potential of land, by the combating and prevention of erosion and weakening or destruction of the water sources, and by the protection of the vegetation and the eradication of weeds and invader plants that may be identified in the surrounding environment of the proposed project. The Act was taken cognisance of in the development of the EMPR.</td>
</tr>
</tbody>
</table>

**Applicable Policies and Guidelines**

- **Tshwane Metropolitan By Laws.** Applicable City of Tshwane by laws were reviewed and taken into consideration to ensure that the proposed Poultry Farm will be in adherence to the City of Tshwane by laws.
- **City of Tshwane Integrated Development Plan.** The footprint of the proposed Poultry Farm will not be rezoned. The existing use will remain as agriculture and will thus not contravene the IDP objectives.
- **City of Tshwane Spatial Development Framework.** The Spatial Development Framework (SDF) was taken cognisance of during the design and development of the proposed Poultry Farm. No additional footprint will be disturbed other than that which is already cultivated. Cultivated land will be converted to that of Poultry Farming.

The SDF is the legislated component of the municipality’s Integrated Development Plan (IDP) that prescribes development strategies and policy guidelines to restructure and reengineer the urban and rural form. The SDF is the municipality’s long-term vision of what it wishes to achieve spatially, and within the IDP programmes and projects. The SDF should not be interpreted as a blueprint or master plan aimed at controlling physical development, but rather the framework giving structure to an area while allowing it to grow and adapt to changing circumstances. The proposed project has considered and is guided by the Regions’ SDF and IDP priorities of the area.
<table>
<thead>
<tr>
<th>Title of legislation, policy or guideline</th>
<th>Administering authority</th>
<th>Description of compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gauteng Province Provincial Environmental Management Framework.</td>
<td></td>
<td>The Gauteng Provincial Environmental Management Framework has been used to assist in the determination of impacts and mitigation measures.</td>
</tr>
<tr>
<td>Department of Environmental Affairs (DEA) Integrated Environmental Management Guideline Series, Guideline 3: General Guide to the EIA Regulations, 2006</td>
<td></td>
<td>This guideline was taken cognisance of in assessing the environmental impacts envisaged from the proposed Poultry Farm.</td>
</tr>
<tr>
<td>DEA Integrated Environmental Management Guideline Series, Guideline 4: Public Participation in support of the EIA Regulations</td>
<td></td>
<td>This guideline was taken cognisance of during the Stakeholder Engagement process conducted for the proposed Poultry Farm.</td>
</tr>
<tr>
<td>DEA Integrated Environmental Management Guideline Series, Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations</td>
<td></td>
<td>This guideline was taken cognisance of in determining the alternatives for the proposed Poultry Farm.</td>
</tr>
<tr>
<td>DEA Integrated Environmental Management Guideline Series, Guideline 5: Companion to the EIA Regulations</td>
<td></td>
<td>This guideline was taken cognisance of in assessing the environmental impacts envisaged from the proposed Poultry Farm.</td>
</tr>
<tr>
<td>Western Cape Department of Environmental Affairs and Tourism. 2010. EIA Guideline and Information Document Series: Guideline on Need and Desirability</td>
<td></td>
<td>This guideline was taken cognisance of in determining the need and desirability of the proposed Poultry Farm.</td>
</tr>
<tr>
<td>Gauteng Conservation Plan</td>
<td></td>
<td>The Gauteng Conservation Plan was taken cognisance of in ensuring the protection of the surrounding ecology by preventing the sterilisation of soils and biodiversity.</td>
</tr>
<tr>
<td>VPN 44.2012-01 Standard for the inspection of poultry farms for export</td>
<td></td>
<td>This guideline was taken cognisance of during the development of the Environmental Management Plan and mitigation measures for the Proposed Poultry Farm.</td>
</tr>
<tr>
<td>AA_Broiler_Manual_2009_282</td>
<td></td>
<td>This guideline was taken cognisance of during the design of the broiler houses and development of the Environmental Management Plan and mitigation measures for the Proposed Poultry Farm.</td>
</tr>
</tbody>
</table>
3. ALTERNATIVES
Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. Do not include the no go option into the alternative table below.

Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Please describe the process followed to reach (decide on) the list of alternatives below

The proposed alternative was considered based on the location within land owned by the applicant, avoidance of any sensitivity on site, and aligns the proposed project with the surrounding land uses. No other location alternatives have been proposed for the project as this is the only site available for the applicant. No other land owned by the applicant was available. The proposed footprint is located on already cultivated land that will be decommissioned to make provision for the proposed Poultry Farm. Technology alternatives were not considered, as the applicant will be making use of the Best Practical Environmental Option that is available in the Poultry industry. The technology alternatives were screened out at the initiation phase of the project. The broiler houses will be semi-automated.

Provide a description of the alternatives considered

<table>
<thead>
<tr>
<th>No.</th>
<th>Alternative type, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of “other”)</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1   | Proposed                                                                                                                                  | Top Tech would like to construct eight broiler houses and associated infrastructure with a footprint size of approximately 1 400 square meters each. Four broiler houses will be constructed adjacent to the other four, with 22 meter servitude between them. Each house will have the capacity to store approximately 120 000 chicks from day one. Two broiler houses will be kept vacant at any point in time, for cleaning and maintenance. The broiler houses will be semi-automated, with an automated feeding system. The associated infrastructure will include, but not limited to, the following:  
- Feed silos;  
- Water storage units for drinking water;  
- Possible water storage units to capture rainfall from;  
- Additional storage facilities for chemicals;  
- Biosecurity access control entrance;  
- Temporary manure stockpile shelter;  
- Ablution facilities for workers. |
| 2   | Alternative 1                                                                                                                              | Not Applicable |
| 3   | Alternative 2                                                                                                                              | Not Applicable |

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

Top Tech Feeds owns portion 41 of the Honingnestkrans 269 JR. The location within the farm was decided upon as a result of the access to the road adjacent to the property. An access road will need to be made available for entrance and exit to the farm as well as for the establishment of a Biosecurity access control entrance. The proposed location is aligned with the existing land use.
4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

**Proposed activity (Total environmental (landscaping, parking, etc.) and the building footprint)**

**Size of the activity:**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Ha/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative 1 (if any)</td>
<td></td>
</tr>
<tr>
<td>Alternative 2 (if any)</td>
<td></td>
</tr>
</tbody>
</table>

or, for linear activities:

**Proposed activity**

**Length of the activity:**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>m/km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative 1 (if any)</td>
<td></td>
</tr>
<tr>
<td>Alternative 2 (if any)</td>
<td></td>
</tr>
</tbody>
</table>

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

**Size of the site/servitude:**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Ha/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative 1 (if any)</td>
<td></td>
</tr>
<tr>
<td>Alternative 2 (if any)</td>
<td></td>
</tr>
</tbody>
</table>

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?

**YES**

If **NO**, what is the distance over which a new access road will be built

Describe the type of access road planned:

**No access road will be constructed. The existing road network will be utilised. Small pathways will be constructed between the houses for access during loading and offloading of chickens.**

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

**Alternative 1**

Does ready access to the site exist, or is access directly from an existing road?

If **NO**, what is the distance over which a new access road will be built

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

**Alternative 2**

Does ready access to the site exist, or is access directly from an existing road?

If **NO**, what is the distance over which a new access road will be built

Describe the type of access road planned:

Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated 0 Number of times

(only complete when applicable)
6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
  - A4 size for activities with development footprint of 10sqm to 5 hectares;
  - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
  - A2 size for activities with development footprint of >20 hectares to 50 hectares;
  - A1 size for activities with development footprint of >50 hectares);
- The following should serve as a guide for scale issues on the layout plan:
  - A0 = 1: 500
  - A1 = 1: 1000
  - A2 = 1: 2000
  - A3 = 1: 4000
  - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD’s;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggy, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

7. SITE PHOTOGRAPHS

Colour photographs from the center of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under the appropriate Appendix. It should be supplemented with additional photographs of relevant features on the site, where applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity to be attached in the appropriate Appendix.
SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

**Note:** Complete Section B for the proposal and alternative(s) (if necessary)

**Instructions for completion of Section B for linear activities**
1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
2) Indicate on a plan(s) the different environments identified
3) Complete Section B for each of the above areas identified
4) Attach to this form in a chronological order
5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route **0** times

**Instructions for completion of Section B for location/route alternatives**
1) For each location/route alternative identified the entire Section B needs to be completed
2) Each alternative location/route needs to be clearly indicated at the top of the next page
3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives **0** times (complete only when appropriate)

**Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application**

Section B is to be completed and attachments order in the following way
- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order, then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route 

Section B – Location/route Alternative No. 

**1. PROPERTY DESCRIPTION**

Property description: (Including Physical Address and Farm name, portion etc.)

41 Puma Road. Portion 41 of the Farm Honingnestkran 269 JR, Pyramid, Pretoria

**2. ACTIVITY POSITION**

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

**Alternative 1 – Proposed Alternative:**

<table>
<thead>
<tr>
<th>Latitude (S):</th>
<th>Longitude (E):</th>
</tr>
</thead>
<tbody>
<tr>
<td>25°59.6529</td>
<td>28°22.7556</td>
</tr>
</tbody>
</table>

**In the case of linear activities:**

- Starting point of the activity
- Middle point of the activity
- End point of the activity

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached **N/A**

The 21 digit Surveyor General code of each cadastral land parcel
3. **GRADIENT OF THE SITE**

Indicate the general gradient of the site.

- Flat

4. **LOCATION IN LANDSCAPE**

Indicate the landform(s) that best describes the site.

- Plain

5. **GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE**

   a) Is the site located on any of the following?

   - Shallow water table (less than 1.5m deep)
   - NO
   - Dolomite, sinkhole or doline areas
   - NO
   - Seasonally wet soils (often close to water bodies)
   - NO
   - Unstable rocky slopes or steep slopes with loose soil
   - NO
   - Dispersive soils (soils that dissolve in water)
   - NO
   - Soils with high clay content (clay fraction more than 40%)
   - NO
   - Any other unstable soil or geological feature
   - NO
   - An area sensitive to erosion
   - NO

   (Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

   b) are any caves located on the site(s)

   - NO

   If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

   Latitude (S): Longitude (E):

   c) are any caves located within a 300m radius of the site(s)

   - NO

   If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

   Latitude (S): Longitude (E):

   d) are any sinkholes located within a 300m radius of the site(s)

   - NO

   If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

   Latitude (S): Longitude (E):

   If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. **AGRICULTURE**

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)?

- YES

   The land is currently cultivated with Lucerne. The Applicant, and land owner, has decided to change his farming practice on the farm to that of Poultry Farming. Portion 41 of the farm Honingnestkrans 269 JR is approximately 21 Hectares in extent. Of this approximately 0.3 Hectares (1.5%) has a moderate agricultural potential, 4 Hectares (20 %) is built up, and the remaining 16 Hectares is cultivated. Of this approximately 9 Hectares will remain for lucerne cultivation following construction of the Poultry Houses.

   Please note: The Department may request specialist input/studies in respect of the above.

7. **GROUNDCOVER**
To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

<table>
<thead>
<tr>
<th>Groundcover Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivated land</td>
<td>% = 70</td>
</tr>
<tr>
<td>Building or other structure</td>
<td>% = 30</td>
</tr>
</tbody>
</table>

**Please note**: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity(ies).

Are there any rare or endangered flora or fauna species (including red list species) present on the site?

If YES, specify and explain:

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site?

If YES, specify and explain:

Are there any special or sensitive habitats or other natural features present on the site?

If YES, specify and explain:

Was a specialist consulted to assist with completing this section?

If yes complete specialist details

- Name of the specialist:
- Qualification(s) of the specialist:
- Postal address:
- Postal code:
- Telephone:
- E-mail:
- Cell:
- Fax:

Are any further specialist studies recommended by the specialist?

If YES, specify:

If YES, is such a report(s) attached?

If YES list the specialist reports attached below

Signature of specialist: ___________________________ Date: ___________________________

**Please note**: If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated.
8. **LAND USE CHARACTER OF SURROUNDING AREA**

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>31. Open cast mine</td>
<td>32. Underground mine</td>
<td>33. Spoil heap or slimes dam</td>
<td>34. Small Holdings</td>
<td></td>
</tr>
</tbody>
</table>

Other land uses (describe):

**NOTE:** Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks.

**Note:** More than one (1) Land-use may be indicated in a block.

**Please note:** The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activities. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an “A” and with an “N” respectively.

Have specialist reports been attached

YES

If yes indicate the type of reports below

**A Hydro census was conducted on a 1 km radius from the borehole found on the proposed property.**
9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

The proposed project is situated approximately 800 m south west from the Pyramid Estate and 2.5 km north east within the northern regions of the Tshwane Metropolitan Municipality. The proposed project is situated within Ward 49 of the Tshwane Metropolitan Municipality. The surrounding areas can be classified as rural.

Population

The population of Ward 49 reaches approximately 35 424 with a density of 2 people per hectare and a household size of 3.5 persons per household (Tshwane Metropolitan Municipality, 2015).

Education and Employment

Five percent of adults have no schooling while twenty one percent of adults are schooled up to grade 12. In general, the level of education in the region is low. The level of education is illustrated in Figure 2.6.

![Highest Level of Education 2011: Region 2](image)

Figure 2.6: Education Levels of Ward 49 (StatsSA, 2011)

Approximately twenty eight percent of economically active persons are unemployed and sixty five present are employed, leaving a seven percent of discouraged work seekers (Tshwane Metropolitan Municipality, 2015). Limited job opportunities exist in the area.

Accommodation

A total of 18274, or around 20% of dwellings in Region 2, of which Ward 49 falls within, are informal. Although a fifth of households in the area still live in informal dwellings, the actual number of informal dwellings is low compared to the neighbouring Region 1. This however still represents a backlog in housing delivery.

In conclusion, Region 2 consists of peripheral urban settlements in the north, suburban settlements and nodal development in the south, and a large rural area. Employment and education levels are low and a fifth of dwelling units in the region are informal.
10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50m in length;

(c) any development or other activity which will change the character of a site-
   (i) exceeding 5 000 m² in extent; or
   (ii) involving three or more existing erven or subdivisions thereof; or
   (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
   (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(d) the re-zoning of a site exceeding 10 000 m² in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Are there any signs of culturally (aesthetic, social, spiritual, environmental) or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or close (within 20 m) to the site?
If YES, explain:

| NO |

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:
The proposed site was historically cultivated and currently utilised for lucerne cultivation. It is thus foreseen that will be no signs of cultural significance. The EMPr will mitigate impacts should any findings be discovered during the construction phase.

Will any building or structure older than 60 years be affected in any way?

| NO |

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?
If yes, please attached the comments from SAHRA in the appropriate Appendix

| NO |
SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?  

YES

This report has been provided to local authorities and key organs of state for comment as per the stakeholder database presented in Appendix E.

If yes, has any comments been received from the local authority?  

NO

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

No comments have been received to date following the initial notice and newspaper adverts. Any comments received from the authorities during the review of this Basic Assessment Report will be incorporated into the Report and recorded in Appendix E.

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least thirty (30) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?  

YES

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):
A number of comments were received during the initiation phase. A newspaper advert was placed in the Pretoria North Rekord on 11 November 2016. Public notices were erected around the proposed site on 10 November 2016. Surrounding land owners were notified of the proposed development on 25 October 2016. The following issues and comments were received from stakeholders, who have further been registered on the Stakeholder database:

<table>
<thead>
<tr>
<th>Name</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs CJ Uys</td>
<td>Poultry facilities are a source of odour and attract flies, rodents and other pests that create local nuisances and carry disease. Door emissions, caused by a large number of contributing compounds including ammonia (NH₃), volatile organic compounds (VOCs), and hydrogen sulphide (H₂S), from poultry farms adversely affect the life of people living in the vicinity.</td>
<td>SRK takes cognisance of this statement and concern with regards to the spreading of disease and risk posed by the proposed operation. The applicant is aware of the possible risks and will commit to reducing the probability of disease injection into the areas as far as feasible. National standard developed by the Poultry Association of South Africa will be taken into account when developing the management plan for the farm.</td>
</tr>
<tr>
<td>Water pollution; pesticides used to control pests.</td>
<td>SRK is in the process of conducting the EIA which will assess the status quo on the surface and ground water resources. A management plan will be put in place to minimise the impact arising from the proposed Poultry Farm.</td>
<td></td>
</tr>
<tr>
<td>Where will Top Tech feeds dispose of the dead chickens</td>
<td>Top Tech Feeds plans to dispose of all carcases at the nearest licensed landfill site. No carcasses will be buried on site.</td>
<td></td>
</tr>
<tr>
<td>Can they also give a 100% guarantee that if the business do not a succeed that they will not use these buildings for shantytown</td>
<td>Top Tech Feeds can guarantee that these buildings will not be used for human accommodation. This will be included into the EMPr which becomes a legal document.</td>
<td></td>
</tr>
<tr>
<td>Mrs Renetta van der Berg</td>
<td>I fertilise my lawn with chicken manure and have a very real concern regarding the possible transfer of one of many different diseases that can severely affect any chicken farming operation in my immediate area. Please remember that although we obtain the manure from a registered egg farm, neither I nor my supplier can at any stage guarantee this manure is not infected with, for example, Newcastle disease! As you are no doubt aware, such an occurrence will be devastating to this operation.</td>
<td>The applicant is aware of the possible risks and will commit to reducing the probability of disease injection into the areas as far as feasible. National standard developed by the Poultry Assassination of South Africa will be taken into account when developing the management plan for the farm. Applicable international standards will be utilised where feasible.</td>
</tr>
</tbody>
</table>

If "NO" briefly explain why no comments have been received
4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below:
Appendix 1 – Proof of site notice
Appendix 2 – Written notices issued as required in terms of the regulations
Appendix 3 – Proof of newspaper advertisements
Appendix 4 – Communications to and from interested and affected parties
Appendix 5 – Minutes of any public and/or stakeholder meetings
Appendix 6 - Comments and Responses Report
Appendix 7 – Comments from I&APs on Basic Assessment (BA) Report
Appendix 8 – Comments from I&APs on amendments to the BA Report
Appendix 9 – Copy of the register of I&APs
### 1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

#### Solid waste management

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activity produce solid construction waste during the construction/initiation phase?</td>
<td>YES</td>
</tr>
<tr>
<td>If yes, what estimated quantity will be produced per month?</td>
<td>15 – 20 m³</td>
</tr>
</tbody>
</table>

Minimal waste will be generated as a result of the construction phase. Waste will be limited to building rubble (cement bags/remains, remains of roofing material, glass, plastic, and domestic waste from contractor).

**Solid Waste will be managed as follows:**

- Waste bins will be provided at strategic positions on site focusing on the segregation of waste as source (i.e., plastic, glass, food, paper) and when they are full they will be disposed off at a licensed landfill site.
- Topsoil generated by cut and fill activities will be utilized by spreading the soil onto the areas that are to be grassed or rehabilitated on site. Detailed Environmental Management Requirements during construction have been covered in the EMPR attached as Appendix H.

Where will the construction solid waste be disposed of (describe)?

**Waste will be disposed of at a licensed was disposal facility capable of handling the type of waste generated.**

Will the activity produce solid waste during its operational phase?  
If yes, what estimated quantity will be produced per month?  

<table>
<thead>
<tr>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
</tr>
<tr>
<td>~ 250 m³</td>
</tr>
</tbody>
</table>
How will the solid waste be disposed of (describe)?

**Chicken House Waste Management**

Chicken houses produce large quantities of solid waste. Waste includes sawdust used for groundcover and chicken droppings (faeces and urine) and will be collected at the end of every consignment of chickens on a seven-week cycle.

Waste products must be regularly disposed of so that they do not cause any contamination of surface or underground water resources and minimise the production of offensive odours that may impact residents in the vicinity.

**Disposal of Chicken House Waste**

Manure can be stored for extended periods of time and must be stored in stockpiles on an impermeable surface as far as feasible, where rain, sprinklers and surface drainage cannot transport contaminants into surrounding water resources.

Common method of disposal is aerobic composting, where manure is actively turned while stockpiled in piles or rows. This method stabilises the waste and reduces the incidence of pathogens. Once stabilised, the compost can be spread on fields as fertilizer (DEWCP, 2002).

For this project, two alternatives for the disposal of sawdust and droppings have been considered. Manure will be initially utilised as fertiliser. Should excess manure be generated for which the agricultural sector in the immediate vicinity can handle, this will be disposed of at a licensed landfill site or transformed for cattle feed.

**General Waste**

A limited amount will be produced due to the nature of the operations (approximately 10m³/month). This will be transported and disposed of in a licensed Municipal landfill site.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?  

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

Chicken droppings (manure and urine) will either be used as fertiliser spread on the pasture or sold to surrounding farms as the primary option.

**Note:** If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?  

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?  

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
Describe the measures, if any, that will be taken to ensure the optimal reuse or recycling of materials:

Recommendations will be made that owner of the facility provide waste bins labelled in according to the different recyclable materials, e.g. glass, paper and plastics. More details regarding the management of waste are provided in the EMPr attached.

Manure generated will be reused on cultivated land as fertiliser. It is not anticipated that manure will be disposed of at a landfill site. This option will be used in extreme cases when the fertiliser cannot be utilised.

<table>
<thead>
<tr>
<th>Liquid effluent (other than domestic sewage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?</td>
</tr>
<tr>
<td>If yes, what estimated quantity will be produced per month?</td>
</tr>
<tr>
<td>If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?</td>
</tr>
</tbody>
</table>

If yes, what estimated quantity will be produced per month?

If yes describe the nature of the effluent and how it will be disposed.

Note that if effluent is to be treated or disposed on site the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

| Will the activity produce effluent that will be treated and/or disposed of at another facility? | NO |
|------------------------------------------------|
| If yes, provide the particulars of the facility: |
| Facility name: | |
| Contact person: | |
| Postal address: | |
| Postal code: | |
| Telephone: | Cell: |
| E-mail: | Fax: |

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

There is currently no immediate plan for water recycling or reused. Rain water harvesting will be investigated during operation.

<table>
<thead>
<tr>
<th>Liquid effluent (domestic sewage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?</td>
</tr>
<tr>
<td>If yes, what estimated quantity will be produced per month?</td>
</tr>
<tr>
<td>If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?</td>
</tr>
</tbody>
</table>

Will the activity produce any effluent that will be treated and/or disposed of on site?

If yes describe how it will be treated and disposed off.

<table>
<thead>
<tr>
<th>Emissions into the atmosphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activity release emissions into the atmosphere?</td>
</tr>
<tr>
<td>If yes, is it controlled by any legislation of any sphere of government?</td>
</tr>
<tr>
<td>If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.</td>
</tr>
<tr>
<td>If no, describe the emissions in terms of type and concentration:</td>
</tr>
</tbody>
</table>
Minor and temporary odours may be generated as a result of the manure generated on site. Strict mitigation and management as stipulated in the EMP will curb the impacts thereof. Poultry farming is not legislated by the National Environmental Management Act (Act No. 39 of 2004) (NEM:AQA), however the principles of the act in reducing emissions thereby protecting the environment and adjacent land uses will be taken cognisance of.

The only increase in dust during the operational phase will be from the minor increase in vehicle movement on the access roads. However, it is highly unlikely that any additional traffic associated with the proposed expansion will impact on local road users and / or surrounding landowners.

2. WATER USE

Indicate the source(s) of water that will be used for the activity

| groundwater |

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month: 350 000 liters

The quantity of abstraction from the borehole will be broken down as follows:

Week 1 – 6 = ~7 500 litres per day
Week 8 – 9 – ~3000 litres per day.

Raising the birds generally occurs over a six week period. Thereafter, two weeks are scheduled for cleaning and administration purposes in preparation for the next cycle of birds. The borehole yield averages 0.5 l per second, equating to approximately 130 cubic meters per month. It can thus be illustrated that sufficient water is available from the borehole on site.

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs? YES

If yes, list the permits required

A Water Use License is required for the abstraction of water from the borehole for livestock watering.

If yes, have you applied for the water use permit(s)? NO

If yes, have you received approval(s)? (attached in appropriate appendix) NO

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

Eskom.

If power supply is not available, where will power be sourced from?

Emergency generators will be made available should possible power failures occur.

4. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

Solar electricity will be investigated in order to reduce the pressure on the Eskom grid. The possibility of placing solar panels on the coops is under investigation. Consideration needs to be taken on the well beings of the birds and the generation of heat that may occur.

The proposed Poultry Farm will require lighting in order for the chickens to be productive. Energy efficient lighting will be utilised for the area.

An automated ventilation system for heating and cooling, which removes human error and the associated risk of unnecessary/wastage of power usage will be installed.
Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

All buildings will be insulated to minimise heating and cooling gains and losses, minimising the amount of work to be done by the automated system to regulate temperatures.
SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts as well as the impacts of not implementing the activity (Section 24(4)(b)(i)).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

<table>
<thead>
<tr>
<th>Name</th>
<th>Comment</th>
</tr>
</thead>
</table>
| Mrs CJ Uys                  | 1. Poultry facilities are a source of odour and attract flies, rodents and other pests that create local nuisances and carry disease. Door emissions, caused by a large number of contributing compounds including ammonia (NH3), volatile organic compounds (VOCs), and hydrogen sulphide (H2S), from poultry farms adversely affect the life of people living in the vicinity.  
2. Water pollution: pesticides used to control pests  
3. Where will Top Tech feeds dispose of the dead chickens  
4. Can they also give a 100% guarantee that if the business do not a succeed that they will not use these buildings for shantytown |
| Mrs Renetta van der Berg    | 5. I fertilise my lawn with chicken manure and have a very real concern regarding the possible transfer of one of many different diseases that can severely affect any chicken farming operation in my immediate area. Please remember that although we obtain the manure from a registered egg farm, neither I nor my supplier can at any stage guarantee this manure is not infected with, for example, Newcastle disease! As you are no doubt aware, such an occurrence will be devastating to this operation. |

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included) (A full response must be provided in the Comments and Response Report that must be attached to this report):

<table>
<thead>
<tr>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SRK takes cognisance of this statement and concern with regards to the spreading of disease and risk posed by the proposed operation. The applicant is aware of the possible risks and will commit to reducing the probability of disease injection into the areas as far as feasible. National standard developed by the Poultry Association of South Africa will be taken into account when developing the management plan for the farm.</td>
</tr>
<tr>
<td>2. SRK is in the process of conducting the EIA which will assess the status quo on the surface and ground water resources. A management plan will be put in place to minimise the impact arising from the proposed Poultry Farm.</td>
</tr>
<tr>
<td>3. Top Tech Feeds plans to dispose of all carcases at the nearest licensed landfill site.</td>
</tr>
<tr>
<td>4. Top Tech Feeds can guarantee that these buildings will not be used for human accommodation.</td>
</tr>
<tr>
<td>5. The applicant is aware of the possible risks and will commit to reducing the probability of disease injection into the areas as far as feasible. National standard developed by the Poultry Assassination of South Africa will be taken into account when developing the management plan for the farm. Applicable international standards will be utilised where feasible.</td>
</tr>
</tbody>
</table>
2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

<table>
<thead>
<tr>
<th>The anticipated impacts associated with the proposed Poultry Farm have been assessed according to SRK standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first stage of any impact assessment is the identification of potential environmental activities, aspects and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors and resources, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.</td>
</tr>
<tr>
<td>The significance of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in Table 1-1.</td>
</tr>
<tr>
<td>The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity, spatial scope and duration of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity and the frequency of the impact together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 1-2.</td>
</tr>
<tr>
<td>This matrix thus provides a rating on a scale of 1 to 150 (very low, low, low medium, medium high, high, or very high) based on the consequence and likelihood of an environmental impact occurring. Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation. The assessment of significance should be undertaken twice. Initial significance should be based on only natural and existing mitigation measures. The subsequent assessment should take into account the recommended management measures required to mitigate the impacts.</td>
</tr>
</tbody>
</table>

1. An activity is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are owned by an organisation.
2. An environmental aspect is an ‘element of an organisation’s activities, products and services which can interact with the environment’. The interaction of an aspect with the environment may result in an impact.
3. Receptors comprise, but are not limited to, people or man-made structures.
4. Resources include components of the biophysical environment.
5. Environmental impacts are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.
6. Severity refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.
7. Spatial scope refers to the geographical scale of the impact.
8. Duration refers to the length of time over which the stressor will cause a change in the resource or receptor.
9. Frequency of activity refers to how often the proposed activity will take place.
10. Frequency of impact refers to the frequency with which a stressor (aspect) will impact on the receptor.
### Table 1-1: Criteria for assessing significance of impacts

<table>
<thead>
<tr>
<th>SEVERITY OF IMPACT</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insignificant/non-harmful</td>
<td>1</td>
</tr>
<tr>
<td>Small/potentially harmful</td>
<td>2</td>
</tr>
<tr>
<td>Significant/slightly harmful</td>
<td>3</td>
</tr>
<tr>
<td>Great/harmful</td>
<td>4</td>
</tr>
<tr>
<td>Disastrous/extremely harmful</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPATIAL SCOPE OF IMPACT</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity specific</td>
<td>1</td>
</tr>
<tr>
<td>Project specific (within the project boundary)</td>
<td>2</td>
</tr>
<tr>
<td>Local area (within 5 km of the activity boundary)</td>
<td>3</td>
</tr>
<tr>
<td>Regional</td>
<td>4</td>
</tr>
<tr>
<td>National</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DURATION OF IMPACT</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>One day to one month</td>
<td>1</td>
</tr>
<tr>
<td>One month to one year</td>
<td>2</td>
</tr>
<tr>
<td>One year to ten years</td>
<td>3</td>
</tr>
<tr>
<td>Life of operation</td>
<td>4</td>
</tr>
<tr>
<td>Post closure/permanent</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FREQUENCY OF ACTIVITY/DURATION OF ASPECT</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annually or less/low</td>
<td>1</td>
</tr>
<tr>
<td>6 monthly/temporary</td>
<td>2</td>
</tr>
<tr>
<td>Monthly/infrequent</td>
<td>3</td>
</tr>
<tr>
<td>Weekly/life of operation/regularly/likely</td>
<td>4</td>
</tr>
<tr>
<td>Daily/permanent/high</td>
<td>5</td>
</tr>
</tbody>
</table>

### Table 1-2: Significance rating matrix

<table>
<thead>
<tr>
<th>CONSEQUENCE (Severity + Spatial Scope + Duration)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>20</td>
<td>22</td>
<td>24</td>
<td>26</td>
<td>28</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>18</td>
<td>21</td>
<td>24</td>
<td>27</td>
<td>30</td>
<td>33</td>
<td>36</td>
<td>39</td>
<td>42</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>20</td>
<td>24</td>
<td>28</td>
<td>32</td>
<td>36</td>
<td>40</td>
<td>44</td>
<td>48</td>
<td>52</td>
<td>56</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>45</td>
<td>50</td>
<td>55</td>
<td>60</td>
<td>65</td>
<td>70</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
<td>30</td>
<td>36</td>
<td>42</td>
<td>48</td>
<td>54</td>
<td>60</td>
<td>66</td>
<td>72</td>
<td>78</td>
<td>84</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>14</td>
<td>21</td>
<td>28</td>
<td>35</td>
<td>42</td>
<td>49</td>
<td>56</td>
<td>63</td>
<td>70</td>
<td>77</td>
<td>84</td>
<td>91</td>
<td>98</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>24</td>
<td>32</td>
<td>40</td>
<td>48</td>
<td>56</td>
<td>64</td>
<td>72</td>
<td>80</td>
<td>88</td>
<td>96</td>
<td>104</td>
<td>112</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>18</td>
<td>27</td>
<td>36</td>
<td>45</td>
<td>54</td>
<td>63</td>
<td>72</td>
<td>81</td>
<td>90</td>
<td>99</td>
<td>108</td>
<td>117</td>
<td>126</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
<td>120</td>
<td>130</td>
<td>140</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

### Table 1-3: Positive/negative mitigation ratings

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td>126-150</td>
<td>Improve current management</td>
<td>Maintain current management</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>101-125</td>
<td>Improve current management</td>
<td>Maintain current management</td>
<td></td>
</tr>
</tbody>
</table>
## 3. Pre-Construction and Construction Phase

The pre-construction and construction phase of the proposed Poultry Farm will include the following activities:

- Fencing off of the project area;
- Construction of concrete slabs and foundations for the poultry houses;
- The construction and erection of the coops (total of eight coops are to be constructed);
- Installation of a small generator;
- Construction of a room for the storage of water to be used during times of high temperatures and a room to be used as the control area;
- Construction of offices as well as packaging and sorting area;
- Erection of feeding silos for the storage of chicken feed;
- The establishment of biosecurity infrastructure which will include toilet facilities;
- Establishment of stormwater management infrastructure;
- Establishment and installation of all associated infrastructure (ablation facilities, septic tanks if necessary, security/guard area);
- Construction of an area for the storage of manure;
- Construction of waste disposal area;
- Disposal of construction and domestic waste.

### Socio – Economic Impacts

As a result of the pre – construction and construction phase of the proposed Poultry Farm, the following impacts are envisaged on the socio – economic status quo of the immediate surroundings. The construction phase will result in a number of direct and indirect job opportunities through auxiliary services.

### Positive Impacts

The following positive impacts are anticipated:

- The construction phase will result in additional temporary job opportunities;
- The proposed project will increase the local Gross Domestic Product (GDP) through the provision of employment and support to other businesses in the area;
- Auxiliary services required for the construction of the proposed Poultry Farm will be sourced from local businesses. These may include, brick laying, coop construction, lightning erection and security services.
Negative Impact

- Possible inflow of migrant workers.

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive direct impact on temporary employment opportunities.</td>
<td>Low Maintain Current Management</td>
<td>Contractors will be informed that locals must be considered for employment wherever this is feasible; It is expected though that wages from direct and indirect employment will have a positive economic impact on the immediate villages and mine community; Workers are to be made aware of the fact that employment is temporary and will cease at the end of the contract period.</td>
<td>Low Maintain Current Management</td>
<td>Low</td>
</tr>
<tr>
<td>Positive direct impact on the increase in GDP through the provision of employment.</td>
<td>Low Maintain Current Management</td>
<td>The facility will help towards meeting the growing demand for poultry products in this country; Local business will be used where unskilled labour is required; Reputable local business will be used where available.</td>
<td>Low Maintain Current Management</td>
<td>Low</td>
</tr>
<tr>
<td>Possible inflow of migrant workers.</td>
<td>MH Maintain Current Management</td>
<td>No recruitment “at the gate” will be allowed; No permanent or temporary structure will be constructed on the proposed construction area for permanent residence; No contractor will reside on the premises. All workers will report for construction activities every morning before work.</td>
<td>MH Maintain Current Management</td>
<td>Low</td>
</tr>
</tbody>
</table>

Soil Impacts

As a result of the construction phase, the following impacts are envisaged on the soil resources:

- Loss of soil resources as a result of soil stripping of the construction footprint;
- Sterilisation of soil resources as a result of hydrocarbon/chemical/waste contamination;
- Possibility of erosion as a result of runoff from cleared and compacted areas resulting in the soil instability and loss of soil resources;
- Soil contamination as a result of uncontrolled stormwater runoff or wash water runoff;
- Soil contamination as a result of uncontrolled sewage handling;
- Indirect impact on the loss of micro habitats following soil removal.
<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of soil resources as a result of soil stripping of the construction footprint.</td>
<td>LM Maintain Current Management</td>
<td>The construction footprint will be fenced off and unnecessary disturbance will be minimised; Topsoil stripped will be stockpiled and reused for rehabilitation purposes following construction activities; Disturbed areas will be revegetated with indigenous vegetation following construction activities; Before replacing topsoil, remove all visible weeds from the placement area and from the topsoil; All excavations will be backfilled with sub soil and topsoil in the reverse order to which the soil profiles were removed.</td>
<td>VL Maintain Current Management</td>
<td></td>
</tr>
<tr>
<td>Sterilisation of soil resources as a result of hydrocarbon/chemical/waste contamination.</td>
<td>L Maintain Current Management</td>
<td>No foreign matter such as rubble, waste or hazardous material will be mixed with the topsoil or used to backfill excavation; Sufficient spill kits will be made available at areas where possible hydrocarbon spills may occur; Spills will be cleaned up immediately after the incident. Contaminated soil will be disposed of as hazardous waste at a licensed hazardous landfill facility; Drip trays or a Polyvinyl chloride (PVC) lining shall be provided for equipment utilising hydrocarbons.</td>
<td>VL Maintain Current Management</td>
<td></td>
</tr>
<tr>
<td>Possibility of erosion as a result of runoff from cleared and compacted areas resulting in the soil instability and loss of soil resources.</td>
<td>L Maintain Current Management</td>
<td>Topsoil will be protected against erosion by wind or rain and allowed to vegetate; Areas compacted as a result of construction activities will be ripped and scarified in order to allow for the re-vegetation of the disturbed surrounding areas; Seeding of disturbed areas will be undertaken should vegetation not establish; Only the identified areas should be cleared of vegetation. This should be done in stages as construction works progress to reduce areas exposed to erosion; Erosion will be monitoring frequently and management measures put in place should signs of erosion occur.</td>
<td>VL Maintain Current Management</td>
<td></td>
</tr>
<tr>
<td>Soil contamination as a result of uncontrolled stormwater runoff or wash water runoff.</td>
<td>L Maintain Current Management</td>
<td>Care must be taken to collect contaminated wash water from cleaning activities and dispose of it in an approved manner. All visible remains of excess concrete</td>
<td>VL Maintain Current Management</td>
<td></td>
</tr>
</tbody>
</table>
## Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil contamination as a result of uncontrolled sewage handing.</td>
<td></td>
<td>Must be physically removed on completion and disposed of. Washing off the remains into the ground is not acceptable; • In terms of the National Building Regulations, on site drainage will be provided prior to construction to combat soil erosion.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect impact on the loss of micro habitats following soil removal.</td>
<td></td>
<td>• Sewage will be contained and handled/disposed of by a reputable contractor, if not connected to the municipal system at the time of construction; • Safe disposal certificate will be obtained and kept on site for the disposal of sewage; • Should sewage spillages occur, this will be considered as hazardous waste and will be handled/disposed of as such.</td>
<td></td>
<td>MEDIUM</td>
</tr>
</tbody>
</table>

### Surface Water and Wetland Impacts

There are not wetlands situated on site of significant importance. The closest surface water resource is located 1 km east to the proposed Poultry Farm. The following impacts are envisaged as a result of the construction phase on surface water resources and wetlands:

- Possible contamination of surface water resources as a result of contaminated runoff;
- Possible contamination of surface water resources and wetlands as a result of uncontrolled waste handling and disposal;
- Possible contamination of surface water resources and wetlands as a result of uncontrolled usage of hazardous substances;
- Sedimentation of surface water resources as a result of runoff from cleared areas.
## Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
</table>
| Possible contamination of surface water resources as a result of contaminated runoff. | L Maintain Current Management                           | • No project infrastructure will be located within the 1:100 year flood lines or within 100 m of any non-perennial tributaries;  
• Contaminated runoff will be contained on site to prevent off site movement of contaminants. | VL Maintain Current Management                                         | LOW                                                   |
| Possible contamination of surface water resources and wetlands as a result of uncontrolled waste handling and disposal. | L Maintain Current Management                           | • Site personnel will not allow the dispersion of non-biodegradable waste around the drilling site. All litter will be cleaned up at the end of each shift;  
• No domestic or solid waste will be disposed of on site. All waste will be collected in drums for disposal;  
• Waste will be sorted at source;  
• Waste receptacles will be kept closed at all times when not in use. | VL Maintain Current Management                                         | LOW                                                   |
| Possible contamination of surface water resources and wetlands as a result of uncontrolled usage of hazardous substances. | L Maintain Current Management                           | • All hazardous substances will be stored in a bunded area with the capacity to store 110% of the contents volume;  
• No equipment or tools with oil or grease is allowed to be placed on bare ground. These must always be placed on a lined surface;  
• Spill kits will be made available. Employees will be trained on how to use these kits. Spills will be remediated within 24 h of the incident occurring;  
• Temporary toilet facilities will not cause water pollution or any health hazard;  
• Temporary toilet facilities will be used by personnel. No urination or defecation into the immediate environmental surroundings will allowed;  
• Temporary toilet facilities will be kept clean and tidy at all times;  
• Sewage spillages are considered to be hazardous waste and will be cleaned up and disposed of as such. | VL Maintain Current Management                                         | LOW                                                   |
| Sedimentation of surface water resources as a result of runoff from cleared areas. | L Maintain Current Management                           | • No alterations to banks or beds of watercourses is allowed (a dry gully is also recognized as a water course);  
• Stockpile will be shaped to divert storm water around the site to minimise soil erosion of the site as well as to prevent the contaminated water runoff. | VL Maintain Current Management                                         | LOW                                                   |
**Groundwater Impacts**

The current status quo of the groundwater and aquifer conditions shows a shallow groundwater level. Groundwater is currently used around the site for agricultural and domestic purposes. The following impacts on groundwater have been identified:

- Impact on groundwater quality as a result of soil pollution due to the usage of hazardous substances on site;
- Impact on groundwater as a result of uncontrolled waste handling.

**Proposed Site**

<table>
<thead>
<tr>
<th>Potential impacts</th>
<th>Significance rating of impacts (positive or negative)</th>
<th>Proposed mitigation</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on groundwater quality as a result of soil pollution due to the usage of hazardous substances on site.</td>
<td>VL Maintain Current Management</td>
<td>• No equipment or tools with oil or grease is allowed to be placed on bare ground. These must always be placed on a lined surface; • Spill kits will be made available at areas posing a hydrocarbon spillage risk; • Hydrocarbon spills will be cleaned up immediately after the incident. Contaminated soil will be removed and disposed of at a licensed hazardous waste site; • Cement mixing will take place on a lined surface. No Cement will be mixed on a bare surface.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Impact on groundwater as a result of uncontrolled waste handling.</td>
<td>L Maintain Current Management</td>
<td>• No waste will be allowed to be disposed of into excavations; • Waste water will be contained to prevent the ingress into the groundwater system; • Sewage facilities will be maintained and kept in a good order to prevent any sewage spills.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

**Air Quality Impacts**

As a result of the construction phase of the proposed Poultry Farm, the following impacts are envisaged on the Air Quality around the project site. Minimal activities will result in the emissions causing a detrimental air quality issue, however a number of impacts may arise, posing a nuisance to employees and surrounding land uses:

- Impact on air quality as a result of the dust generation from cleared areas and cement missing;
- Impact on air quality as a result of Volatile Organic Compounds (VOC) emissions from machinery and increased vehicle usage.
## Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on air quality as a result of the dust generation from cleared areas and cement missing.</td>
<td>L Maintain Current Management</td>
<td>• At times of high winds, periodic dust suppression techniques will be employed on cleared areas generating dust; • Soil stockpiles will be kept moist to prevent dust generation, or alternatives covered with sheeting to prevent off site movement of dust and erosion; • Clearance of the construction footprint must be kept to a minimum.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Impact on air quality as a result of Volatile Organic Compounds (VOC) emissions from machinery and increased vehicle usage.</td>
<td>L Maintain Current Management</td>
<td>• Machinery utilised on site will be maintained and kept in good working order; • Machinery emitting large quantities of VOC will be removed from site until maintenance and repair have been conducted on the machines to ensure their compliance.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### Noise Impacts

As a result of the construction phase of the proposed Poultry Farm, additional vehicles will be utilised for construction purposes in terms of bulk earthworks and building erection. Minimal noise emitting activities will be generated. The following impacts are envisaged:

- Noise emissions as a result of machinery movement around the site.

### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise emissions as a result of machinery movement around the site.</td>
<td>L Maintain Current Management</td>
<td>• Construction activities should be restricted to 07:00hrs to 17:00hrs during weekdays and 08:00hrs to 13:00hrs during weekends; • Machinery will be kept in good working order to reduce noise emissions; • Should noise be problematic, silencers will be fitted to construction vehicles.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### Land Use and Land Capability Impacts

The footprint of the proposed Poultry Farm is currently cultivated. The project will inherently remove a section of cultivated land. The following impacts are envisaged on the land use and land capability:

- Temporary loss of land use and land capability as a result of the clearance of cultivated land;
- Sterilisation of land as a result of soil pollution and erosion.
<table>
<thead>
<tr>
<th>Proposed Site</th>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary loss of land use and land capability as a result of the clearance of cultivated land.</td>
<td>LM Maintain Current Management</td>
<td></td>
<td>Vegetation clearance will be conducted only where and when required. No undue vegetation disturbance will occur outside the construction footprint; All areas not used during operation will be rehabilitated following construction activities.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Sterilisation of land as a result of soil pollution and erosion.</td>
<td>L Maintain Current Management</td>
<td></td>
<td>Compaction of soils must be avoided where possible. Soil compaction leads to erosion; Chemical/hydrocarbon spillages will be prevented as far as feasible; Should spillages occur, these will be remediated within 24 hours.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

**Waste Impacts**

As a result of the construction phase of the proposed Poultry Farm, the following waste impacts are envisaged:

- Mixing of waste and uncontrolled disposal;
- Pollution and aesthetical impacts as a result of uncontrolled waste storage.

<table>
<thead>
<tr>
<th>Proposed Site</th>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixing of waste and uncontrolled disposal.</td>
<td>LM Maintain Current Management</td>
<td></td>
<td>Recyclable waste must be stored separately to waste disposed to landfill. Reuse or recycling of waste must be investigated; All waste contaminated with hydrocarbons will be considered hazardous waste, regardless of the level of contamination; Safe disposal certificates to be kept on record; Bins for hazardous and non-hazardous waste should be clearly separated and marked. Waste should be separated according to the appropriate bin.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Pollution and aesthetical impacts as a result of uncontrolled waste storage.</td>
<td>L Maintain Current Management</td>
<td></td>
<td>Site personnel will not allow the dispersion of non-biodegradable waste around the drilling site. All little cleaned up at the end of each shift; Domestic waste will be disposed at a registered landfill site; Employees will be educated on the need for waste segregation and disposal; No domestic or solid waste will be disposed of on site. All waste will be collected in drums and disposed of at a</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>
### Cultural and Heritage Impacts

The proposed construction footprint has been cultivated. Therefore it can be concluded that there are no known locations of archaeological or cultural significance. It must however be noted that archaeological remains may be located underground that have not been identified on the footprint of the proposed project and may be uncovered during excavation activities. The following impacts are envisaged:

- Destruction of cultural and heritage artefacts found underground;
- Destruction of alternation of buildings older than 60 years.

### Visual Impacts

The proposed project is located on a farm portions adjacent to the R 101 Regional Road. The visual impacts resulting from the proposed project will be mainly relating to the road users and adjacent farms. The following impacts are envisaged, which can be mitigated to an acceptable level of significance:

- Visual disturbance on adjacent land and road users as a result of the use of construction equipment, excavation and building material;
• Aesthetic impact as a result of litter dispersion and untidy housekeeping from contractors.

### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
</table>
| Visual disturbance on adjacent land and road users as a result of the use of construction equipment, excavation and building material. | LM Maintain Current Management | • Artificial lighting will be restricted to areas under construction. Yellow sodium lights will be used on site as they do not attract as many invertebrates at night and will not disturb the wildlife;  
• Natural vegetation, wherever possible, must be retained;  
• The chicken houses must be designed to minimise visual intrusion;  
• The colour selection and tone must be carefully considered to mitigate visual impacts. | L Maintain Current Management | LOW |
| Aesthetic impact as a result of litter dispersion and untidy housekeeping from contractors. | L Maintain Current Management | • Keep site neat and organised;  
• No accommodation will be provided on site;  
• Litter and dust management measures should be in place at all times. | VL Maintain Current Management | LOW |

### Fauna and Flora Impacts

As a result of the construction phase of the proposed Poultry Farm minimal biodiversity impacts are envisaged as the land is currently cultivated. No natural habitat is remaining. The following impacts are envisaged:

• Disturbance of fauna and flora habitats as a result of site clearing;
• Disturbance of faunal species, including those of adjacent land owners, as a result of noise generation;
• Loss of faunal species during construction activities;
• Potential to indirectly increase the risk of the spread of alien vegetation.

### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
</table>
| Disturbance of fauna and flora habitats as a result of site clearing. | L Maintain Current Management | • Any gate, fence or infrastructure constructed and not further used following construction activities will be removed from the site and appropriately disposed of or re used;  
• Should vegetation growth not establish, the area to be rehabilitated must be seeded with a seed mix of indigenous species to the local area;  
• Disturbed areas will be kept to a minimum. The construction footprint will be demarcated. No undue disturbance to the surrounding environment will occur. | VL Maintain Current Management | LOW |
### Safety, Security and Health

As a result of the construction phase of the proposed Poultry Farm, the following impacts are envisaged on the Safety, Health and Security of land uses, employees and adjacent land uses:

- Increased economic activity may lead to the increase in crime;
- Safety risk of contractors, due to increased construction activity;
- Health risks as a result of waste generation and storage.

#### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased economic activity may lead to the increase in crime.</td>
<td>L Maintain Current Management</td>
<td>• Clear sign boards should be erected at the entrance to the site to indicate that a construction area is being entered and safety precautions should be followed; • Notification signs must be posted around the site warning residents and visitors about the hazards around the construction site; • The proponent of the development should appoint the services of a security company that will monitor the proposed development activity on a 24-hour 7-days per week basis.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Disturbance of faunal species, including those of adjacent land owners, as a result of noise generation.</td>
<td>L Maintain Current Management</td>
<td>• Machinery with low noise levels to be used; • Site activities will be conducted during daytime hours to avoid night time noise disturbances.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Loss of faunal species during construction activities.</td>
<td>L Maintain Current Management</td>
<td>• No poaching will be permitted by any person on site; • Fires will only be permitted in facilities or equipment specially allocated for this purpose; • Site personnel will not allow the dispersion of non-biodegradable waste around the drilling site. All little cleaned up at the end of each shift; • Only approved herbicides / pesticides will be used on site. Only a person accredited to handle herbicides and pesticides may be used.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Potential to indirectly increase the risk of the spread of alien vegetation.</td>
<td>LM Maintain Current Management</td>
<td>• Alien vegetation in and around the site will be eradicated using approved techniques and herbicides, by accredited personnel; • Proliferation of alien vegetation will be controlled.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>
### Proposed Site

#### Potential impacts:

<table>
<thead>
<tr>
<th>Potential impacts</th>
<th>Significance rating of impacts (positive or negative)</th>
<th>Proposed mitigation</th>
<th>Significance rating of impacts after mitigation</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety risk of contractors, due to increased construction activity.</td>
<td>L Maintain Current Management</td>
<td>• Workers should be adequately trained to follow all safety procedures and wear protective equipment where required;</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Health risks as a result of waste generation and storage.</td>
<td>LM Maintain Current Management</td>
<td>• Waste will be sorted and stored in designated bins on site. These bins will allow for the separation of waste at source; • No waste will be allowed to disperse around the site.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### 4. Operational Phase

The operational phase of the proposed Poultry Farm will include the following activities:

- Loading and offloading of chickens;
- Storage of chicken feed and water;
- Pumping of water from the borehole for drinking purposes;
- Filtration and treatment of water;
- Housing of chickens for a seven week cycle;
- Cleaning and disinfecting coops following each cycle;
- Storing of manure for the production of fertiliser;
- Operation of the biosecurity system.

#### Socio – Economic

As a result of the operational phase of the proposed Poultry Farm the following impacts are envisaged on the socio-economic environment:

- Permanent job opportunities will be made available for the operation and maintenance of the Poultry Farm;
- Nuisance to surrounding land owners as a result of odour emissions;
- Nuisance to surrounding land owners as a result of possible vermin encroachment and breeding;
- Migration of workers to the operational site;
- The potential exposure of workers to infectious diseases. There is also a risk of spreading diseases to neighbouring farms;
- Risk to theft of chickens and project infrastructure.

#### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts</th>
<th>Significance rating of impacts (positive or negative)</th>
<th>Proposed mitigation</th>
<th>Significance rating of impacts after mitigation</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent job opportunities will be made available for the operation and maintenance of the Poultry Farm.</td>
<td>MH Maintain Current Management</td>
<td>• Local labour will be utilised as far as feasible and according to skills availability; • Employees will be trained on their job description.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Potential impacts:</td>
<td>Significance rating of impacts (positive or negative):</td>
<td>Proposed mitigation:</td>
<td>Significance rating of impacts after mitigation:</td>
<td>Risk of the impact and mitigation not being implemented</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Nuisance to surrounding land owners as a result of odour emissions.</td>
<td>L Maintain Current Management</td>
<td>• The manure must be dried to a level at which obnoxious and harmful odour production will not occur; • All mortalities will be disposed of as per the recommendations of a state veterinarian; • Ensure optimum ventilation to keep poops dry reducing odour and sicknesses; • After every annual cycle there will be a rest period where coops will be kept empty for approximately three weeks for disinfection and cleaning; • Manure will be removed from site or utilised on surrounding farms every three days. Longer storage of manure will be prohibited; • Waste will be removed from site frequently so as to prevent the accumulation of waste on site.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Nuisance to surrounding land owners as a result of possible vermin encroachment and breeding.</td>
<td>LM Maintain Current Management</td>
<td>• Mortalities will be removed from the poultry houses, on a daily basis; • Waste receptacles and surrounding areas will be inspected for vermin occurrences; • The Vegetation around the coops should be kept short, any spilled feed cleaned up and all hideouts should be dismantled; • Cats and dogs can assist in the control of rodents; • Traps are to be used to control rodents should the problem arise; • Protect litter storage facilities from the weather and secure from access by vermin and wild birds.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Migration of workers to the operational site.</td>
<td>MH Maintain Current Management</td>
<td>• No employee will be allowed to erect temporary or permanent structures on site for accommodation; • Employees will source their own accommodation.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Potential impacts:</td>
<td>Significance rating of impacts (positive or negative):</td>
<td>Proposed mitigation:</td>
<td>Significance rating of impacts after mitigation:</td>
<td>Risk of the impact and mitigation not being implemented</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
</tbody>
</table>
| The potential exposure of workers to infectious diseases. There is also a risk of spreading diseases to neighbouring farms. | LM Maintain Current Management | • Vaccination will be guided by the advice of a qualified veterinarian and poultry health service. Only healthy chickens should be vaccinated;  
• The coops will be decontaminated against disease organisms such as: viruses, bacteria, parasites and moulds that may be present at a poultry farm or at the end of a disease outbreak;  
• Clean overalls and gumboots will be provided after disinfection;  
• Vehicles will be sprayed with disinfectants when entering and exiting the farm;  
• Workers should be adequately trained to follow all safety procedures and wear protective equipment provided;  
• Comprehensive records should be kept. Proper sanitary facilities must be provided, i.e.: wash room with showering facilities;  
• A warning sign must be placed at all entrances to the farm, indicating that it is a bio secure area with no unauthorised access allowed;  
• A procedure must be in place for disinfecting tools or equipment brought into the bio secure zone by outside maintenance workers;  
• No food is allowed into any poultry houses;  
• Bedding material must be clean and dry and protected from contamination during transport and storage;  
• Foot baths must be placed at the entrance of all poultry houses;  
• Disinfectants in the foot baths must be replaced at least once a day. Foot baths must be constructed in such a way that people entering or leaving the houses cannot easily bypass the foot bath;  
• Vaccination records including the type of vaccination and frequency of administration must be available;  
• Records of bacteriological monitoring of the disinfection procedures must be available;  
• Stacking density will be in adherence to the South African Poultry Association guidelines. | | LOW |
## Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk to the theft of chickens and project infrastructure.</td>
<td></td>
<td>Casual visitors will be kept out; The gates will be kept locked and the property will be fenced off, the buildings will be completely closed; Security will be employed for the site to monitor activity on a 24h basis; A 1.8 m high fence must be erected in such a manner as to prevent access by people and animals; There should be a distance of at least 1.5m between the perimeter fence and the poultry houses.</td>
<td></td>
<td>LOW</td>
</tr>
</tbody>
</table>

## Soils

As a result of the operational phase of the proposed Poultry Farm, the following impacts are envisaged on the soils of the surrounding area:

- Sterilisation of soil as a result of uncontrolled manure handling and storage;
- Contamination of soils as a result of wash water from the disinfection area;
- Soil erosion as a result of runoff from cleared areas and poorly constructed stormwater drainage system;
- Soil contamination as a result of accidental spillages of hazardous substances.
<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil erosion as a result of runoff from cleared areas and poorly constructed stormwater drainage system.</td>
<td>L Maintain Current Management</td>
<td>• Stormwater controls will be implemented to ensure that dirty water is contained and does not pose a threat to soil or water resources; • Stormwater systems will be inspected and repaired timeously; • No waste or refuse will be allowed to access the stormwater infrastructure; • The development footprint will be landscaped in order to prevent pooling of water.</td>
<td>VL Maintain Current Management</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Soil contamination as a result of accidental spillages of hazardous substances.</td>
<td>LM Maintain Current Management</td>
<td>• The contractor must ensure that drip trays are always be available to collect any fluid that may result from accidental spillage, overflow and/or servicing. All equipment that leaks must be repaired immediately and/or removed from the site when necessary; • Depending on the nature and extent of the spill, contaminated soil must be either excavated or treated onsite.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

**Surface Water and Wetlands**

No significant surface water resources are located in close proximity to the proposed Poultry Farm, however localised activities may have minor impacts on the catchment as a whole. The following impacts on surface water resources are envisaged:

- Inadequately designed greywater and wash water disposal systems could result in overflow (due to increase in wastewater volume) and the subsequent contamination of surface water;
- Contamination of surface water resources as a result of uncontrolled waste handling and disposal;
- The concrete slabs and coops will increase storm water runoff resulting in erosion and possible sedimentation.
**Proposed Site**

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequately designed greywater and wash water disposal systems could result in overflow (due to increase in wastewater volume) and the subsequent contamination of surface water.</td>
<td>MH Maintain Current Management</td>
<td>• The storm water drainage system must be adequately designed based on site conditions in order to ensure the free flow of surface run-off. The design must include measures for reducing the flow velocity and keeping stormwater and contaminated run-off separate at all times; • Investigate the use of installing a water treatment package plant to reduce water use; • Septic tanks will be inspected and kept in a good working condition so as to prevent spillages and subsequent possible contamination of surface water resources; • No hazardous chemical must be discarded in the sewage or storm water system.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Contamination of surface water resources as a result of uncontrolled waste handling and disposal.</td>
<td>LM Maintain Current Management</td>
<td>• Waste will be sorted and stored in designated bins on site. These bins will allow for the separation of waste at source; • No waste will be allowed to disperse around the site; • No waste will be dumped in areas around the site. Waste disposal certificates from a registered landfill site will be obtained and records kept; • Adequate toilet facilities must be provided for all staff members as standard construction practice; • Different types of waste should be separated and placed in different bins/skips.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>The concrete slabs and coops will increase storm water runoff resulting in erosion and possible sedimentation.</td>
<td>L Maintain Current Management</td>
<td>• Energy dissipaters will be places at discharge points to reduce surface water runoff and possible pollution; • Storm water from the roofs of the broiler houses should be captured in water tanks. This water could be used for drinking water in the broiler houses and for the cleaning and disinfecting phase; • A waste water management plan should be drawn up by a specialist and complied with.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

**Groundwater**

As a result of the operational phase of the proposed Poultry Farm in conjunction with the low water table and static water level of the boreholes, the following impacts are envisaged on the groundwater resources:

- Impact on groundwater as a result of incorrect storage of manure;
- Impact on groundwater as a result of uncontrolled wash water runoff and disposal;
- Impact on groundwater quality as a result of over abstraction from the existing borehole;
- Impact on water quality as a result of uncontrolled storage of hazardous substances and waste management;
- Impact on groundwater as a result of incorrect disposal of carcasses.

### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on groundwater as a result of incorrect storage of manure.</td>
<td>MH Maintain Current Management</td>
<td>• Manure will be stored on a hard standing surface in a secondary containment area preventing rain runoff; • Storage area will be roofed to prevent the ingress of rain water; • Manure will not be stored for periods longer than 72 hours; • Manure is will be used for fertiliser on cultivated land, cattle feed or disposed of at a licensed landfill site; • Manure will be removed from the coops after every cycle.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Impact on groundwater as a result of uncontrolled wash water runoff and disposal.</td>
<td>L Maintain Current Management</td>
<td>• Use of biodegradable sanitiser should be used to prevent pollution of soil and water resources; • The storm water drainage system must be adequately designed based on site conditions in order to ensure the free flow of surface run-off; • Pooling of water will be prohibited as far as possible.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Impact on groundwater quality as a result of over abstraction from the existing borehole.</td>
<td>L Maintain Current Management</td>
<td>• A Water Use License will be applied for which will illustrate the maximum abstraction rate of the borehole; • Water abstraction will be within the amounts stipulated by the Water Use License, • The use of rainwater collected off the roofs should reduce the need for additional stream water and groundwater.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Impact on water quality as a result of uncontrolled storage of hazardous substances and waste management.</td>
<td>LM Maintain Current Management</td>
<td>• Ablution facilities will be erected should no municipal connection be available; • Allusion facilities will be emptied frequently and maintained so to prevent pollution of soils and groundwater; • Hazardous waste will be stored in contained facilities able to withhold 110% of the stored volume; • Hazardous storage facilities will be roofed to prevent rain ingress; • General waste and hazardous waste should be stored temporarily on site in suitable (and correctly labelled) waste collection bins and skips (or similar); • Waste collection bins and skips should be covered with suitable material, where</td>
<td>L Maintain Current Management</td>
<td></td>
</tr>
</tbody>
</table>
### Air Quality

As a result of the operational phase of the proposed Poultry Farm the following impacts on Air Quality may be realised:

- Odour emissions as a result of manure storage from the chicken coops;
- Impact on air quality as a result of exhaust emissions and dust generation.

#### Odour emissions as a result of manure storage from the chicken coops.

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
</table>
| Odour emissions     | MH Maintain Current Management                        | • Ensured that cages are cleaned to avoid foul smell that can bother neighbours;  
|                     |                                                        | • Food stocks should be kept dry when stored and must be in airtight containers;  
|                     |                                                        | • Divert water used to clean structures to a septic tank if not biodegradable;  
|                     |                                                        | • Keep chicken carcasses in a lined and sealed container and these containers must be removed from site daily;  
|                     |                                                        | • Investigate giving carcasses to Lion or Crocodile farms for feeding purposes. |

#### Impact on groundwater as a result of incorrect disposal of carcasses.

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
</table>
| Impact on groundwater | Maintain Current Management | • Chicken carcasses will not be disposed of on site;  
|                     |                                                        | • All carcasses will be disposed of at a licensed landfill site;  
|                     |                                                        | • No burying of carcasses will be allowed on site;  
|                     |                                                        | • Chicken houses should be cleared of dead chickens every morning and every evening. A register of mortalities should be kept;  
|                     |                                                        | • Mortalities should be stored in appropriate containers with lids and in a location where dogs and cats cannot gain access;  
|                     |                                                        | • The mortalities should be removed from the premises daily;  
|                     |                                                        | • Fly and other vermin should be strictly controlled. |

---

**Proposed Site**

**Maintain Current Management**

- A waste management plan will be compiled and adhered to;
- All measures must be taken to ensure no hydrocarbon spillages occur on site. These mitigation measures will ensure that no pollution will affect the surrounding environment and storm water runoff.

**Proposed Site**

**Maintain Current Management**

- Chicken carcasses will not be disposed of on site;
- All carcasses will be disposed of at a licensed landfill site;
- No burying of carcasses will be allowed on site;
- Chicken houses should be cleared of dead chickens every morning and every evening. A register of mortalities should be kept;
- Mortalities should be stored in appropriate containers with lids and in a location where dogs and cats cannot gain access;
- The mortalities should be removed from the premises daily;
- Fly and other vermin should be strictly controlled.
### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on air quality as a result of exhaust emissions and dust generation.</td>
<td>Maintain Current Management</td>
<td>- Emissions into the air can be minimised by ensuring regular maintenance of construction vehicles and equipment in order to reduce emission of exhaust fumes; - The application of best management practices for dust suppression will also aid in reducing air pollution. Dust control can be achieved by means of the periodic application of water to open sandy surfaces and to temporary dirt roads when required; - Cleared areas will be rehabilitated as soon these areas are not in use anymore; - Areas compacted will be scarified and ripped to encourage vegetation growth.</td>
<td>Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### Noise

The following noise impacts are envisaged as a result of the operational phase of the proposed Poultry Farm:

- Weekly transportation to and from the broiler houses will create some localised noise.

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly transportation to and from the broiler houses will create some localised noise.</td>
<td>Maintain Current Management</td>
<td>- Provincial noise regulations must be complied with at all times. Noise must not constitute a nuisance to the neighbourhood during the operational phase of the project; - Any noise complaints received must be recorded in the Complaints Register.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### Waste

As a result of the operational phase of the proposed Poultry Farm, the following waste impacts are envisaged:

- Uncontrolled storage of waste leading to pollution;
- Attraction of vermin and pests as a result of waste management;
- Impact on soils and water resources as a result of vaccines and detergents used during disinfection disposal;
- Impact on surrounding environment as a result of sewage control and waste water generation.
Uncontrolled storage of waste leading to pollution.

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LM Maintain Current Management</td>
<td>• Waste sill be stored in designated areas;</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Waste bins will be labelled for their designated use;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A waste management plan will be compiled for operation of the site;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chickens which have died as a result of a communicable disease will be disposed-off as per the recommendations of a veterinarian.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attraction of vermin and pests as a result of waste management.

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MH Maintain Current Management</td>
<td>• Vermin and pests will be kept under control;</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Depending on the type of pests that present themselves, deterrents will be placed around the site;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Non-hazardous waste generated during operation, must be disposed-off site;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Waste will disposed of at frequent intervals to prevent the attraction of vermin;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A complaints register will be kept on site.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impact on soils and water resources as a result of vaccines and detergents used during disinfection disposal.

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LM Maintain Current Management</td>
<td>• The poultry farm shall be kept neat and clean at all times;</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Refuse collection and storage must be done in a way that will not cause a health nuisance;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No hazardous chemical must be discarded in the sewage or storm water system;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Store cleaning materials in a lockable, well ventilated building.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Impact on surrounding environment as a result of sewage control and waste water generation.

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L Maintain Current Management</td>
<td>• Septic tanks should be installed to accommodate the human waste from ablution blocks if no municipal connection is available;</td>
<td>VL Maintain Current Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• All waste water should be channelled to the septic tank which will then be pumped by a contractor as often as necessary.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Visual**

As a result of the operational phase, the following impacts are envisaged on the visual character of the area:

- Visual intrusion as a result of the chicken coops;
- Visual impacts as a result of cleared areas not rehabilitated.
Potential impacts: Visual intrusion as a result of the chicken coops.

Significance rating of impacts (positive or negative): LM

Proposed mitigation:
- Heights of all buildings, including the broiler houses and feed silos, should be kept as low as possible to reduce the visual impact;
- Roof angles should also be kept as low as possible;
- The roofing and walls should be coloured in olive green or dove grey to camouflage the buildings;
- Indigenous trees will be planted around the buildings to reduce the visual impact.

Significance rating of impacts after mitigation: L

Risk of the impact and mitigation not being implemented: LOW

Potential impacts: Visual impacts as a result of cleared areas not rehabilitated.

Significance rating of impacts (positive or negative): L

Proposed mitigation:
- All cleared areas will be scarified and ripped to encourage vegetation growth;
- Erosion will be prevented and monitored frequently.

Significance rating of impacts after mitigation: VL

Risk of the impact and mitigation not being implemented: LOW

Biodiversity

As a result of the operational phase of the proposed Poultry Farm, the following impacts are envisaged on the biodiversity of the surrounding area:

- Potential impact on surrounding fauna and flora as a result of incorrect waste storage and handling;
- Potential impact on surrounding biodiversity as a result of contaminated runoff;
- Proliferation of alien vegetation in disturbed areas.

Proposed Site

Potential impacts: Potential impact on surrounding fauna and flora as a result of incorrect waste storage and handling.

Significance rating of impacts (positive or negative): L

Proposed mitigation:
- Should vegetation growth not establish, the area to be rehabilitated must be seeded with a seed mix of indigenous species to the local area;
- Site personnel will not allow the dispersion of non-biodegradable waste around the drilling site. All little will be cleaned up at the end of each shift;
- Waste receptacles will be placed around site and inspected for integrity;
- Waste will be removed from site frequently to prevent to accumulation on non-biodegradable waste;
- No dead chickens will be buried. These will be disposed of at the closest landfill site or sold as feed.

Significance rating of impacts after mitigation: VL

Risk of the impact and mitigation not being implemented: LOW

Potential impacts: Potential impact on surrounding biodiversity as a result of contaminated runoff.

Significance rating of impacts (positive or negative): L

Proposed mitigation:
- Manure will be stored on a hard standing surface to prevent the ingress and runoff of water;
- Manure storage areas will be roofed.

Significance rating of impacts after mitigation: VL

Risk of the impact and mitigation not being implemented: LOW
### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proliferation of alien vegetation in disturbed areas.</td>
<td>L Maintain Current Management</td>
<td>• Alien vegetation must be controlled. Areas disturbed will be planted with indigenous vegetation; • Alien vegetation will be removed should species establish in the area.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### Health, Safety and Security

As a result of the operational phase of the proposed Poultry Farm, the following impacts on Health, Safety and Security may be realised:

- Impact on biosecurity and transmission of diseases;
- Attraction of pests and rodents;
- Possible increase in criminal activity.

### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on biosecurity and transmission of diseases.</td>
<td>LM Maintain Current Management</td>
<td>• Dead chicks must be removed from the facility as soon as possible, at all times; • Restrict access to the houses and use disinfectant sprays; • Vehicle and personnel accessing the Poultry Farm will be screened and disinfected at the biosecurity office; • Training of workers to effectively handle sick and dead animals; • Ensure effective pest management measures. Feed should be stored in clean closed containers; • At the entry to the biosecurity zone there must be a changing room and hygiene facility, equipped with showers.</td>
<td>L Maintain Current Management</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Attraction of pests and rodents.</td>
<td>L Maintain Current Management</td>
<td>• Regularly clean the houses to minimise influx of pests; • Feeding areas must be regularly cleaned to prevent the attraction of flies; • The farm must have security fencing around it to prevent access of other animals such as dogs.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>
Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
</table>
| Possible increase in criminal activity. | LM Maintain Current Management | • The design of the coops is of importance in order to ensure that the chickens are safe from theft, the chickens will not be completely closed off with the naturally ventilated layer house;  
• The proponent of the development will hire the services of a security company that will monitor the proposed development activity on a 24-hour 7-days per week basis. Security should be vigilant as to who gains access to the site;  
• A 1.8 m high fence must be erected in such a manner as to prevent access by people and animals;  
• There should be a distance of at least 1.5m between the perimeter fence and the poultry houses. | L Maintain Current Management | LOW |

Traffic

The following impacts are envisaged during the operational phase of the project on the traffic and existing road users.

- Increase in traffic as a result of offloading of chickens.

Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
</table>
| Increase in traffic as a result of offload of chickens. | L Maintain Current Management | • Reduce the amount of trucks entering the premises by transporting larger loads;  
• Speed limits will be restricted at the Poultry Farm to 10 km/h. | VL Maintain Current Management | LOW |

Climate Change

According to (World Bank, 2007), the Proposed Poultry Farm will utilise approximately 13.5 – 20.75 watts/hour/bird/day. The following climate change impacts are envisaged from the proposed Poultry Farm:

- Loss of productivity due to increased stress of chickens as a result of increased frequency of storm events and heat waves;
- Utilisation of non-renewable energy sources resulting in the increased project carbon footprint;
- Change in land use to accommodate the Poultry Farm.
### Proposed Site

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of productivity due to increased stress of chickens as a result of increased frequency of storm events and heat waves.</td>
<td>L Maintain Current Management</td>
<td>- Housing systems need to be managed to maintain optimal seasonal temperatures and reduce the risk of heat stress, and increased investment will be required in ventilation and cooling.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Utilisation of non-renewable energy sources resulting in the increased project carbon footprint.</td>
<td>L Maintain Current Management</td>
<td>- Investigate the installation of renewable energy – such as solar or wind power – to power poultry sheds, and using biomass boilers or anaerobic digestion of poultry litter.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Change in land use to accommodate the Poultry Farm.</td>
<td>VL Maintain Current Management</td>
<td>- The operational footprint will be kept as small as possible. All disturbed areas will be rehabilitated with indigenous vegetation.</td>
<td>VL Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### 5. No – Go Alternative

Should the “no-go” alternative be identified as the preferred alternative, then the following situations will occur:

- The property will retain its current status and no construction activities will be undertaken;
- In addition not using the site for any economic activities does not provide opportunity for job creation within the local community. Business activities provide entrepreneurial opportunities as well as job opportunities, while the environmental impact will be fairly insignificant;
- The no go alternative will contribute negatively towards food security and poultry production, which is already undersupplied in South Africa;
- If the demand for chicken continues to increase and South Africa has to import this product from other countries in order to meet demand, it is likely that the price of poultry will continue to increase. Increased poultry price will mean that fewer people will be able to afford this valuable source of protein.

### No Go

<table>
<thead>
<tr>
<th>Potential impacts:</th>
<th>Significance rating of impacts (positive or negative):</th>
<th>Proposed mitigation:</th>
<th>Significance rating of impacts after mitigation:</th>
<th>Risk of the impact and mitigation not being implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>The property will retain its current status and no construction activities will be undertaken.</td>
<td>L Maintain Current Management</td>
<td>No management measures are applicable.</td>
<td>L Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>In addition, not using the site for any economic activities does not provide opportunity for job creation within the local community.</td>
<td>LM Maintain Current Management</td>
<td>No management measures are applicable.</td>
<td>LM Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>The no go alternative will contribute negatively towards food security and poultry production, which is already undersupplied in South Africa.</td>
<td>LM Maintain Current Management</td>
<td>No management measures are applicable.</td>
<td>LM Maintain Current Management</td>
<td>LOW</td>
</tr>
<tr>
<td>Potential impacts:</td>
<td>Significance rating of impacts (positive or negative):</td>
<td>Proposed mitigation:</td>
<td>Significance rating of impacts after mitigation:</td>
<td>Risk of the impact and mitigation not being implemented</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------------------------</td>
<td>---------------------</td>
<td>------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>If the demand for chicken continues to increase and South Africa has to import this product from other countries in order to meet demand, it is likely that the price of poultry will continue to increase. Increased poultry price will mean that fewer people will be able to afford this source of protein.</td>
<td>LM Maintain Current Management</td>
<td>No management measures are applicable.</td>
<td>LM Maintain Current Management</td>
<td>LOW</td>
</tr>
</tbody>
</table>

Based on these reasons the “No-Go” alternative is not recommended. The environmental impacts associated with the proposed expansion are considered to be of an acceptable level and can be effectively managed with the implementation of effective mitigation methods as discussed in the EMPr.

A detailed Impact Assessment can be found in Appendix I.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

A Hydrocensus was conducted and can be found in Appendix G

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

Uncertainties form part of any proposed development with regards to the actual degree of impact that the development will have on the immediate environment. Any actual and/or site specific results will only be determined once development has commenced and throughout the life cycle of the proposed project.

All the data and information supplied to SRK is assumed to be accurate and reflective of the current condition of the affected area. It is assumed that the baseline information scrutinised and used to explain the environmental profile is accurate.

Top Tech will comply with all legislation pertaining to the activities of Poultry Farm and that all permits and licenses that may be required will be identified and applied for prior to commencement of construction activities.

The Stakeholder Engagement Process has been sufficiently effective in identifying the critical issues needing to be addressed in the EIA/EMP by the Environmental Assessment Practitioner (EAP). The Stakeholder Engagement Process has sought to involve key stakeholders and individual landowners. Wherever possible the information requested and comments raised by Interested and Affected Parties (I&APs) has been sufficiently addressed and incorporated into the Basic Assessment Report for perusal and comment.

SRK assumes that Top Tech will implement the measures contained in the EMP, and will adhere to any monitoring procedures. A monitoring and evaluation system, including auditing, will be established and operationalized to track the implementation of the EMP ensuring that management measures are effective to avoid, minimize and mitigate impacts and that corrective action is being undertaken to address shortcomings and/or non-conformances.

The Screening phases of this project did not highlight potential issues or concerns. It is assumed that all comments and concerns received by I&APs have been informed and considered. All key issues pertaining to the project have been assessed in this draft Basic Assessment Report. Additional issues raised during the review of the BAR by stakeholders will be addressed and included within the Basic Assessment Report prior to submission to GDARD for approval.

Top Tech will adopt a process of continual improvement when managing and mitigating negative environmental impacts arising from the project. The EMP will be used as the basis of environmental management and will regularly be improved and refined where applicable.
The EAP does not accept any responsibility in the event that additional information comes to light at a later stage of the process. All data from unpublished research utilised for the purpose of this project is valid and accurate. The scope of this investigation is limited to assessing the potential biophysical, social and cultural impacts associated with the proposed Poultry Farm.

3. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

No decommissioning is foreseen in the near future for the proposed project. However, should the coops be decommissioned in future and depending on the end land use at the time, this phase will entail the demolishing of infrastructure and rehabilitation of the site. A rehabilitation plan will be developed should the coops be decommissioned and rehabilitation be implemented.

Should decommission be required, an additional Environmental Authorisation and closure plan will be submitted to the competent authority for approval and it will comply to the relevant legislation at the time of closure.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix:

Not Applicable

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts:

Not Applicable

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

The proposed Poultry Farm will contribute to employment of the local area due to the nature of the development. It is expected that the proposed development will generate a range of job opportunities for both skilled and unskilled labourers during the construction and operational phases of development.

Additional pressure will be placed on road infrastructure in the area due to the additional traffic generated as a result of the proposed development. Traffic will be a cumulative impact if further development activities are planned for this area. The cumulative impact of traffic will however be low if managed according to the EMPr.

There is the possibility for the contamination of groundwater resources as a result of the storage and handling of dead chickens and manure. The management plan presented in the EMPr will ensure the proper handling of waste on site. Chickens will be stored in a sealed container prior to disposal at the nearest incinerator or landfill site.

Cleaning of the containers should be controlled and separators from clear water runoff to ensure no contaminated water ends up in any watercourse or results in soil contamination.

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Proposal

This Basic Assessment Report for the proposed Poultry Farm has been undertaken in accordance with the EIA Regulations amended in 2014 and published in GNR 982 of 4 December 2014 of the NEMA. This process included the required Stakeholder Engagement Process as stipulated in GNR 982. This study provides an assessment of the possible positive and negative impacts that may arise from the
proposed Poultry Farm. Taking into consideration that the proposed Poultry Farm will be undertaken within already cultivated areas and on land owned by the applicant, no alternatives were assessed.

Where potential biophysical or social impacts have been identified, mitigation and management measures have been proposed to control and monitor the magnitude of impacts associated with the various aspects of the proposed Poultry Farm.

The findings of the Basic Assessment Report concluded that there are no environmental fatal flaws that could hinder the construction and subsequent operation of the Poultry Farm. An EMPr has been compiled to manage and control activities during the construction and operation phase (Appendix G) with all the impact having a VERY LOW to LOW significance rating following mitigation and management measures. All negative impact can be mitigated and managed in context of the surrounding biophysical, social and cultural environment to an acceptable level.

Service provision has been explored for the proposed development, and it can be confirmed that there is sufficient services for the proposed development

The main environmental impact of a project of this nature is the contamination of groundwater resources as well as the attraction of pests and diseases. The appropriate management and mitigation methods of dealing with waste water runoff and solid waste management must be implemented and continually monitored.

Provided the EMPr and associated management plans are implemented and waste disposal procedures are respected it is unlikely that significant contamination will occur. The EMPr is sufficient, if followed correctly, to minimise any potential negative environmental impacts and/or avoid these all together.

No-go (compulsory)

Should the “no-go” alternative be identified as the preferred alternative, then the following situations will occur:

- The property will retain its current status and no construction activities will be undertaken;
- In addition not using the site for any economic activities does not provide opportunity for job creation within the local community. Business activities provide entrepreneurial opportunities as well as job opportunities, while the environmental impact will be fairly insignificant;
- The no go alternative will contribute negatively towards food security and poultry production, which is already undersupplied in South Africa;
- If the demand for chicken continues to increase and South Africa has to import this product from other countries in order to meet demand, it is likely that the price of poultry will continue to increase. Increased poultry price will mean that fewer people will be able to afford this valuable source of protein.

Based on these reasons the “No-Go” alternative is not recommended. The environmental impacts associated with the proposed expansion are considered to be of an acceptable level and can be effectively managed with the implementation of effective mitigation methods as discussed in the EMPr.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The proposed Poultry Farm will be situated on land already used for cultivation. The main impacts associated with the proposed project include:

**Socio – Economic Impacts**

- The construction phase will result in additional temporary job opportunities;
- The proposed project will increase the local Gross Domestic Product (GDP) through the provision of employment and support to other businesses in the area;
- Auxiliary services required for the construction of the proposed Poultry Farm will be sourced
from local businesses. These may include, brick laying, coop construction, lightning erection and security services;

- Possible inflow of migrant workers.
- Permanent job opportunities will be made available for the operation and maintenance of the Poultry Farm;
- Nuisance to surrounding land owners as a result of odour emissions;
- Nuisance to surrounding land owners as a result of possible vermin encroachment and breeding;
- Migration of workers to the operational site;
- The potential exposure of workers to infectious diseases. There is also a risk of spreading diseases to neighbouring farms;
- Risk to theft of chickens and project infrastructure.

**Soil Impacts**

- Loss of soil resources as a result of soil stripping of the construction footprint;
- Sterilisation of soil resources as a result of hydrocarbon/chemical/waste contamination;
- Possibility of erosion as a result of runoff from cleared and compacted areas resulting in the soil instability and loss of soil resources;
- Soil contamination as a result of uncontrolled stormwater runoff or wash water runoff;
- Soil contamination as a result of uncontrolled sewage handling;
- Indirect impact on the loss of micro habitats following soil removal.
- Sterilisation of soil as a result of uncontrolled manure handling and storage;
- Contamination of soils as a result of wash water from the disinfection area;
- Soil erosion as a result of runoff from cleared areas and poorly constructed stormwater drainage system;
- Soil contamination as a result of accidental spillages of hazardous substances.

**Surface Water and Wetland Impacts**

- Possible contamination of surface water resources as a result of contaminated runoff;
- Possible contamination of surface water resources and wetlands as a result of uncontrolled waste handling and disposal;
- Possible contamination of surface water resources and wetlands as a result of uncontrolled usage of hazardous substances;
- Sedimentation of surface water resources as a result of runoff from cleared areas;
- Inadequately designed greywater and wash water disposal systems could result in overflow (due to increase in wastewater volume) and the subsequent contamination of surface water;
- Contamination of surface water resources as a result of uncontrolled waste handling and disposal;
- The concrete slabs and coops will increase storm water runoff resulting in erosion and possible sedimentation.

**Groundwater Impacts**

- Impact on groundwater quality as a result of soil pollution due to the usage of hazardous substances on site;
- Impact on groundwater as a result of uncontrolled waste handling;
- Impact on groundwater as a result of incorrect storage of manure;
- Impact on groundwater as a result of uncontrolled wash water runoff and disposal;
- Impact on groundwater quality as a result of over abstraction from the existing borehole;
- Impact on water quality as a result of uncontrolled storage of hazardous substances and waste management;
- Impact on groundwater as a result of incorrect disposal of carcasses.
Air Quality Impacts

- Impact on air quality as a result of the dust generation from cleared areas and cement missing;
- Impact on air quality as a result of Volatile Organic Compounds (VOC) emissions from machinery and increased vehicle usage;
- Odour emissions as a result of manure storage from the chicken coops;
- Impact on air quality as a result of exhaust emissions and dust generation.

Noise Impacts

- Noise emissions as a result of machinery movement around the site;
- Weekly transportation to and from the broiler houses will create some localised noise.

Land Use and Land Capability Impacts

- Temporary loss of land use and land capability as a result of the clearance of cultivated land;
- Sterilisation of land as a result of soil pollution and erosion.

Waste Impacts

- Mixing of waste and uncontrolled disposal;
- Pollution and aesthetical impacts as a result of uncontrolled waste storage;
- Uncontrolled storage of waste leading to pollution;
- Attraction of vermin and pests as a result of waste management;
- Impact on soils and water resources as a result of vaccines and detergents used during disinfection disposal;
- Impact on surrounding environment as a result of sewage control and waste water generation.

Cultural and Heritage Impacts

- Destruction of cultural and heritage artefacts found underground;
- Destruction of alternation of buildings older than 60 years.

Visual Impacts

- Visual disturbance on adjacent land and road users as a result of the use of construction equipment, excavation and building material;
- Aesthetic impact as a result of litter dispersion and untidy housekeeping from contractors;
- Visual intrusion as a result of the chicken coops;
- Visual impacts as a result of cleared areas not rehabilitated.

Fauna and Flora Impacts

- Disturbance of fauna and flora habitats as a result of site clearing;
- Disturbance of faunal species, including those of adjacent land owners, as a result of noise generation;
- Loss of faunal species during construction activities;
- Potential to indirectly increase the risk of the spread of alien vegetation;
- Potential impact on surrounding fauna and flora as a result of incorrect waste storage and handling;
- Potential impact on surrounding biodiversity as a result of contaminated runoff;
- Proliferation of alien vegetation in disturbed areas.
**Safety, Security and Health**

- Increased economic activity may lead to the increase in crime;
- Safety risk of contractors, due to increased construction activity;
- Health risks as a result of waste generation and storage;
- Impact on biosecurity and transmission of diseases;
- Attraction of pests and rodents;
- Possible increase in criminal activity.

**Traffic**

- Increase in traffic as a result of offloading of chickens.

**Climate Change**

- Loss of productivity due to increased stress of chickens as a result of increased frequency of storm events and heat waves;
- Utilisation of non-renewable energy sources resulting in the increased project carbon footprint;
- Change in land use to accommodate the Poultry Farm.

For alternative:

**Not Applicable**

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

The proposed alternative was considered based on the location within land owned by the applicant, avoidance of any sensitivity on site, and aligns the proposed project with the surrounding land uses. No other location alternatives have been proposed for the project as this is the only site available for the applicant and within already disturbed areas. No other land owned by the applicant was available. The proposed footprint is located on already cultivated land that will be decommissioned to make provision for the proposed Poultry Farm. The proposed site is not located in close proximity to any sensitive environment (i.e. watercourse). Technology alternatives were not considered, as the applicant will be making use of the Best Practical Environmental Option that is available in the Poultry industry. The technology alternatives were screened out at the initiation phase of the project. The broiler houses will be semi-automated. Alternatives in energy consumption will be investigated during the operational phase.

### 7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

**Gauteng Conservation Plan**

Geographic Information Systems were used in determining the status quo of the receiving environment. The Gauteng Conservation Plan was utilised to indicate any sensitive surrounding environments and the level of protection of these. No sensitive environments that will be impacted on by the Proposed Poultry Farm were identified.

Topographic maps of the area were studied to accurately determine nearby infrastructure and land use of the proposed footprint.

**City of Tshwane Metropolitan Spatial Development Framework (2015)**

The proposed project falls within Ward 49 of Region 2 of the Spatial Development Framework and is centred between the north western and north eastern quadrants of the Tshwane Metropolitan Municipality. Income received in the region are very low on average, falling beneath the Tshwane average. As a resource, the region holds large undeveloped areas, which could in future accommodate growth (Tshwane Metropolitan Municipality, 2015).
Tshwane Regional Integrated Development Plan (2014-15)

The introduction of land uses that will create job opportunities in the Region 2 was one of the primary development objectives and Zone of Choice which is confirmed in this framework. Job creation in this region is entrenched in this development plan in which the “Zone of Choice” was demarcated including the entire area to south. (N4).

Gauteng Environmental Management Framework (2014)

The Gauteng Environmental Management Framework was taken cognisance of in determining the feasibility of the proposed project. The proposed Poultry Farm is situated on agricultural land, of which a section will be transformed. Agricultural land is a scarce resource, and food security resources need to be protected. The Proposed Poultry Farm will aid in addressing the poultry shortfall in South Africa.

Gauteng Spatial Development Framework (2014)

The Spatial Development Framework was taken cognisance of during the design and development of the proposed Poultry Farm. No additional footprint will be disturbed other than that which is already cultivated. Cultivated land will be converted to that of Poultry Farming.

The SDF is the legislated component of the municipality’s IDP that prescribes development strategies and policy guidelines to restructure and reengineer the urban and rural form. The SDF is the municipality’s long-term vision of what it wishes to achieve spatially, and within the IDP programmes and projects. The SDF should not be interpreted as a blueprint or master plan aimed at controlling physical development, but rather the framework giving structure to an area while allowing it to grow and adapt to changing circumstances. The proposed project has considered and is guided by the Regions’ SDF and IDP priorities of the area.

8. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereeto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).

YES

If “NO”, indicate the aspects that require further assessment before a decision can be made (list the aspects that require further assessment):

Not Applicable

If “YES”, please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

The overall environmental impacts identified as part of this Basic Assessment Process are insignificant and can easily be mitigated. It is important that the appointed contractors implement the proposed EMPr and mitigation measures.

From the findings of this BAR, it is recommended that the EA be granted for the proposed Poultry Farm in adherence to the EMPr as per the project description.

9. THE NEEDS AND DESIRABILITY OF THE PROPOSED DEVELOPMENT (as per notice 792 of 2012, or the updated version of this guideline)

<table>
<thead>
<tr>
<th>No</th>
<th>Question as per guideline</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority? (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP).</td>
<td>Yes. This site is currently utilised for lucerne farming. A portion of the footprint will be altered to accommodate the Poultry Farm. The policy stipulated in the IDP, expresses the need for poverty eradication and food security. The proposed project will result in small scale job opportunities, as well as assist in addressing the poultry shortfall in the province and South Africa as a whole.</td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur here at this point in time?</td>
<td>Yes, according to the Regional Developmental Overview for Region 2 (Tshwane Regional Integrated Development Plan, 2014-15), the proposed project falls within an area which is demarcated as “rural”, and the intention of development in this area is to create vibrant, equitable and sustainable rural development which provides food and work opportunities.</td>
</tr>
<tr>
<td>3</td>
<td>Does the community/area need the activity and the associated land use concerned (is it a societal priority)? This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate).</td>
<td>Yes. At a local level, employment opportunities will be created for surrounding land occupiers. The Poultry Farm will furthermore establish a point of Poultry sales within the immediate area, providing easy access to Poultry, both at markets or direct sales.</td>
</tr>
<tr>
<td>4</td>
<td>Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development?</td>
<td>Yes. The proposed project will be using water directly from a registered borehole and will not rely on additional municipal water services. In addition, the site already has access to municipal electricity. Generators will be installed at the site for alternative energy sources. The applicant will furthermore investigate the use of renewable energy. The road networks are fully intact and the project will not have a major impact on road congestion. Thus, additional capacity does not need to be created for the development.</td>
</tr>
<tr>
<td>5</td>
<td>Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication is on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)?</td>
<td>The development is not provided for in the infrastructure planning of the municipality as it is a small scale establishment of local importance. Thus, the proposed project will not have any implications for the infrastructure planning, as no services and/or infrastructure needs to be upgraded or created to cater for this development.</td>
</tr>
<tr>
<td>6</td>
<td>Is this project part of a national programme to address an issue of national concern or importance?</td>
<td>The proposed Poultry Farm will aid in addressing the challenge of food security in South Africa. The current food security challenge in South Africa consists of two dimensions: the first tries to maintain and increase South Africa's ability to meet its national food requirements, and the second seeks to eliminate inequalities and poverty amongst households that is made apparent by inadequate and unstable food production, lack of purchasing power, poor nutritional status and weak institutional support networks and disaster management systems.</td>
</tr>
</tbody>
</table>

### Desirability (Placing)

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the development the Best Practicable Environmental Option for this land/site?</td>
<td>To reach objective of sustainable poultry production, the proposed project is the Best Practicable Environmental Option for the site. The No-Go Alternative will result in the land continually being used for cultivation of Lucerne. This will not assist food security on a local or national level.</td>
</tr>
</tbody>
</table>
| 2 | Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities? | No. The proposed project aligns itself with the Tshwane Municipality Vision 2055 outlined in the IDP. The following strategic objectives are sought to be achieved and are aligned with the objectives of the proposed project:  
  - Promote shared economic growth and job creation;  
  - Improve financial sustainability;  
  - Continue institutional development, transformation and innovation. |
<p>| 3 | Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustainability considerations? | No, the integrity of the existing environmental management priorities for the area will not be compromised by this development. |
| 4 | Do location factors favour this land use (associated with the activity applied for) at this place?                | Yes. The surrounding land use it largely used for agriculture and livestock farming. |</p>
<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?</td>
<td>The development of the proposed development associated infrastructure will exert an impact on the environment; but based on the locality of the site, the impacts associated with this proposed development can be mitigated to an acceptable level (Low, Low Medium).</td>
</tr>
</tbody>
</table>
| 6 | How will the development impact on people’s health and wellbeing (e.g. in terms of noise, odours, visual character and sense of place, etc)?      | The surrounding land is occupied by low density residents and dwellings. The area is further zones for agriculture, thus the visual character and sense of place will not be altered. The proposed project may however impact on the health and wellbeing in the areas if not managed or mitigated. The following impacts and significance rating are envisaged by the proposed development:  
- Visual – Low;  
- Odours – Low;  
- Noise – Very Low;  
- Sense of Place – Very Low |
| 7 | Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?               | No. The poultry industry is the largest segment of the South African agricultural sector, contributing more than 16% of its share of gross domestic product. It provides employment, directly and indirectly, for about 108 000 people throughout its value chain and related industries. It supports many businesses and provides a strong platform for rural development, as well as the government’s zero-hunger goals, as it is the main supplier of a protein diet. |
| 8 | Will the proposed land use result in unacceptable cumulative impacts?                                                                     | No. The proposed project will have minimal cumulative impacts which can be mitigated to an acceptable level. The management and mitigation measures stipulated in the EMPr will strive to prevent and reduce negative long term cumulative impacts on the receiving environment. |

10. **THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED**  
(Consider when the activity is expected to be concluded)

The EA is required for at least 10 years.

11. **ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPrr)** (must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers “Yes” to Point 7 above then an EMPr is to be attached to this report as an Appendix

EMPrr attached X
SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s) – (must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

Appendix G: Specialist reports

Appendix H: EMPrr

Appendix I: Impact Assessment

Appendix J: Other information

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

➢ Where requested, supporting documentation has been attached;
➢ All relevant sections of the form have been completed.

Compiled By

Reviewed By
Appendix A: Site plan(s)
Appendix B: Photographs
Appendix C: Facility illustration(s)
Appendix D: Route position information
Appendix E: Public participation information
Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information
Appendix G: Specialist reports
Appendix H: EMPrr
Appendix I: Impact Assessment
Appendix J: Other information
SRK Report Distribution Record

Report No. 509128

<table>
<thead>
<tr>
<th>Name/Title</th>
<th>Company</th>
<th>Copy</th>
<th>Date</th>
<th>Authorised by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms Malesela Sehona</td>
<td>GDARD</td>
<td>1 (HC)</td>
<td>13 April 2017</td>
<td>Manda Hinsch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 – 3 (PDF)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms Lilian Siwelane</td>
<td>DWS</td>
<td>4 (HC)</td>
<td>13 April 2017</td>
<td>Manda Hinsch</td>
</tr>
<tr>
<td>Mr Mthobeli Kholisa</td>
<td>Tshwane Metropolitan Municipality</td>
<td>5 (HC)</td>
<td>13 April 2017</td>
<td>Manda Hinsch</td>
</tr>
<tr>
<td>Mr Jose Paulo</td>
<td>Top Tech Feeds</td>
<td>6 (HC)</td>
<td>13 April 2017</td>
<td>Manda Hinsch</td>
</tr>
<tr>
<td></td>
<td>Good Luck Centre</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRK Website</td>
<td>SRK</td>
<td>7 (PDF)</td>
<td>13 April 2017</td>
<td>Manda Hinsch</td>
</tr>
<tr>
<td>Mr Jose Paulo</td>
<td>Top Tech Feeds</td>
<td>8 (HC)</td>
<td>13 April 2017</td>
<td>Manda Hinsch</td>
</tr>
<tr>
<td>SRK File</td>
<td>SRK</td>
<td>9 (HC)</td>
<td>13 April 2017</td>
<td>Manda Hinsch</td>
</tr>
<tr>
<td>SRK Library</td>
<td>SRK</td>
<td>10 (HC)</td>
<td>13 April 2017</td>
<td>Manda Hinsch</td>
</tr>
</tbody>
</table>

Approval Signature:

This report is protected by copyright vested in SRK (South Africa) Pty Ltd. It may not be reproduced or transmitted in any form or by any means whatsoever to any person without the written permission of the copyright holder, SRK.