

**PART 2 AMENDMENT OF ENVIRONMENTAL AUTHORIZATION FOR THE CONSTRUCTION OF 7 (SEVEN) BROILER HOUSES AND ASSOCIATED INFRASTRUCTURE, ON THE FARM KILLARNEY NO. 855 OF SUB 40 (A SUB OF 11) SITUATED IN THE MKHAMBATHINI LOCAL MUNICIPALITY (DC22/0023/2009/AMEND/2022)**

ENVIRONMENTAL AUTHORIZATION AMENDMENT REPORT - Proposed expansion of Makhalempongo Chicken Farm located on farm Killarney No. 855 FT, Mkhambathini Local Municipality, KwaZulu-Natal.

**ABSTRACT**

This is the draft Environmental Authorization Amendment Report for the proposed expansion of Makhalempongo Chicken Farm by constructing 2 x broiler chicken houses. This report includes the description of the proposed development, preferred alternatives, receiving environment, potential impacts and proposed mitigation measures. This report has been prepared in line with the EIA Regulations, 2014 as amended.

Prepared by: Mondli Consulting Services

Prepared by:



Prepared for:



*Makhalempongo  
Chicken (Pty) Ltd  
Reg. No.: 2010/013501/07*

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## APPLICATION FOR ENVIRONMENTAL AUTHORISATION AMENDMENT REPORT – PROPOSED EXPANSION OF MAKHALEMPONGO CHICKEN FARM

Submitted in terms of the Environmental Impact Assessment Regulations, 2014, as amended promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) to:

Department of Economic Development, Tourism and Environmental Affairs (EDTEA):

### Project Title

Proposed expansion of Makhalempongo Chicken Farm located on Farm Killarney No. 855 FT, Mkhambathini Local Municipality, KwaZulu-Natal.

### A. DETAILS AND EXPERTISE OF THE EAP WHO PREPARED THE REPORT:

Mondli Consulting Services has been appointed by Makhalempongo Chicken (Pty) Ltd to undertake the Environmental Authorization amendment for the Proposed Expansion of Makhalempongo Chicken Farm on Farm Killarney located within Ward 3 of Mkhambathini Local Municipality, Umgungundlovu District, KwaZulu Natal.

Details of the EAP:

Business Name of EAP	Mondli Consulting Services		
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The expertise of the EAP (including curriculum vitae) IS ATTACHED as Appendix F (1)(a&b).

Name of representative of the EAP	Education qualifications of	Professional affiliations	Experience at environmental assessments (yrs)
A Mhatu	Bachelor of Science Degree Ecology, Environment & Conservation and Geography	SACNASP Registered (Membership No. 125863).	Has over 9 years' experience in conducting EIAs and EIA related work.
BM Mthembu	Diploma in Nature Conservation  Master's Degree (Environmental Studies Dissertation, Geography)	EAPASA registered EAP: No. 2018/168 in accordance with the prescribed criteria of Regulation 15(1) of section 24 H Registration Authority Regulation	Has been involved in environmental and conservation field for over 20 yrs. Conducted EIAs for over 20 years including Strategic Env. Assessment.

	Bachelor of Law (LLB)	Society of South African Geographers (Membership No. 28/09), confirmed to comply with the requirements set by South African Council for Natural Scientific Professions.	Has been involved in the review and commenting on development projects impacting on the environment.
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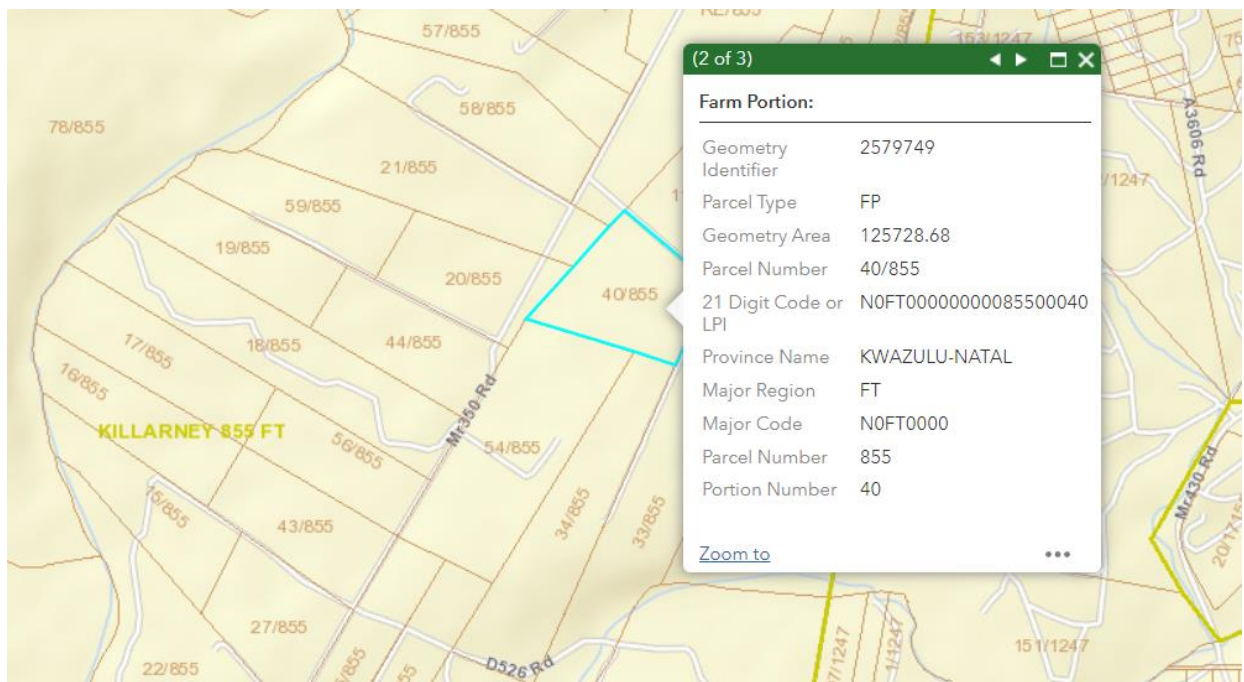
## B. THE LOCATION OF THE ACTIVITY

(i) The site for the proposed development is located along Road D505, Sankotshe, Ilanga. This area is located within Ward 3 of the Mkhambatini Local Municipality, Umgungundlovu District in the Province of KwaZulu Natal. The 21-digit Surveyor General code of each cadastral land parcel is given in the table below.

N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	5	0	0	0	4	0
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(ii) The physical address and Farm name

The site for the proposed development is located on Portion 40 of Farm Killarney No. 855. The property has a total size of 12.57 Ha and currently has an operational chicken farm consisting of 7 broiler houses, biosecurity control, manager's house, storeroom and office.



**Figure 1:** Figure showing the property and details of the property on which the proposed development will be located (<https://csggis.drdir.gov.za/psv/>).

(iii) The coordinates for the property are given below. These coordinates indicate four corner points along the boundary of the property.

Points	Latitude /Longitude	Degrees	Minutes	Seconds
Point 1	South	29 <sup>0</sup>	47'	45.88"
	East	30 <sup>0</sup>	34'	27.90"
Point 2	South	29 <sup>0</sup>	47'	54.81"
	East	30 <sup>0</sup>	34'	40.27"
Point 3	South	29 <sup>0</sup>	48'	0.97"
	East	30 <sup>0</sup>	34'	36.87"
Point 4	South	29 <sup>0</sup>	47'	57.21"
	East	30 <sup>0</sup>	34'	22.27"

C. A PLAN WHICH LOCATES THE PROPOSED ACTIVITY OR ACTIVITIES APPLIED FOR AS WELL AS ASSOCIATED STRUCTURES AND INFRASTRUCTURE AT AN APPROPRIATE SCALE.

A locality map has been attached under **Appendix A (i)** showing the locality of the property including surrounding towns. A layout map showing where the structures will be located on site is attached as **(Appendix A (ii))**.



**Figure 2:** Figure showing layout of the proposed structures and the existing structures. (Layout can be found under Appendix A (2) (ii)).

**D. DESCRIPTION OF THE SCOPE OF THE PROPOSED ACTIVITY, INCLUDING –**

**(i) All listed and specified activities triggered and being applied for**

The proposed development will entail a construction of 2 x broiler houses which will have a combined total area of 3528 square metres and a combined total capacity of 79 380 birds. This construction will take place within an existing Makhalempongo Chicken Farm which currently has 7 broiler houses.

In the year 2009, Makhalempongo Investment CC lodged an application for Environmental Authorization for their then proposed construction of 7 broiler houses (DC22/0023/09). The broiler houses were each 1800 square metres with capacity to host 40 000 chickens per house on a 42 day cycle. The project was subsequently authorized on 30/03/2010 with the authorization having a validity period of 3 years. This EA was amended in 2013 for the relocation of 5 of the houses which were relocated away from wet areas to drier parts of the site. The amendment also entailed a change in ownership. The construction of the Farm was subsequently undertaken during the year 2013.

The table below shows Listed Activities within the National Environmental Management Act, 1998 (NEMA), GNR 324, 325 and 327 that were triggered and authorized within which the proposed construction falls.

Table 1: Table showing Listed activities triggered by the proposed development.

Indicate the number and the date of the relevant notice;	Activity No(s) (in terms of the relevant notice)	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice):
GNR. 327 of 2014 (Listing Notice 1) as amended on 7 April 2017.	Activity No. 40 - The expansion and related operation of facilities for the concentration of poultry, excluding chicks younger than 20 days, where the capacity of the facility will be increased by— (ii) more than 5 000 poultry per facility situated outside an urban area.	The proposed expansion will include construction of 2 broiler chicken houses with a total capacity of 79 380 birds and associated infrastructure with the project area being located in a rural area (i.e. outside urban area).

**(ii) A description of the activities to be undertaken including associated structures and infrastructure**

**Background of the proposed development**  
 In the year 2009, Makhalempongo Investment CC lodged an application for Environmental Authorization of their then proposed construction of 7 broiler houses (DC22/0023/09). The broiler houses were each 1800 square metres with capacity to host 40 000 chickens per house on a 42 day cycle. The project was subsequently authorized on 30/03/2010 with the authorization having a validity period of 3 years.



Prior to the implementation of the above mentioned development, an application for amendment of the EA was lodged. This amendment was for relocation of 5 of the proposed from a wet area to a drier area. The amendment was also for change of ownership from Makhalempongo Investment CC to Makhalempongo Chicken (Pty) Ltd. The amendment was granted on 11 June 2013.

The construction of the structures was thereafter commenced in the same year of 2013 with Makhalempongo Chicken operating to provide live chicken to Rainbow Chicken. The proposal now is to expand the Farm operations by constructing 2 additional broiler houses.

### **Overview**

Makhalempongo Chicken (Pty) Ltd is proposing the expansion of their existing Chicken Farm located on Farm Killarney by constructing two (2) additional broiler houses. The proposed broiler houses will have a combined total area of 3528 square metres and a combined total capacity of 79 380 birds. The proposed development is intended to increase the supply of live chickens to Rainbow Chicken for chicken meat production.

The development will therefore include: -

- Site preparation and earthworks including fill with 25404 cubic meters material and
- Construction of the proposed chicken houses.

The proposed chicken houses will be constructed to meet the standards and best practice for broiler chicken houses. This includes applicable Standards of South African Bureau of Standards (SABS) and Code of Practice and guidelines from the South African Poultry Association.

### **Project Objectives**

The objective of the proposed development is to increase the supply of live chicken to Rainbow Chicken in order to increase meat production with the aim to meet rising demand for chicken meat. There will also be a creation of employment opportunities during both the construction and operation phases of the development.

### **Services on-site**

#### **Access/Roads**

The site for the proposed development is located adjacent to Road D505. This is an existing Farm that is fully operational, and the property is accessible from D 505 Road, with short internal roads that are developed within the Farm.

#### **Electricity**

The area within which the proposed development is located has Eskom supplied electricity. Electricity for the proposed development will therefore be sourced from the same supplier. Eskom has been identified as a stakeholder and will be provided with the opportunity to comment on the proposed expansion. This will assist in confirming the available capacity.

### **Water Supply**

Water supply for the Farm is through Municipal Supply. This supply is augmented by water obtained through a bore hole.

### **Sewer Supply**

The existing Makhalempongo Chicken Farm is serviced through a septic tanks and soakaway system. The proposed expansion will therefore make use of the same system. The system has enough spare capacity for the proposed expansion.

### **Stormwater**

The stormwater plan has been compiled for the proposed expansion. (see attached Appendix D 2).

### **Waste Management During the Construction Phase**

Waste bins and/or skip will be provided for the purposes of storage of construction related waste. This waste will be disposed of at a regular basis at a waste disposal site that will be confirmed by the appointed Contractor prior to the commencement of construction. Waste management during the construction phase will be monitored by the appointed Environmental Control Officer (ECO).

### **Waste Management During the Operational Phase**

General Waste from the Farm is stored in waste bins and taken out on municipal waste collection days for collection and disposal. This will therefore be the case for the operation of the project after the Farm expansion. Mortalities are disposed of through rendering whereby the dead birds collected are handed over to Rainbow Chicken. Through rendering, mortality is recycled into a valuable, biologically safe protein by-product through processes such as Maceration (grinding/shredding/mincing) of the dead birds into a high protein animal food powder which can be fed to chickens.

### **Construction Phase**

The construction phase of the development will include:

- Clearing of vegetation and excavations for development platforms. This clearance will be of grass as the project is to take place within an existing operational Farm.
- Infilling with materials for the required levels of the platforms.
- Construction of the broiler houses.
- Installation of required facilities within the chicken houses and connections for water and electricity supply.

All construction works will be monitored by a suitably qualified appointed independent Environmental Control Officer (ECO).

**E. A DESCRIPTION OF THE POLICY AND LEGISLATIVE CONTEXT WITHIN WHICH THE DEVELOPMENT IS PROPOSED INCLUDING –**

- (i) *An identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report.*

Table 2: Table showing identified Legislation, policies, plans and Municipal Development planning frameworks applicable to the proposed development.

<b>LEGISLATION</b>	<b>AUTHORITY</b>	<b>COMPLIANCE/APPLICABILITY</b>
National Environmental Management Act (No. 107 of 1998).	Department of Environment, Forestry and Fisheries (National Authority) Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	The Environmental Management: EIA Regulations promulgated according to this Act guided the Environmental Impact Assessment Process conducted for the proposed development.
EIA Regulations, 2014 as amended.	Department of Environment, Forestry and Fisheries (National Authority) Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	EIA Regulations were adhered to during the Environmental Impact Assessment including determining the need for an Environmental Authorization, the Application/Assessment Process to be followed, conduction of the public participation and report formulation.
Guideline:5 Assessment of Alternatives and Impacts in support of EIA Regulations	Department of Environment, Forestry and Fisheries (National Authority) Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	These guidelines were considered in terms of exploring alternatives linked to the proposed development.
Guideline on Need and Desirability, Department of Environmental Affairs	Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	In terms of these guidelines the need and desirability of the project has to cover certain specifics like training, safety, service delivery, benefits to the local people and the alignment of planning related issues to the project.

National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Department of Environment, Forestry and Fisheries (National Authority) Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	All necessary steps will be taken to reduce the impact of the project on the biodiversity of the receiving environment.
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)	Department of Environment, Forestry and Fisheries (National Authority) Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	Proposed mitigation measures within the EMPr have also taken into consideration potential impacts on air quality within and around the site. The main air quality impacts are dust during construction and potential odor during the operation phase.
The National Water Act (No. 36 of 1998).	Department of Human Settlements, Water and Sanitation	The site for the proposed development is located within 500m from a wetland. The Department of Human Settlements, Water and Sanitation will therefore be engaged.
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)	Department of Environment, Forestry and Fisheries (National Authority) Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	All waste produced during construction and operational phase of the project will be handled and disposed of in compliance to this Act and associated regulations.
Alien and Invasive Species Regulations, 2014.	Department of Environment, Forestry and Fisheries (National Authority) Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	All necessary precautions will be taken throughout the project life-cycle to ensure that no alien or invasive plant species are introduced as a result of the project.
National Forests Act (Act No. 84 of 1998)	Department of Environment, Forestry and Fisheries	Forests and woodlands near the site will not be disturbed. Any tree/plant species of biodiversity significance will be preserved.
KwaZulu-Natal Amafa and Research Institute Act, 2018	KZN Amafa Research and Institute	Provides for the safeguarding of heritage resources within the project area. Guidelines will be

		given for process to be followed if any heritage resources are discovered on the site.
Noise Control Regulations (Regulations 154, 10 January 1992)	Department of Environment, Forestry and Fisheries (National Authority) Department of Economic Development, Tourism and Environmental Affairs (Provincial Authority)	Noise levels throughout the project cycle must be kept as low as possible to ensure that there is no nuisance or health impact on community and/or workers resulting from the proposed project.
National Development Plan	RSA Government Departments, Municipalities and Public Entities	Members of the community within which the project is located will be employed during the construction and operational phases. Community members may also be provided with the opportunity to hold managerial positions provided that they meet the requirements for such positions.
South African Constitution, 1996	Government of the Republic of South Africa	Due diligence will be taken to ensure that project related activities do not result in the violation of constitutional rights of community members and/or employees within project.
Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000)	Department of Justice and Correctional Services	Integrated decision making has been allowed for through public participation allowing all relevant departments, stakeholders and community members to have input on the decision made. Should an Environmental authorization be issued, the decision, reasons for the decision and appeal procedures will be disclosed to all who took part in the public participation.
Animals Protection Act of 1962 (Act No. 71 of 1962)	Department of Agriculture, Land Reform and Rural Development	This law was promulgated for the prevention of cruelty towards animals. It is therefore applicable in this case as there will be concentration of chicken and therefore all practice within the farm must not cause any

		cruelty towards the farmed chickens.
Mkhambathini Local Municipality Development Plan (IDP), 2020/2021	Mkhambathini Local Municipality	Mkhambathini Municipality has high poverty and unemployment rates. Therefore projects which create employment and stimulate economic growth are important.
Umgungundlovu District Environmental Management Framework (EMF), 2019/2020	Umgungundlovu District Municipality	The environmental management framework of uMgungundlovu District Municipality identifies different sensitivities and biodiversity area within uMgungundlovu area. The site will not impact on any areas important for biodiversity as it will take place within an existing farm on an area that has already been previously disturbed.

**F. A MOTIVATION FOR THE NEED AND DESIRABILITY FOR THE PROPOSED DEVELOPMENT INCLUDING THE NEED AND DESIRABILITY OF THE ACTIVITY IN THE CONTEXT OF THE PREFERRED LOCATION**

The need and desirability of the project has to be informed by the principle of sustainability as provided for in the National Environmental Management Act, Guideline on Need and Desirability issued by the National Department of Environmental Affairs (2017), and ultimately the Constitution of South Africa. This serves as a way of ensuring that the proposed development is ecologically sustainable, and socially and economically justifiable.

According to the Guideline on Need and Desirability (Department of Environmental Affairs, 2017) Need and desirability of a proposed project calls for the consideration of how the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity. The need and desirability is also used to determine if the proposed activity is the best option when considering the proposed development and must therefore also be informed by the sum of all the impacts considered holistically and therefore becomes an impact summary of the proposed activity.

Mkhambathini Local Municipality is one of the seven local municipalities within the uMgungundlovu District Municipality which is situated within south west KwaZulu-Natal. Mkhambathini Local Municipality consists of 7 wards with a large part of the municipality being rural in nature and underdeveloped. There is also a high rate of unemployment, scarcity of employment opportunities and the slow economic growth within the municipality. Some employment opportunities will be created during the construction phase of the development which will have a small scale temporary benefit to municipality’s employment status specifically the affected community and businesses. During the operation phase, there will be an increased number of chicken houses and therefore more chickens. This will require additional workers creating permanent employment opportunities.

The population of South Africa is rapidly rising. One of the direct results of a rapid population rise, is a fast increase in food demand. For the increase in food demand to be met, there must be improved food production/supply. The proposed development is aimed at increasing Rainbow Chicken's meat production capacity as live chickens from Makhalempongo Chicken Farm are supplied to Rainbow Chicken. Chicken is rich in an array of important nutrients and can be an excellent addition to a healthy, well-rounded diet. Broiler meat in South Africa is the most affordable meat, supporting household food and nutrition security. South Africa has the highest meat consumption per capita in Africa, with a growing demand for poultry meat, showing an increase of 132% between 1995 and 2015.

The site for the proposed development is already an operational Farm and the area chosen within the Farm means that there is a low probability of significant environmental impacts occurring as a result of the proposed expansion. The most significant environmental impact for the construction phase would be that of dust and noise. This will be on a site scale and will therefore mainly affect workers on the Farm and construction area. The removal of vegetation will have no biodiversity impacts due to the location of the proposed structures and the vegetation on this area.

During the operation phase, aspects of the development that could have significant impacts are waste management including management of wastewater and carcasses as additional waste will have to be disposed of/treated as a result of the increase in the number of chicken on the Farm which will directly lead to increased waste products.

Looking at the guideline on need and desirability, and focusing more on planning tools like the IDP, SDF and EMF, these have been useful in the assessment. The said guideline provides a list of 14 aspects, which must be considered. Below the 14 aspects have been addressed for the proposed development.

- 1. 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).***

The proposed expansion is in line with the Municipal IDP. Employment opportunities will be created which is in line with the needs set out in the IDP to help alleviate poverty and reduce unemployment rate.

- 2. 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?***

Yes. The proposed development is an expansion of an existing operational Farm in an agricultural area that has other Farms around/in the vicinity. This means expansion of farming operations, and increase in job opportunities.

- 3. 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).***

The proposed development is viewed as a project that is needed by the community. The Farm currently employs a number of people from local community and the proposed expansion will create more employment opportunities.

**4. 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?**

All necessary services with adequate capacity are currently available as there is an existing Farm. Stormwater drainage will be attended to as per undertaken stormwater investigation and resultant stormwater management plan.

**5. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)?**

The proposed expansion will not have implications on municipal infrastructure planning. Electricity is provided by Eskom with capacity to accommodate proposed expansion. Water is obtained through Municipality and augmented through borehole. There is no municipal sewer/wastewater system in the area and therefore, Makhalempongo Chicken Farm makes use of a soakaway/septic tank system.

**6. Is this project part of a national programme to address an issue of national concern or importance?**

Yes. The proposed development will help in food supply which is an issue of national importance. Although there will be few additional jobs provided through the proposed expansion, these will somewhat help with alleviation of poverty which is an issue of national concern.

**7. Is the development the best practicable environmental option for this land/site?**

Yes this is the best option for the site as there is already an existing operational Farm.

**8. 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, approval of the proposed expansion would not compromise the municipal IDP or SDF. The site is falling under an area that is zoned, agriculture, with on-going agricultural operations.

**9. 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?**



Approval of the proposed development will not compromise the integrity of any existing environmental management priorities for the area. Although there is a wetland located within 500m of the site, there are existing broiler houses between the proposed structures and the wetland. In addition, a stormwater management plan has been compiled for the proposed expansion which will assist in management of stormwater flow around the proposed structures and therefore mitigate potential impacts on the wetland. No other sensitive areas are located within or close to the site.

**10. Do location factors favour this land use (associated with the activity applied for) at this place? This relates to the contextualisation of the proposed land use on this site within its broader context).**

Location factors favour the land use at the site. The area is zoned for agricultural use. The site is already developed consisting of the existing Makhalempongo Chicken Farm which consists of seven (7) broiler houses to be increased to nine (9) broiler houses upon implementation of the proposed additional two (2) houses.

**11. 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)?**

The proposed expansion will not impact in any cultural or heritage features.

There is a wetland that is located less than 500m from the edge of the proposed structures. This wetland is located in the south-west direction of the site with some existing structures between the wetland and the proposed structures. Therefore, the proposed expansion is not expected to have impacts on the wetland with implementation of impact mitigation measures including stormwater management during both the construction and operation phase of the proposed structures. In addition, there is an existing fully functional wastewater treatment system which has the capacity to accommodate wastewater increase that can be associated with the proposed two additional structures. It must also be stated that the current farming operations have not impacted on the sensitive areas like wetlands from 2013 to date.

There is no sensitive vegetation within the site as the proposed expansion will occur on the same property as the existing Makhalempongo Chicken Farm.

**12. 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)?**

There will be some noise experienced during the construction phase as various vehicles/plant will travel to and from the site. This is not expected to have any significant impacts on people within or close to the site as construction works will be limited to working hours between 07:00am and 04:30pm.

**13. Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?**

No. There are no unacceptable opportunity costs expected.

**14. Will the proposed land use result in unacceptable cumulative impacts?**

On condition that the developer implements all mitigation measures laid out for both the construction and operational phase and adheres to Environmental and Agricultural Regulations and Guidelines, the proposed development is not expected to have unacceptable cumulative impacts. Cumulative impacts of the project over time are rather expected to be positive with specific reference to stimulation of economic development on a local scale.

There are three (3) different phases that will form part of the proposed development. These are: -

**(i) Pre-construction and planning phase**

This phase includes the appointment of professionals across different fields of expertise for all required assessments, permits and designs that need to be undertaken as part of the planning to ensure successful implementation of the project and compliance to all relevant legislations, regulations and guidelines.

**(ii) Construction phase**

This phase includes appointment of Contractors, Sub-Contractors and labour to carry out construction of the different structural components of the project. This includes appointment of locals which are often appointed for labour but may also be appointed for other roles based on skills required versus skills possessed. This phase also includes a strong involvement of engineers and for this application, an Environmental Control Officer will also be required.

**(iii) Operational phase**

The operation phase will include concentration of chickens in the proposed houses. These chickens will need to be looked after including feeding, airing of the chicken houses, cleaning out of manure and litter from the houses. These chickens will then be collected by transporting trucks and taken to Rainbow Chicken Facilities where they will be slaughtered and used for production of different chicken products. All forms of mortalities will also be taken by rainbow chicken for processing into chicken feed.

**G. A MOTIVATION FOR THE PREFERRED SITE, ACTIVITY AND TECHNOLOGY ALTERNATIVE**

As per GN. R 326, Appendix 1(2)(b), alternatives for the proposed development are to be identified and considered, and this is in line with the definition under Chapter 1 of the EIA Regulations, interpreting alternatives as “in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to the –

- a. Property on which or location where the activity is proposed to be undertaken;
- b. Type of activity to be undertaken;
- c. Design or layout of the activity
- d. Technology to be in the activity;
- e. Operational aspects of the activity

This includes the option of not implementing the activity. This approach compels the developers and assessors to consider other potential land uses and possible future land uses for the site under assessment.

In essence this section focusses on the motivation for the preferred site, looking at the topics covered below:

### Property on which the activity is undertaken

The proposed two chicken houses will be constructed on Farm Killarney No. 855. This property is owned by Makhalempongo Chicken (Pty) Ltd and is the property where the existing previously authorized seven chicken houses are located. This property is located within Ward 3 of Mkhambathini Local Municipality, uMgungundlovu District Municipality.



**Figure 3:** Google Earth Image showing an outline of the property where the proposed development will take place.

### Type of activity undertaken

Makhelempongo Chicken (Pty) Ltd has been providing Rainbow Chicken with live chickens through their existing chicken Farm. Due to the need to supply more chicken to Rainbow Chicken, Makhalempongo Chicken (Pty) Ltd has proposed the expansion of their existing farm by constructing two additional chicken houses within their property.

The proposed activity will include:

- Clearance of vegetation which will mainly be grass.
- Excavation/earthworks.
- Construction of chicken houses as per designs and applicable guidelines and standards.
- Construction of structures for the stormwater management system.

- Installation of relevant facilities within the chicken houses.
- Rehabilitation works.

### Design and layout of the activity

The site layout and Facility illustration are shown as **Appendix A(2) (ii)** as indicated above.

The proposed expansion of Makhalempongo Chicken Farm will include the construction of two chicken houses to add to the existing seven chicken houses. These houses have been labelled house 8 and house 9 on the layout.

House 8 will have a size of 1674 square metres with a capacity to accommodate 37 665 birds. House 9 will have a size of 1854 square metres with a capacity to accommodate 41 715 birds. The combined total area of the proposed houses is therefore 3528 square metres and the combined capacity is 79 380 birds.

### Technology to be used by the activity

The technology to be used is in line with the standards, guidelines and best practices for broiler chicken farming and as such no alternatives were considered as technology chose was to ensure compliance with minimal requirements.

### No - go option

Should the amendment of the Environmental Authorization not be granted, this will imply that the two proposed structures cannot be constructed. The Developer will lose all the funds invested thus far including funds used to pay for the different studies and plans undertaken thus far. The Developer will also lose out on the opportunity to grow his business as they will not be able to increase their supply of chickens to Rainbow Chicken.

The proposed expansion will create some employment opportunities during both the construction and operation phase. These opportunities will be lost if the proposed amendment/expansion is not approved.

The site will remain in the same state. However, this will have no benefit to the surrounding environment as there are no sensitive areas within or near the site that will be affected by the proposed expansion.

## H. A FULL DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED ALTERNATIVES WITHIN THE SITE, INCLUDING:

### *i. Details of all the alternatives considered*

#### Property on which the activity is undertaken

The property for the proposed development has been previously assessed. An environmental authorization was granted for the development of seven chicken houses within this property. Makhalempongo Chicken Farm has been operating from this property since its development. The property is therefore suitable for the proposed construction of two broiler houses.

Construction of the two broiler houses within the existing property, reduces the likelihood of significant environmental impacts as it is an already developed property. In addition, all services required for the operation of the broiler houses already exist within the property as there are other existing functioning broiler houses.

There were therefore no other properties considered for the proposed development.

The factors that make the property desirable for the proposed development include:

- Easily accessible from D505.
- Already secure as there is an existing Farm which is fenced with an appointed security company.
- There are existing broiler houses on the property and therefore all required services are available such as the wastewater septic tank and soakaway system, electricity provided through Eskom and water from Municipality and borehole system.
- There is sufficient space within the property for the proposed chicken houses.
- The slope/gradient of the site is favourable for the proposed additional chicken houses.
- The existing Farm operations have not impacted and degraded the environment.

#### Location of the site within the property

There is a wetland located in the south-west direction of the property. This was taken into consideration and the area towards the wetland was avoided for the proposed two houses. Although use of the space where there is a wetland could have allowed for bigger houses and therefore higher capacity which is conducive for business, this would have impacted on the wetland and therefore this area was avoided.

The location chosen to place the two houses within the property will allow for construction of the two houses according to standards with respect to distance to the manager's house, biocontrol and centre of the road (D505).

Furthermore, the chosen location has sufficient space available for the proposed houses to be of a sufficient size to host the number of chickens required for increasing supply to Rainbow Chicken.



**Figure 4:** Google Earth Image showing outline of the property in red and location of the site within the property in yellow.

#### Type of activity undertaken

According to Statistics South Africa, South Africa experienced a positive population growth year-on-year between the year 2002 and 2022. A positive growth rate indicates that the population is increasing, despite the devastating impact of COVID-19 globally and within South Africa's borders. The increase in population comes with an increase in demand for different food items including chicken meat.

Makhalempongo Chicken (Pty) Ltd provides their chickens to Rainbow Chicken who use these chickens to produce chicken meat and different chicken meat based products. Makhalempongo Chicken (Pty) Ltd has been approached by Rainbow Chicken to increase the number of chickens that they provide them with. This is to help Rainbow Chicken increase their production so as to meet the increasing demand.

The proposal to construct additional chicken houses is therefore the only way in which Makhalempongo (Pty) Ltd can increase the number of chickens that they are supplying as their existing chicken houses are operating at full capacity. Therefore, no other alternatives were considered with regards to the type of activity to be undertaken.

#### Design and layout of the activity

The design and layout of the proposed development took into consideration the requirements as set out within the South African Poultry Association's abridged code of practice. The requirements of the KZN Department of Transport were also considered as the site for the proposed structures is located adjacent to D505 which is a provincial road under the jurisdiction of the KZN Department of Transport.

Another factor that was considered is the number of chicken that was requested by Rainbow Chicken. This influenced the layout as the exercise would only be fruitful if the structures proposed would be able to house the number of birds required for the increase in number of birds to be supplied to Rainbow Chicken.

There were three (3) different layouts considered. The other two alternatives were considered less favourable due to two main factors:

- High input costs: these alternatives included the construction of three (3) chicken houses which would require more resources and therefore more money while having little difference to the preferred alternative in terms of total chicken/bird capacity.
- Space: the space taken up by the houses did not allow enough space for the truck turning area and some of the structures were in violation of the distance required between the edge of the chicken house and manager's office, biocontrol area and/or centre of the road.

The design of the proposed structures has to be according to the guidelines and standards for broiler houses and therefore, no alternatives were considered for the design of the houses.

#### Technology to be used by the activity

Basic construction machinery will be used during the construction phase including plant such as TLB, different trucks that will be delivering material to the site, vehicles that will be transporting staff to and from the site as well as hand-held tools such as drilling equipment. There were therefore no technology alternatives considered as those to be used are not known to have any excessive detrimental impacts on the environment.

#### No – go option

The no-go option took into consideration the outcomes/impacts of the proposed development considering both positive and negative impacts associated with construction and operation phase of the proposed expansion. There are no significant environmental impacts expected to occur during the construction phase provided that impact mitigation measures are implemented.

The site is already used for chicken farming with an established wastewater management system that has the capacity to accommodate the wastewater that can be associated with the proposed additional chicken houses.

Therefore, the no-go option is not considered as a favourable option as it would not benefit the environment around the site and would lead to loss of opportunity for the applicant and for those who could have gained through employment opportunities during the construction and operation phases of the project.

*ii. Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs*

The project has followed the standard public participation process as contemplated under Regulation 41 of the 2014 EIA Regulations, as outlined below.

- A meeting was held with the Ward Councillor for Ward 3 of Mkhambathini Local Municipality, Cllr Maphanga. This meeting was held on 20 July 2022 to inform the councillor of the proposed development, explain the Basic Assessment Process being conducted and request a meeting with the community/ward committee of the project area. Minutes and attendance register of the said meeting are attached as **Appendix B (1)(i) and Appendix B (1)(ii)**.
- Subsequently, a meeting was held with Cllr Maphanga and Mr. Gwala who is an elderly member of the community. This is due to the fact that the immediate neighbors around the site are other farmers – **see attached Appendix B (2)(i) and Appendix B (2) (ii)** for the register and minutes.
- The neighboring properties were supplied with flyers/pamphlets providing them with the information on the proposed expansion, the Basic Assessment being conducted and the EAPs contact details to register as I&APs and submit comments/concerns. **see attached Appendix B (3)(i)** for the register where someone was on the property and **Appendix B (3) (ii)** for photos where there was no response and flyers were left on the entrance/gate.
- The project was advertised in English in the Mercury dated 5 August 2022 – attached as **Appendix B (4)**.
- The Site Notices were erected on site on 24 August 2022 – see **Appendix B (5)**
- A draft Basic Assessment report is being circulated to all stakeholders, Interested and Affected Parties (I&APs) and state department for commenting as part of the Public Participation Process. All comments received will be incorporated in the Final BAR and EMPr.

*iii. A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or reasons for not including them*

This is a draft EA Amendment report which is being circulated to I&APs, stakeholders, and state departments as per the table below giving them the opportunity to comment on the proposed expansion of Makhalempongo Chicken Farm. As per the EIA Regulations, 2014 (as amended), all parties will be afforded 30 days within which to submit their comments. For those who fail to submit their comments within the stipulated time frame, it will be assumed that they do not have any comments to make. All comments received will be recorded in the Comments and Response Report along with the EAPs responses to comments made. This report will be submitted as an Appendix to the final report. Comments made will also be incorporated into the Final Amendment Report and EMPr.



**Table 3: Table showing identified stakeholders, I&APs and State Departments consulted and given the opportunity to comment on the proposed development.**

<b>Name of Department</b>	<b>Contact person</b>	<b>Address</b>
Department of Economic Development, Tourism & Environmental Affairs	Shawn Janneker/Nombasa Kama	No 8 Warwick Road Cascades Pietermaritzburg 3202 Tel: 033 347 1820 Email: Shawn.Janneker.kznedtea.gov.za/nombasa.kama@kznedtea.gov.za
Ezemvelo KZN Wildlife	Dominic Wieners/Nomonde Ndebele	P.O. Box 13053 Cascades 3202 (033) 845 1460 / 1739 / 1452
KwaZulu – Natal Amafa and Research Institute	John Pakwe	195 Langalibalele Street, Pietermaritzburg, 3201 Tel:033 3946543 Email: John.Pakwe@amafapmb.co.za
Department of Water & Sanitation	Ms Nonkululeko Mokoena / Mr Neo Leburu	P.O.Box 1018 Durban. 4000 031 336 2758 / 2789 / 083 2970832 / 083 297 0832
Department of Transport	Ms Judy Reddy	224 Prince Alfred Str Pietermaritzburg 3200 Tel: 033 355 8600 Email: Judy.Reddy@Kzntransport.gov.za
Mkhambathini Local Municipality	Matiwane K	18 Old Main Road Camperdown 3720 Tel: 031 785 9300 Email: matiwane@mkhambathini.gov.za
Umgungundlovu District Municipality	Mandisa Khomo/Nokulunga Nxumalo	242 Langalibalele Street Pietermaritzburg 3200 Tel: 033 897 6811/6723 Email: mandisa.khomo@umdm.gov.za/nokulunga.nxumalo@umdm.gov.za
Department of Agriculture, Land Reform and Rural Development	Mr. A Mnyungula	185 Langalibalele Str. Pietermaritzburg 3200
ESKOM	Samantha Naicker	Durban – New Germany 031 7105183 /NaickeSa@eskom.co.za
Ward Councillor (Ward 3)	Nonhlanhla Maphanga	Cell: 073 282 2182 maphangan@mkhambathini.gov.za

*iv. The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects*

**Geographical and Physical Attributes**

**Land Use Character**

The area where the project is located is zoned as agri-eco tourism. A broiler house Farm is classified as an agricultural activity and is therefore permissible in an agri-eco tourism area. The property where the proposed expansion will take place is surrounded by farms with different agricultural activities. The property is within a rural setting and is accessible through MR 350 and D505.

**Topography**

A topographical survey of the site was conducted. Elevation profile of the site shows that elevation on site ranges from 602m to 609m. The topographical drawing is attached as **Appendix D(4)**.

**Climate**

The wet season is warm and partly cloudy and the dry season is comfortable and mostly clear. Over the course of the year, the temperature typically varies from 5°C to 26.1°F and is rarely below 1.7°C or above 30.6°C.

The warm season lasts for 3.7 months, from December 2 to March 23, with an average daily high temperature above 25°C. The hottest month of the year in Camperdown is January, with an average high of 26.1°F and low of 16.1°C.

The wetter season lasts 5.7 months, from October 4 to March 27, with a greater than 37% chance of a given day being a wet day. The month with the most wet days is December, with an average of 20.7 days with at least 0.1016cm of precipitation.

**Description of ecological baseline**

**Vegetation**

According to the KZN Biodiversity Sector Plan (2014), the site is located within the KwaZulu Natal Hinterland Thronveld vegetation unit which is part of the Savanna Biome. This vegetation unit has a conservation status of vulnerable.

However, the property is developed and hosts the existing operational Makhalempongo Chicken Farm. Therefore, the vegetation within the property and site is not the typical vegetation associated with the said vegetation unit. Vegetation on site mainly consists of grass with some scattered trees including Pine Trees, Aloe and Erythrina Trees. None of the trees observed within the site are protected plant species. In any event any tree that is removed if unavoidable will be re-planted on project completion.



**Figure 5:** Photographic image showing some of the vegetation within the site area.

## **Fauna**

There are no faunal species within the site/property that will be affected by the proposed construction of two chicken houses. The chickens within the chicken Farm may be agitated by the noise which may be experienced during the construction phase especially during the noisier stages of the construction. Except for this, there are no other fauna impacts expected and therefore, no significant faunal impacts are expected for the construction or operation phases of the project.

## **Soil and Geology**

According to the Geotechnical Study (**Appendix D3**) conducted for the site, the site underlain by sandstone of the Natal Group which is overlain by colluvial and ferruginous pedogenic horizon at depth ranging between 0.00 to 2.30m below existing ground level. According to the laboratory results, the material on site has low plasticity. Generally, the sampled material recorded a “low” potential expansiveness according to van der Merwe (1964). Based on TRH 14 Classification, the sampled material classifies as G9 quality material.

## Groundwater and Wetlands / Hydrology



**Figure 6:** Image adopted from Wetland Delineation Study showing artificial wetland in green shading and potential natural wetland in blue shading.

A wetland delineation study was previously done on the property. Soil and vegetation sampling of the south-western portion of the property identified the presence of temporary, seasonal and semi-permanent hydric soils and associated wetland vegetation communities.

According to the assessment conducted, two wetlands were identified within 500m of the site as per the image above. This includes an artificial wetland and natural wetland (valley head seep wetland) as per the image above (**Figure 6**).

### **Heritage, historical features, and cultural aspects**

There are no existing heritage or cultural features within or close to the site of the proposed construction of two chicken houses. Although there are existing structures within the property, none of these structures are over 60 years of age as the existing Farm was only established in 2013. In addition, there is no planned demolition of existing structures for the proposed project.

- v. **The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts –**

*(aa) can be reversed*

Impacts associated with the proposed expansion cannot be reversed unless the project were to be decommissioned and the site rehabilitated as close to its original state as possible. However, due to the nature of the site and the mitigation measures against negative impacts, the proposed expansion is not expected to have any significant negative environmental impacts.

*(bb) may cause irreplaceable loss of resources*

There is no irreplaceable loss of resources expected to occur as a result of the proposed development. Mitigation measures will provide for the avoidance, reduction and remediation of impacts to ensure that the overall integrity of the surrounding environment is preserved to allow for continued ecosystem functionality.

*(cc) can be avoided, managed or mitigated*

All impacts associated with the proposed project can be avoided or managed and reduced to minor/low significance levels. Such impacts include dust during both construction and operation phase, vegetation removal and noise.

### Details of the impact rating tools

The table below shows the table of the impact significance rating scale that was used for assessing the impacts associated with the proposed development. The guidelines for the impact assessment process applied in compiling this document are outlined within Appendix 1 of the EIA regulations 2014, under which the requirements and objectives for a satisfactory manner to conduct an impact assessment process are outlined.

Table 4: Table showing significance rating scale.

SIGNIFICANCE VALUE	SIGNIFICANCE WEIGHTING	DESCRIPTION
<10	Negligible	The impact is very small to absent
10 - 20	Low	Where this impact would not have a direct influence on the decision to develop in the area.

20 - 50	<b>Medium</b>	Where the impact could influence the decision to develop in the area unless it is effectively mitigated.
50 - 70	<b>High</b>	Where the impact must have an influence on the decision process to develop in the area.
>70	<b>Very High</b>	Where the impact may constitute a fatal flaw for the project.

The significance ratings given in the table above took into consideration different factors such as extent of impact, nature of impact and duration of impact.

These are explained in the sections below.

### ***Nature***

Herewith impacts are classified as either direct, indirect or cumulative.

- **Direct impacts:** impacts usually caused from activities carried out on site that can only be monitored to be carried out within certain confines but cannot at all be avoided, i.e. clearing of vegetation to mark a road reserve in an area populated with vegetation.
- **Indirect impacts:** secondary impacts resulting from direct impacts, i.e. erosion resulting from destabilised soils due to clearing of vegetation.
- **Cumulative impacts:** impacts which could result during the life cycle of the project as a result of one or two impacts that are usually unnoticed as single elements of such.

### **Evaluation Criteria**

In the evaluation of the impacts, a criteria was used which considers the extent, magnitude, duration and probability of the impact amongst other factors.

**Table 5:** Table of evaluation criteria ranking

<b>Component</b>	<b>Definition</b>	
<b>Magnitude</b>	<b>The intensity or size of the impact:</b>	
	Small: No visual effects.	0
	Minor: Impact on processes.	2
	Low: Minimal effect on ecological processes	4
	Medium/Moderate: The environment is altered but is able to perform ecological processes in a modified state, despite being negatively affected.	6

	High: The ecological processes are altered such that they cease due to drastic changes to the structure and function of systems.	8
	Very high: The ecological processes severely altered and complete destruction of patterns and permanent cessation of processes.	10
<b>Duration</b>	<b>The temporal scale / predicted lifetime of the impact:</b>	
	Very short term: 0 - 1 years.	1
	Short term: 2 - 5 years.	2
	Medium term: 5 -15 years.	3
	Long term: > 15 years.	4
	Permanent: Will persist indefinitely unless mitigated.	5
<b>Extent</b>	<b>Spatial scale of the impact</b>	
	Specific to site of impact.	1
	Local scale: Immediate surroundings.	2
	Regional scale: Province related scale.	3
	National: Specific to country.	4
	International: World wide/global.	5
<b>Probability</b>	<b>Likelihood of the impact occurring</b>	
	Very improbable: Possibility that will likely never occur.	1
	Improbable: Some low possibility of occurrence.	2
	Probable: Distinct possibility.	3
	Highly probable: Most likely to occur.	4
	Definite: Impact will occur regardless of any prevention measures.	5

**Impact Significance = (Magnitude + Duration + Extent) x Probability**

**vi. The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives**

The factors and ranking scales indicated above were used for the assessment of potential impacts considering the scope of works and environment within and around the preferred site as this is the only site being considered thus far for this application.

**vii. Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects**

*Positive impacts of the activity*

Positive impacts that can be associated with the project are the socio-economic benefits which can be linked with the proposed expansion. Work opportunities will be created for both skilled and unskilled workers during the construction phase for the different tasks that will need to be completed as part of the process of constructing the proposed chicken houses. In addition, there will also be employment opportunities during the operational phase as more workers will be needed to take care of the additional number of chickens and the chicken houses. The proposed development will also help the business (Makhalempongo Chicken Farm) grow by increasing the income made by the business. The Developer (Makhalempongo Chicken (Pty) Ltd) will be able to maintain a good relationship with their client (Rainbow Chicken) which will help the business grow even better in the future with more opportunities to likely arise motivated by the reliability of Makhalempongo Chicken Farm's reliability. This would in return have positive socio-economic impacts as growth of the farm leads to creation of employment opportunities which also benefit the local community where the farm is located.

*Negative impacts of the activity*

Odour from the chicken houses is one of the most significant impacts during the operation phase. This odour is said to occur at the stage where the chickens are about 25 days old. This smell can be experienced a distance from the site influenced by weather conditions at that time. However, this is a nuisance impact that has not been linked with any health impacts. This is mainly due to the fact that this smell does not occur consistently for a long period of time. People more likely to be affected by any odour/gases released from the Farm would be the workers who are directly exposed for long periods of time for consecutive days. This requires the use of applicable measures as per the guidelines and standards for operating broiler houses. In addition the operations are expected to comply to the Occupational Health and Safety legislation.

During the construction phase, there will be removal of vegetation, however, there will be no plant species of conservation concern removed and mitigation measures will be implemented included relocation of indigenous trees within the project footprint. Although there is a wetland located in proximity of the site, the proposed development is not likely to have any impacts on the wetland especially with implementation of mitigation measures. It is also unlikely that the wetland will be affected due to the



number of structures that exist within the property which are located between the proposed structures and the wetland.

### Impacts identified for the preferred site

Impacts that can be associated with the proposed development considering the scope of work, site and receiving environment are listed below. These are the impacts identified thus far with the list to be refined throughout the Basic Assessment Process.

- Vegetation Removal
- Soil Erosion
- Pollution
- Soil Contamination
- Nuisance: Noise and dust
- Spread of Alien Plants
- Odour
- Visual impact
- Groundwater contamination
- Socio-Economic
- Health and Safety

The EIA Regulations, 2014 as amended stipulates requirements that need to be adhered to and objectives to be reached when undertaking environmental impact assessment. Key to a successful EIA is the accurate identification of environmental and social impacts and the subsequent assessment of the likely significance of each impact. This will assist in facilitating the prioritization of impacts, the identification of fatal flaws and the identification of mitigation measures.

*viii. An assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures*

**Table 6:** Table showing some of the potential impacts that can be associated with the proposed development as well as proposed mitigation measures.

Activity	Resulting Impact	Proposed Mitigation
<b>Pre-Construction Phase</b>		
<p><b>Stripping of topsoil, sub-soil and vegetation for the construction of the proposed structures</b></p>	<ul style="list-style-type: none"> <li>• Increased soil erosion.</li> <li>• Sedimentation of wetland close to the site.</li> <li>• Loss of indigenous plant species.</li> <li>• Decreased bank stability.</li> <li>• Decreased topsoil quality resulting in lowered plant growth rate.</li> <li>• Where exposed surfaces are left undeveloped for an extended period of time, this will give opportunity for alien plants to proliferate on such areas.</li> </ul>	<ul style="list-style-type: none"> <li>• An ECO must be appointed timeously before the commencement of construction to monitor all construction activities including the clearance of vegetation.</li> <li>• Topsoil that it stored on site during the construction phase must be checked before being used for backfilling.</li> <li>• Topsoil must be sequentially removed in accordance with the requirements on site.</li> <li>• All topsoil required for backfilling during rehabilitation must be adequately stored:               <ul style="list-style-type: none"> <li>○ On a Flat surface;</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>○ Below two metres;</li> <li>○ Suitably covered if stored for prolonged periods of time.</li> <li>○ Separate from sub-soil and other stockpiles.</li> <li>○ Not near watercourses.</li> </ul> <ul style="list-style-type: none"> <li>● No clearance of vegetation must be allowed to take place outside of the construction footprint.</li> <li>● Any indigenous plant species identified to occur within the area of disturbance, must be removed and relocated to other areas within the property. For this purpose, the appointed ECO must be given the opportunity to identify the trees on the site and whether any of them need to be transplanted/relocated.</li> <li>● No protected species may be removed and/or destroyed without a valid permit.</li> <li>● Alien plant eradication must take place for as long as there are exposed surfaces.</li> <li>● Re-vegetation with indigenous grass must take place as soon as possible post-construction.</li> <li>● Environmental induction must be made part of training for all workers on site during both the construction and operational phase and the issue of alien plants must be covered in these talks.</li> </ul>
<b>Construction</b>		
<p><b>Use and storing of potentially hazardous substances</b></p>	<ul style="list-style-type: none"> <li>● Contamination of soil within and around the site;</li> <li>● Contamination of ground and surface water with seeping of contaminants into soil and pollution of runoff;</li> <li>● Potential health/safety risks with possibility of fire and other occurrences that can affect staff and surrounding community.</li> </ul>	<ul style="list-style-type: none"> <li>● All hazardous substances must be stored on impermeable surfaces throughout the project life cycle.</li> <li>● Storage areas where flammable substances are kept must be equipped with serviced fire extinguisher.</li> <li>● Emergency procedures must be known to all workers and must be made part of site induction/training.</li> <li>● All workers that handle potentially hazardous substances must be provided with the appropriate safety clothing.</li> </ul>
<p><b>The movement of vehicles and/or plant to and from the site</b></p>	<ul style="list-style-type: none"> <li>● Reduced photosynthesis of nearby vegetation due to dust settling on leaves;</li> <li>● Trampling of vegetation outside of the development footprint due to vehicle movements;</li> </ul>	<ul style="list-style-type: none"> <li>● Traffic signs must be erected throughout the site, demarcating the following: <ul style="list-style-type: none"> <li>○ Speed limits;</li> <li>○ Sensitive areas; and</li> <li>○ No-go areas</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Compaction of fertile soils leading to reduced soil quality and plant growth;</li> <li>• Plant die-offs due to hydrocarbon spills from vehicles;</li> <li>• Animal fatalities due to traffic related incidents.</li> <li>• Displacement due to increased noise and vibrations.</li> </ul>	<ul style="list-style-type: none"> <li>• Dust suppression must be implemented on all access roads. This practice must be carefully monitored by the ECO.</li> <li>• Vehicular movement within the site/property must be kept at 30km/hr.</li> <li>• Vehicles may only traverse designated areas and access roads.</li> <li>• Heavy duty machinery must only be parked on designated areas.</li> </ul>
<b>Waste Management</b>	<ul style="list-style-type: none"> <li>• Pollution during the construction phase may result from mismanagement of construction and general waste on site.</li> <li>• Visual impacts may result from waste being strewn around the site and not stored and disposed of accordingly.</li> <li>• Should chemical toilets be used during the construction phase, odour, contamination of surrounding area and pests (such as flies) may occur if they are not kept clean.</li> </ul>	<ul style="list-style-type: none"> <li>• Wind and scavenger proof containers must be made available and used for on-site waste storage.</li> <li>• Waste from the waste storage containers must regularly be disposed of at the nearest landfill site that is permitted to handle and dispose of such waste.</li> <li>• Waste disposal certificates/waybills must be kept on file as proof of safe waste disposal.</li> <li>• Workers must be trained to exercise environmentally friendly behaviour including proper disposal of waste.</li> <li>• Should chemical toilets be used for the construction phase, they must be regularly cleaned by the contractor that provided the toilets and kept clean at all times.</li> <li>• Waste Management Plan will be in place to ensure efficient management of waste during construction.</li> </ul>
<b>Nuisance: Noise and dust</b>	<ul style="list-style-type: none"> <li>• Noise may be from construction vehicles, workers and construction works.</li> <li>• Dust will be as a result of earthworks and use of gravel roads by construction vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>• Where required, construction vehicles must be fitted with silencers/noise mufflers.</li> <li>• Unnecessary noise from the site must be avoided during both the construction with no loud music to be permitted.</li> <li>• Slow speeds must be adhered to on the gravel road by all construction vehicles as per recommended speed limits for such roads.</li> <li>• Where necessary, exposed surfaces must be water sprayed to dampen the soil and reduce the dust liberation.</li> <li>• The neighbouring properties must be informed of the intended date of the commencement of construction activities and should be informed if any stages of the construction will be particularly noisy.</li> </ul>
<b>Socio-Economic</b>	<ul style="list-style-type: none"> <li>• Employment opportunities will be created for locals during the construction phase.</li> </ul>	<ul style="list-style-type: none"> <li>• Terms of employment must be clearly explained to all workers.</li> <li>• The Contractor and Developer must avoid making promises to the community especially those that will be hard to keep.</li> </ul>

		<ul style="list-style-type: none"> <li>• The Contractor and Developer must consider giving some form of certification to workers for the skills they displayed during their employment period.</li> <li>• Local community members must be considered for employment at different levels based on possession of required skills/experience.</li> <li>• Suppliers from local areas must be considered where possible for materials required during the construction phase.</li> </ul>
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**Post-construction**

<p><b>Decommissioning of the construction site, camp and laydown area.</b></p>	<ul style="list-style-type: none"> <li>• Spillages of oils fuels and chemicals causing the contamination of soils, surface and ground water;</li> <li>• Hardened/ compacted soils reduce the vegetation growth;</li> <li>• Reinstatement of sub-standard topsoil reduces the growth and success of indigenous vegetation;</li> <li>• Proliferation of IAPS on site and into surrounding plant communities;</li> <li>• Introduction of exotic species through uninformed re-vegetation efforts.</li> <li>• Exposed, unsupported soil being eroded and causing erosion gullies;</li> <li>• Poor stormwater runoff, leading to erosion on site.</li> </ul>	<ul style="list-style-type: none"> <li>• Rehabilitation must be conducted on site, by adequately backfilling topsoil and reinstating indigenous vegetation.</li> <li>• Rehabilitation of the site must be monitored by an ECO.</li> <li>• Stormwater management must be implemented as per the stormwater management plan created for the site.</li> <li>• The site must be appropriately cleaned including cleaning of all spills observed.</li> <li>• Hardened surfaces that need to be revegetated must be ripped and soil loosened prior to the planting of vegetation.</li> <li>• Stockpiles must be cleared of IAPS and this must be checked before infill.</li> <li>• No stockpiles must be left behind after the construction phase, but rather must backfill and/or removed from site.</li> </ul>
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**Operation Phase**

<p><b>Waste Water Management</b></p>	<ul style="list-style-type: none"> <li>• The proposed houses will result in additional waste water which must be treated through existing treatment system. This may result in malfunction which would contaminate surrounding area including wetland area.</li> </ul>	<ul style="list-style-type: none"> <li>• The wastewater system must be monitored regularly to ensure that any faults are picked up. Should an upgrade of the system be required, it must be upgraded accordingly with all necessary permits obtained prior to the upgrade.</li> <li>• Waste Management Plan is currently in place ensuring efficient management of waste during operations.</li> </ul>
<p><b>Operation of the Chicken Houses</b></p>	<ul style="list-style-type: none"> <li>• Odour from the proposed structures will add to the experienced odour.</li> <li>• Storage of mortalities prior to their disposal may cause odour and pests.</li> <li>• Poor waste management practice will have some environmental impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• The applicable guidelines for the management of the chicken houses and associated odour must be adhered to including guidelines on aeration and cleaning out of the chicken houses.</li> <li>• The storage of mortalities on the property must not result in any odour or environmental contamination.</li> </ul>

		<ul style="list-style-type: none"> <li>Waste management must be in such that there is no accumulation of waste on the site. Should there be an increase in frequency of waste disposal required to accommodate the additional waste, this must be arranged by the Developer.</li> <li>The Developer must ensure that none of the operation activities negatively affect the surrounding environment including the wetland located in proximity of the site.</li> </ul>
<b>Socio-Economic</b>	<ul style="list-style-type: none"> <li>There are employment opportunities that will be created during the operation phase.</li> </ul>	<ul style="list-style-type: none"> <li>People from the local community must be prioritize as much as possible with regards to employment opportunities.</li> </ul>

*ix. The possible mitigation measures that could be applied and level of residual risk*

Mitigation measures for the different impacts have been given in **Table 6** above. In addition, the Environmental Management Programme (**Appendix E**) has been attached to this report and contains all recommended mitigation measures for all impacts that can be associated with this development. The assessment of impact significance has therefore taken into consideration, the significance of the impacts without the implementation of mitigation measures and the significance of the impacts with the implementation of mitigation measures. As this is an expansion of an existing Farm within a property with existing structures, the proposed additional structures will most likely have negligible impacts especially with the implementation of mitigation measures.

Below are some of the recommended mitigation measures:

- An Environmental Control Officer (ECO) must be timeously appointed prior to the commencement of any construction activities. This must take into account the potential need to relocate some of the trees within the site.
- Where trees need to be removed, the appointed Environmental Control Officer must be engaged to ensure that the correct procedure is followed for removal of indigenous trees.
- Unnecessary vegetation removal must be avoided through:
  - Clearly marking the site boundaries prior to the commencement of construction activities.
  - Areas beyond the site and construction area must be regarded as no-go zones.
  - Access to the site for Construction vehicles must be designated and no construction vehicles should be allowed to access the site in any other way than the designated access.
- All waste produced during the construction phase including rubble and general waste must be collected and disposed of at the nearest approved waste dumping site. Waste management must also be implemented during the operational phase.
- All hazardous substances must be stored on an impermeable surface during both construction and operational phase. Concrete mixing must take place on mixing boards or on liner. Should any large amount of fuel be kept on site, the fuel must be kept on a properly established bunded area with the capacity to store/hold the contents of the container(s) placed on it.
- All areas that are not engineered which were cleared during the construction phase must be re-vegetated/grassed. Alien plant eradication must take place within and around the site during construction and operational phase.

- The chicken houses must be aerated and cleaned out as per applicable guidelines and standards.
- Storage of mortalities within the site must not cause any contamination, odour, pests or any other impacts.
- Workers must be provided with the necessary safety equipment for tasks to be conducted during both the construction and operational phase.

**Table 7: Impact Assessment for Potential Impacts**

Impact and Risk		Magnitude	Duration	Extent	Probability	Significance	Mitigation
Stripping of topsoil, sub soil and vegetation for the construction of the proposed structures	Without Mitigation	2 Small	2 Short Term	2 Local	5 Definite	30 Medium	Vegetation Removal is absolutely necessary for the proposed development. Significance of the impact can be reduced by: <ul style="list-style-type: none"> <li>• Minimizing space cleared by retaining vegetation.</li> <li>• Revegetation post-construction.</li> <li>• Transplanting species of conservation/biodiversity importance prior to commencement of construction activities.</li> </ul> Other mitigation measures are detailed in <b>Table 6</b> .
	With Mitigation	0 Negligible	1 Very Short Term	1 Site	5	10 Low	
Use and storing of potentially hazardous substances	Without Mitigation	4 Low	2 Short Term	2 Local	4 Highly Probable	24 Medium	<ul style="list-style-type: none"> <li>• Hazardous substances may only be stored on impermeable surfaces.</li> <li>• Vehicles and plant must be kept in good working order and any leaks observed must immediately be fixed.</li> <li>• Construction must keep low speeds on all access roads with speed limits of about 30km/hr to be implemented within the property.</li> <li>• Heavy plant/machinery must only be parked on designated parking areas within the site/property.</li> </ul>
	With Mitigation	2 Small	1 Very Short Term	1 Site	2 Improbable	8 Negligible	
The movement of vehicles and/or plant to and from the site	Without Mitigation	2 Small	2 Short Term	2 Local	3 Probable	18 Low	<ul style="list-style-type: none"> <li>• Site access must only be through designated routes.</li> <li>• Areas beyond the marked site area must be treated as no-go zones.</li> <li>• Regular waste removal from site storage area and disposal at landfill and other appropriate facilities.</li> </ul>
	With Mitigation	0 Negligible	1 Very Short Term	1 Site	2 Improbable	4 Negligible	
Waste Management	Without Mitigation	4 Low	2 Short Term	2 Local	3 Probable	24 Medium	<ul style="list-style-type: none"> <li>• Waste receptacles must be provided on the site for the storage of construction related waste. The</li> </ul>

	With Mitigation	0 Negligible	1 Very Short Term	1 Site	1 Very Improbable	2 Negligible	<p>waste receptacles must be wind and scavenger proof to avoid waste being strewn around the site, therefore they must be covered.</p> <ul style="list-style-type: none"> <li>The waste must be regularly disposed of and not left to accumulate on the site.</li> <li>The waste disposal site for both general and construction waste must be agreed on between the appointed Contractor and ECO.</li> </ul>
Impact and Risk		Magnitude	Duration	Extent	Probability	Significance	Mitigation
Nuisance: Noise and dust	Without mitigation	4 Low	2 Short Term	2 Local	3 Probable	24	<ul style="list-style-type: none"> <li>Where required, construction vehicles must be fitted with silencers/noise mufflers.</li> <li>Unnecessary noise from the site must be avoided during both the construction with no loud music to be permitted.</li> <li>Slow speeds must be adhered to on the gravel road by all construction vehicles as per recommended speed limits for such roads.</li> <li>Where necessary, exposed surfaces must be water sprayed to dampen the soil and reduce the dust liberation.</li> <li>The neighbouring properties must be informed of the intended date of the commencement of construction activities and should be informed if any stages of the construction will be particularly noisy.</li> </ul>
	With mitigation	2 Minor	1 Very Short Term	2 Local	2 Improbable	10 Low	
Socio-Economic	Without mitigation	2 Minor	2 Short Term	2 Local	5 Definite	30 Medium	<ul style="list-style-type: none"> <li>Terms of employment must be clearly explained to all workers.</li> <li>The Contractor and Developer must avoid making promises to the community especially those that will be hard to keep.</li> <li>The Contractor and Developer must consider giving some form of certification to workers for the skills they displayed during their employment period.</li> </ul>
	With mitigation	4 Low	4 Long Term	2 Local	5 Definite	50 High	



								<ul style="list-style-type: none"> <li>Local community members must be considered for employment at different levels based on possession of required skills/experience.</li> <li>Suppliers from local areas must be considered where possible for materials required during the construction phase.</li> </ul>
Post-Construction Phase								
Impact and Risk		Magnitude	Duration	Extent	Probability	Significance	Mitigation	
Decommissioning of site, camp and laydown area	Without Mitigation	4 Low	3 Medium Term	2 Local	3 Probable	27 Medium	<ul style="list-style-type: none"> <li>Rehabilitation must be conducted on site, by adequately backfilling topsoil and reinstating indigenous vegetation.</li> <li>Rehabilitation of the site must be monitored by an ECO.</li> <li>Stormwater management must be implemented as per the stormwater management plan created for the site.</li> <li>The site must be appropriately cleaned including cleaning of all spills observed.</li> <li>Hardened surfaces that need to be revegetated must be ripped and soil loosened prior to the planting of vegetation.</li> <li>Stockpiles must be cleared of IAPS and this must be checked before infill.</li> <li>No stockpiles must be left behind after the construction phase, but rather must backfill and/or removed from site.</li> </ul>	
	With Mitigation	2 Small	1 Very Short Term	1 Site	1 Very Improbable	4 Negligible		
Operation Phase								
Wastewater Management	Without Mitigation	6 Medium	3 Medium Term	2 Local	3 Probable	33 Medium	<ul style="list-style-type: none"> <li>The wastewater system must be monitored regularly to ensure that any faults are picked up. Should an upgrade of the system be required, it must be upgraded accordingly with all necessary permits obtained prior to the upgrade.</li> </ul>	
	With Mitigation	2 Small	1 Very Short Term	1 Site	2 Improbable	8 Negligible		

<b>Operation of the Chicken Houses</b>	Without Mitigation	6 Medium	3 Medium Term	2 Local	3 Probable	33 Medium	<ul style="list-style-type: none"> <li>The applicable guidelines for the management of the chicken houses and associated odour must be adhered to including guidelines on aeration and cleaning out of the chicken houses.</li> <li>The storage of mortalities on the property must not result in any odour or environmental contamination.</li> <li>Waste management must be in such that there is no accumulation of waste on the site. Should there be an increase in frequency of waste disposal required to accommodate the additional waste, this must be arranged by the Developer.</li> <li>The Developer must ensure that none of the operation activities negatively affect the surrounding environment including the wetland located in proximity of the site.</li> </ul>
	With Mitigation	2 Small	2 Short Term	2 Local	2 Improbable	12 Low	
<b>Socio-Economic</b>	Without Mitigation	4 Small	4 Long Term	2 Local	5 Definite	50 Medium	<ul style="list-style-type: none"> <li>People from the local community must be prioritize as much as possible with regards to employment opportunities.</li> </ul>
	With Mitigation	8 High	4 Long Term	2 Local Related	5 Definite	70 High	

### Impact Significance

Considering the table above, the average significance of potential impacts of the proposed development without mitigation is **Medium** and the average significance when considering implementation of mitigation measures is **Negligible**. It must be noted that in calculation of average significance, the socio-economic impacts for both the construction and operation phases were not considered as these are positive impacts that can be enhanced with recommended measures. Therefore consideration of these scores in the average would have most likely led to misleading scores. The proposed expansion is therefore not expected to have any significant impacts on the receiving environment with the implementation of mitigation measures.

Average Impact Significance Without Mitigation	23.67 Medium
Average Impact Significance with Mitigation	6.44 Negligible

All impacts identified can be mitigated against with no irreversible damage to be caused to the environment or community. There is also no anticipated loss of any replaceable resource. Therefore, the socio-economic benefits of the proposed development outweigh the potential environmental impacts.

- I. WHERE APPLICABLE, A SUMMARY OF THE FINDINGS AND IMPACT MANAGEMENT MEASURES IDENTIFIED IN ANY SPECIALISTS REPORT COMPLYING WITH APPENDIX 6 TO THESE REGULATIONS AND AN INDICATION AS TO HOW THESE FINDINGS AND RECOMMENDATION WERE INCLUDED IN THE FINAL REPORT; -

The following are the specialist studies that were recommended through the screening tool. Where applicable, reasons have been given for not undertaking certain specialist studies which had been recommended as per the pre-application screening tool and summary of findings for those undertaken are included.

**Aquatic Biodiversity Impact Assessment/Hydrology Assessment -Wetland Delineation (Appendix D1)**

A wetland delineation study was conducted in 2014 for the 500m radius of the property where the site is located. It was found that there are two (2) wetlands located within this distance one of which is located to the along the boundary of the property to the southwest direction of the site. This wetland was found to be an artificial wetland with hydric soils. A more natural valley head seep wetland is located in the same direction further away from the site but still within the 500m radius.



**Figure 7:** Image from wetland delineation study with artificial wetland in green and natural wetland in blue.

Recommendations made in this report were with regards to impact mitigation measures in respect of the activities that were going to be undertaken at the time.

These include:

- Although not a significant impact, the semi-permanent wetland zones marked as the *J. lomatophyllis* and *C. latifolius* marshes should be excluded from development and maintained as part of the water filtration system of the site below the dam walls.
- Access to the construction area of the dams should not cross the *J. lomatophyllis* and *C. latifolius* marshes.
- The dam construction areas and access/haul roads must be clearly demarcated prior to construction commencing to the satisfaction of the appointed Environmental Control Officer (ECO). The no-go area for construction vehicles is a 20m buffer to the *J. lomatophyllis* marsh.

There are no rivers or other watercourses located in proximity of the site and therefore, no other studies were conducted.

#### **Archaeological and Cultural Heritage Impact Assessment and Palaeontology Impact Assessment**

The site does not contain any archaeological/Heritage Features and therefore no heritage/archaeological assessment was conducted.

#### **Terrestrial Biodiversity Impact Assessment/Plant Species Assessment/Animal Species Assessment**

A terrestrial biodiversity/vegetation assessment would have been conducted in the initial assessment. At this stage, the nature of the site does not warrant a biodiversity assessment. The property has already been disturbed with the development of the existing chicken houses and associated structures. The vegetation where the proposed additional chicken houses will be located consists of "lawn" grass with few trees including Erythrina, Aloe and Pine Trees.

#### **Feasibility / Socio-Economic Impact Assessment**

The proposed structures are an expansion of an existing operational Farm. Since its establishment, Makhalempongo Chicken Farm has been able to operate successfully and hence the current need for an expansion. The proposed expansion is at a request for increased supply from Rainbow Chicken whom Makhalempongo Chicken Supplies with live chickens. Therefore the proposed expansion is feasible and financially sustainable with no expected significant social impacts except for the employment opportunities to be created during the construction and operation phase which are positive impacts.

The feasibility of the expansion has been assessed by both Makhalempongo Financial Director and Rainbow Chicken's Agricultural Engineering Manager and the Financial Department, and found to be desirable.

#### **Stormwater Management Plan- Appendix 2**

According to the Stormwater Management Assessment done, potential impacts of the proposed development in absence of stormwater management include:

- Hydrologic regime alterations – increase in discharge rate (volume per unit time) due to increases in flow velocities along existing engineered channels and conduits;
- Hydraulic regime alterations – increase in discharge volume due to decreases in depression storage and infiltration;

- Thermal – increased water temperatures of storm flows at the pipe outfalls, due to runoff from discharge from attenuation ponds, could impact temperature sensitive biota; and
- Other – and attenuation of trash and debris could result in loss of visual amenity and possibly impact sensitive biota.

A stormwater management plan has therefore been compiled to mitigate the adverse effects of development on downstream receiving waters and/or built environment through effective and sustainable runoff, sediment and pollutant control measures during construction of the civil works, the ensuring construction of the broiler houses and finally upon completion of all construction.

The stormwater management measures recommended include:

- Attenuation structures, storage ponds or grassed swales to be constructed prior to construction of the two additional broiler houses and roundabout or once pipe systems are functional in this catchment.
- Site clearance must be carried out with due care and attention to the effect, whether short-term or long-term, that this removal will have on erosion potential.
- Precautionary filter barriers such as silt fencing, straw bale barriers must be installed on the site at all times to contain soil erosion and prevent any eroded material from being transported.
- Where embankments have to be formed, stabilization and erosion control measures must be implemented immediately.
- Trenching for services shall be programmed to commence immediately preceding installation of the services and said trenches shall be backfilled and compacted, to a density at least equivalent to the density of the adjacent in-situ soils, immediately thereafter. Where it is unavoidable that trenches remain open and unattended temporary check dams shall be constructed in the invert of the trench.
- Landscaping and re-vegetation of areas not occupied by impervious surfaces shall be programmed to commence immediately after civil works have been completed, or have reached a stage where newly established ground cover is not at risk from construction activities.
- The discharge from the roof area and hardened areas will be collected in a piped network and directed to the attenuation tank or ponds as indicated on the site plan. Annexure A. There is no access to municipal stormwater in the vicinity of the site therefore discharge will be attenuated by means of a soak away or retention pond.
- The earthworks operation must be carried out by a suitably qualified contractor.
- Measures must be introduced during the construction phase which will mitigate environmental impacts.

### **Geotechnical Assessment – Appendix D3**

A site assessment was conducted for the geotechnical assessment with regards to the proposed new structures. This site assessment was conducted on the 25 of June 2022. In summary the findings were in support of the Geotechnical Assessment initially done by Terratest titled “Killarney Broiler Farm Geotechnical Report, 41276”. It was concluded that from a geotechnical perspective, the proposed two (2) broiler houses are feasible provided that the recommendations in the initially conducted geotechnical assessment are followed.

All outcomes from the specialist assessments that have been conducted were incorporated into draft BAR and EMPr.

## J. AN ENVIRONMENTAL STATEMENT WHICH CONTAINS-

### *(i) A summary of the key findings of the environmental impact assessment;*

There are some negative environmental impacts which can be associated with the proposed development. However, with the implementation of recommended mitigation measures, these impacts are unlikely to have high significance.

No plant or animal species of conservation concern will be affected by the proposed construction of the broiler houses. Therefore the proposed development will not affect municipal or provincial biodiversity goals.

In terms of negative impacts, operation phase impacts linked with management of the chicken houses and the wastewater management have the highest significance. However, it is unlikely that these impacts will occur with implementation of mitigation measures and considering that the farm has thus far operated successfully.

### *(ii) A map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffer*

There are no high priority/significance area within the property. The only sensitivities are the wetlands identified in proximity of the site. However, these were identified to have low significance at the time of the assessment which was said to have most likely resulted from surrounding land uses.

### *(iii) A summary of the positive and negative impacts and risks of the proposed activity and identified alternatives*

#### *Positive implications of the activity*

There will be employment opportunities created during both the construction and operation phase of the proposed development. The number of employment opportunities are indicated below.

- New skilled employment opportunities created in the construction phase of the project: 7
- New skilled employment opportunities created in the operational phase of the project: 2
- New un-skilled employment opportunities created in the construction phase of the project: 20
- New un-skilled employment opportunities created in the operational phase of the project: 2

#### *Negative implications of the activity*

Potential negative impacts include:

- Removal of vegetation which will have a low significance due to the nature of the site including vegetation on the site.

- Noise and Dust from construction site and construction vehicles are also expected to have low significance with implementation of mitigation measures.
- Health and Safety Impacts: Although these impacts are unlikely to occur, precaution and preventative measures are very important as any incident that occurs could be life threatening.
- During the operation phase, the main negative impacts are wastewater management, waste management, odour and waste management related impacts.

**K. BASED ON THE ASSESSMENT, AND WHERE APPLICABLE, IMPACT MANAGEMENT MEASURES FROM SPECIALISTS REPORTS, THE RECORDING OF THE PROPOSED IMPACT MANAGEMENT OUTCOMES FOR THE DEVELOPMENT FOR INCLUSION IN THE EMPr**

- The attenuation structures, storage ponds or grassed swales shall be constructed prior to construction of the two additional broiler houses and roundabout or once pipe systems are functional in this catchment.
- The removal of vegetation must be done carefully. This must including giving attention as to whether this removal of vegetation will have any impact on the erosion potential on cleared area.
- All vehicles travel to/from the site must adhere to speed limits on all roads for safety and dust minimization.
- The wastewater management system must be monitored to ensure that it is able to accommodate the additional wastewater and that any faults can be quickly picked up and fixed. If an upgrade to the system is necessary, it must be implemented with the necessary permits obtained from the relevant authorities.
- An ECO must be appointed to oversee that the conditions stipulated in the Environmental Authorisation/EMPr are carried out. The ECO appointment must occur in due course to allow for conduction of pre-construction activities such as notification of authorities of the intended commencement of construction, the training of workers and relocation of indigenous trees if any need to be relocated. Some of the activities to be done/monitored by the ECO include the following:
  - Pre-construction environmental induction for all construction staff on site must be conducted.
  - Dust suppression – Agreed practical methods confirmed by the Contractor;
  - All water use on site must be recorded throughout the lifespan of the project.
  - Demarcation of no-go areas (surrounding properties and highly sensitive areas);
  - Expected conduct of staff on site – not harvesting vegetation, no usage of fire on site, reporting incidents.
  - Objectives and conditions of the approved EA, EMPr, Method Statements.
  - Spill Protocol (small and large spills); and
  - Emergency Numbers (ECO, SAPS etc.).
- All construction vehicles should adhere to clearly defined and demarcated roads. No ad hoc roads may be constructed without prior permission of the ECO and Engineers.
- Dust suppression and erosion management should be an integral component of the construction process.
- No dumping or burying of building waste or spoil material from the development should take place on areas other than a licensed landfill site.
- All hazardous materials should be stored appropriately to prevent contamination of the site. Any accidental chemical, fuel and oil spills that occur at the project site should be cleaned up appropriately as related to the nature of the spill.

- If trenches need to be dug for drainage or other purposes, these should not be left open for extended periods of time as fauna may fall in and become trapped in them. Trenches which are exposed should contain soil ramps allowing fauna to escape the trench.
- Control measures must be in place during construction and the operation phases of the development to prevent the proliferation of IAPS and noxious weeds on site.

**L. ANY ASPECTS WHICH WERE CONDITIONAL TO THE FINDINGS OF THE ASSESSMENT EITHER BY THE EAP OR SPECIALIST WHICH ARE TO BE INCLUDED AS CONDITIONS OF AUTHORISATION**

- The submitted stormwater management plan once approved must be implemented.
- The environmental impacts that could have significant impacts to the receiving environment are closely linked with the Waste Management on site during the operational phase especially for mortality birds and manure. Therefore, strict conditions must be included in the conditions of the EA for waste management including frequency of waste disposal.
- Appropriate waste management methods are identified and implemented to mitigate against any pollution or health hazards.
- All exterior lighting is shielded/ subdued and directed towards the development. Fluorescent and mercury vapour lighting must be avoided. Sodium vapour (yellow) lights should be used whenever possible. Unshielded and harsh lights may impact negatively on both nocturnal and crepuscular animals

**M. A DESCRIPTION OF ANY ASSUMPTIONS, UNCERTAINTIES, AND GAPS IN KNOWLEDGE WHICH RELATE TO THE ASSESSMENT AND MITIGATION MEASURES PROPOSED**

The impact assessment has been conducted with the consideration of the project scope as per description given by the Developer. If the project is altered in any way, impacts that actually do occur on or around the site may be of higher significance.

The EAP's view that the proposed developments socio-economic impacts outweigh negative potential environmental impacts is based on the assumption that conditions of the EA, should one be issued, and mitigation measures in the EMP will be adhered to which will reduce potential negative impacts to insignificant levels.

**N. A REASONED OPINION AS TO WHETHER THE PROPOSED ACTIVITY SHOULD OR SHOULD NOT BE AUTHORISED, AND IF THE OPINION IS THAT IT SHOULD BE AUTHORISED, ANY CONDITIONS THAT SHOULD BE MADE IN RESPECT OF THAT AUTHORISATION;**

***Concluding Remarks including Preferred Project Location***

There are no alternative sites for the proposed development since the mentioned site is the only one that is available to the developer. However; from an environmental perspective, this is the best option for location of the development as the site is already disturbed with existing



structures/chicken houses on the property. As describe throughout the report, the site does not consist of any plant or animal species of conservation concern.

***Opinion as to Whether the Proposed Activity Should Be Authorized***

The proposed development will have significant socio-economic benefit for the with regards to the employment opportunities to be created which will also benefit members of the local community. The average significance of impacts of the proposed development with implementation of mitigation is negligible. Therefore, although some negative impacts may occur during both the construction and operation phase of the development, these will not affect the biodiversity or ecological integrity of the area where the project is located.

Therefore, it is the opinion of the EA that the proposed expansion and therefore Amendment of EA, should be approved.

***Condition to be Made Part of the EA***

- All waste produced during the construction phase must be disposed of at the nearest landfill site and proof of safe waste disposal must be kept on site.
- The appointed ECO must be given the opportunity to monitor and/or approve vegetation removal on the site.
- All recommendations made by the specialists must be part of the conditions of the EA.
- The EMPr will form an integral part of the EA.

**O. WHERE APPLICABLE, DETAILS OF ANY FINANCIAL PROVISIONS FOR THE REHABILITATION, CLOSURE, AND ONGOING POST DECOMMISSIONING MANAGEMENT OF NEGATIVE ENVIRONMENTAL IMPACTS**

The applicant must make provision for rehabilitation in the form of revegetation and landscaping on project completion. This must take into account any actions which may be necessary for the ongoing eradication of alien invasive plant species.

Financial provision for the appointment of the ECO must take into account that the ECO needs to be appointed well before the commencement of construction activities including site clearance for the conduction of the pre-construction activities such as notification of the Competent Authority of the intended commencement of construction, monitoring undertaking of tree transplanting and vegetation removal and worker environmental induction.

**P. ANY SPECIFIC INFORMATION THAT MAY BE REQUIRED BY THE COMPETENT AUTHORITY**

None identified at this point.

**Q. ANY OTHER MATTERS REQUIRED IN TERMS OF SECTION 24 (4) (a) AND (b) OF THE ACT**

None identified at this point.

**THE ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT** is attached as **Appendix E**

**AN UNDERTAKING UNDER OATH OR AFFIRMATION BY THE EAP IN RELATION TO;**

- (i) The correctness of the information provided in the reports at the time of compilation;
- (ii) The inclusion of comments and inputs from stakeholders and I&APs;
- (iii) The inclusion of inputs and recommendations from the specialist reports where relevant; and
- (iv) Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties.

I,

confirm that the information provided in the report is correct;

The inclusion of comments and inputs from stakeholders and I&APs is correct;

The inclusion of inputs and recommendations from the specialist reports is correct;

Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties.

Commissioner of oaths:

Commissioner:

Place:

Date: