DRAFT BASIC ASSESSMENT REPORT:

For the propose chicken egg laying poultry farm on Holding 84 Hallgate Agricultural Holdings, Lesedi Local Municipality, Gauteng

Prepared by:
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Prepared for:
Phola Poultry (Pty) Ltd

MARCH 2020

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Document control

Compiled by:

Siphamandla Mzolo
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On behalf of
ESGiA (Pty) ltd

Client:

Mr. L.M. Sikwane
Phola Poultry (Pty) Ltd

Document information:

Report No.	Revision	Date	Compiled by	Checked by
1901-r01-00	Draft BAR	10 March 2013	Siphamandla Mzolo Anthony Goslar	Anthony Goslar

Environmental Assessment Practitioner

Siphamandla Mzolo
Siphamandla Mzolo has over 6 years' experience in the field of Environmental Assessment and Management, Mine Environmental Management, Rehabilitation and Closure. His involvement has ranged from preparing and compiling of Basic Assessment Reports, Environmental Management Plans, Environmental Audits, Environmental Performance Assessment reports, Rehabilitation Plans, Closure Plans and Carbon Accounting reports. He is well familiar with the Implementation and management of an Environmental Management System in terms of ISO14001. He developed a keen interest in environmental performance improvement strategies and alternative technologies. At this stage he is transforming assets in the energy, manufacturing and resources space. This involves the transformation of assets that have reached their end of use to different sustainable economic ventures through a design thinking approach. Creating and delivering solutions that impact and contribute to sustainable development, adding value and making a difference through effective stakeholder engagement.
He currently holds the following qualifications:

- Bachelor of Sciences (Hons) Environmental Management – University of South Africa
- Bachelor of Sciences Geology and Environmental Management - University of Johannesburg
- Certificate of Environmental Law – North West University

Anthony Goslar
Anthony Goslar began his career as an environmental consultant at EIMS (Pty) Ltd followed by Marsh (Pty) Ltd where his areas of focus were environmental impact assessments, strategic and policy tools, and geographical information system. He later joined Murray & Roberts where he was seconded to Gautrain as an environmental manager and was responsible for a variety of environmental functions for the civils contractor (Bombela CJV) on the project. He later left Murray & Roberts and begun providing contracting/consulting services at Goslar Environmental cc which later converted to ESGiA (Pty) Ltd, which is his current employer. He has over 15 years' experience in the environmental assessment and management field, GIS and information systems.

He currently holds the following qualifications:

- MCom Development Finance - *University of Cape Town, Graduate School of Business*
- MSc Environmental Studies – *University of the Witwatersrand*
- BA (Hons) Geography & Environmental Management – *University of Johannesburg*

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

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

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

Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

The draft BAR has been submitted to GDARD together with the GDARD application form in order to register the project.

Is a closure plan applicable for this application and has it been included in this report? No

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

It is not anticipated that the proposed project will be closed. In the case that there is a need to close the development, a closure plan should be developed at the time of the closure. The closure would be straightforward and involve removing the chicken houses and other infrastructure but there is no waste or residue which will remain on site.

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

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

If no, state reasons for not attaching the list.

Please refer to Appendix E for a copy of the Interested and Affected Parties (I&APs) database.

Note from ESGiA: The list of all state departments and the competent authority including contact details and contact person have been included as Appendix E.

Have State Departments including the competent authority commented? No

If no, why?

The draft BAR has been submitted to GDARD together with the GDARD application form in order to register the project. The draft BAR will go out for public review for the specified review period. All state departments will receive the draft report. Appendix I contains a list of state departments involved.

SECTION A : ACTIVITY INFORMATION

A.1 PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

Poultry farm on Holding 84 Hallgate Agricultural Holdings

Introduction

Phola Poultry (Pty) Ltd intends to build and operate an Egg Laying Facilities in Hallgate Agricultural Holdings (AH) on the East Rand in Gauteng. The owner of the company has been successfully rearing egg laying chickens on a smaller scale for some time. Based on this success, the proposed development site in was purchased and the owner has been self-funding the development of this farm.

Hallgate AH was once a larger farm which was divided into agricultural holdings. The holdings are typically 1-2 ha in extent and are used for residential and small to medium scale agriculture. Many residents grow crops and keep small livestock such as chickens, goats and sheep. The area has a grid road system with holdings on either side. Many of the holdings have fences and/or walls. The result is a neighbourhood effect where habitats are fragmented by the various holding land uses and civil infrastructure. The walls and fences between sites, put in place for security and to keep livestock from roaming, impede the movement of other wildlife.

The proposed development site itself is currently an agriculture holding with a small number of sheep on site (less than 10 sheep). The site has a borehole, small area under cultivation, toilet, storeroom, bathroom and dwelling.

Chicken Housing Units

layout has been proposed to maximise the productivity of the site. The development will consist of:

- 4x layer houses with a footprint of 864m^2 (72m x 12m each)
- 1x layer house with a footprint of 600m^2 (60m x 10m)
- 1x packaging and storeroom with a footprint of 240m^2 (8m x 30m)
- 2x office, ablution and kitchen with a combined footprint of 67.5m^2 (4.5m x 15m)
- An entrance with a paved area of approximately 2,000 m^2
- 1x 20m^2 waste storage area.

The total development footprint is approximately 3771.5 m^2. The layer houses will be 5 meters apart and a building line of 5 meters will be observed from the adjacent holdings, and 20 meters from the street will be observed.

The layer house will be such that they protect layers from direct sunlight, excessive wind, rain, extreme heat or cold, wild birds and theft. Housing units will consist of concrete floors, to ensure adequate cleaning as they will be impermeable to water. Water for cleaning and drinking will be sourced from the existing onsite borehole. The application for use of the borehole water is in the process of being lodged with the Department of Water and Sanitation (DWS). The chicken layer farming activities generate waste comprised of bird excrement, spilled feed, bird feathers, mortalities and used chicken bedding (wood shavings, sawdust and peanut hulls). The applicant plans to distribute the chicken waste as fertilizer to nearby farmers, as well as sell a portion of the waste. Broiler chicken waste will be collected every cycle (6 weeks) when chicken houses are cleaned. Should there be no demand for the waste, the waste will be disposed of at a licensed facility. A waste management license will not be required as the amount of waste produced is below the recommended threshold stipulated in the National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA).

The additional infrastructure to support this will comprise the following:

Additional internal Infrastructure:

- 1x Egg collection System

- 1x Feeding System
- 1x Watering system (Nipple lines connected to a bore hole or reservoir)

Feeding system

Feeding systems will be required to easily distribute feed and water to the birds. The feeding systems can be automatic or manual. The chicken feed will be stored in silos, an automated feeding system is preferred.

Ventilation system

Ventilation will be important to ensure that air quality and temperature is appropriate for the layers. The chicken houses will be well ventilated to ensure air circulation and to minimize odours.

Waste Management

Chicken waste (manure) will be collected and dried in an impervious container and stored in 50kg bags at the back of the chicken house for collection by end users. There is a high demand for this manure, it will therefore be sold for use in vegetable production facilities.

Agricultural support services are in the area such as a chicken abattoir located approximately 2 roads down from the site. There are other chicken broiler houses in close vicinity, setting precedent for this type of activity. Residents keep chickens on the small holdings for subsistence.

The area is earmarked for small to medium scale agriculture in the relevant local spatial development and economic plans. The proposed use of the site is in line with this planned agricultural activity set forth by the local government.

Select the appropriate box

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

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

YES [redacted]

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

The application also requires authorization from the Department of Water Affairs (DWS) in terms of a Water Use License.

If yes, have you applied for the authorisation(s)?	[redacted] NO
If yes, have you received approval(s)? (attach in appropriate appendix)	[redacted] NO

Note from ESGiA: The proposed development will apply for assistance from the Department of Agriculture as an emerging farmer. The initial WULA application will be under a general authorisation. Once the Department of Agriculture indicates that they will support the initiative, then a WULA for the increased volumes will be sought, in accordance with the number of chickens. The maximum number will be according to this application which is 100,000.

The borehole registration is currently being checked with the DWA and the application for a general authorization will take place within the review period.

A.2 APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998

National Water Act, 1998 (Act No. 36 of 1998) as amended	National	26 August 1998
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	National & Provincial	28 April 1999
National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004)	National & Provincial	7 June 2004
National Environmental Management Waste Act, 2009 (Act No. 59 of 2008)	National & Provincial	10 March 2009
Environmental Impact Assessment Regulations, 2014	National & Provincial	4 December 2014
National Development Plan: A Vision for 2030	National	19 February 2013
Department of Environmental Affairs Guidelines on Public Participation	National & Provincial	10 October 2012
Spatial Planning Land Use Management Act, 2013 (Act No. 16 of 2013)	National	6 August 2013
Lesedi nodal & corridor development study	Local	July 2009
Review of the spatial development framework for The Lesedi Local Municipality: Spatial Development Framework: January 2016	Local	January 2016
Lesedi Local Municipality: Local Economic Development Strategy: 2014	Local	2014

Description of compliance with the relevant legislation, policy or guideline:	
Legislation, policy of guideline	Description of compliance
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	The Environmental Authorisation for the proposed development is lawfully applied for in terms of the EIA Regulations, 2014, promulgated under NEMA. The conditions on the Environmental Authorisation, if approved, will be adhered to.
National Water Act, 1998 (Act No. 36 of 1998) as amended	Pertinent legislation published under this act will be adhered to as well as a Water Use License Application.
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	Submitted the proposed project to the South African Heritage Resources Agency (SAHRA) online platform South African Heritage Resources Information System (SAHRIS)
National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004)	The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) as amended (NEMBA) including all the pertinent legislation published in terms of this act was considered in undertaking this Basic Assessment process. This included the determination and assessment of the fauna and flora prevailing in the proposed project and the handling thereof in terms of NEMBA.
National Environmental Management Waste Act, 2009 (Act No. 59 of 2008)	The Waste Management License will be undertaken in respect of the National Environmental Management: Waste Act (Regulations published in GNR 921 on the 29 November 2013 Government Gazette No 37083) as amended NEM:WA. Pieces of legislation published under this act will be adhered to.
Environmental Impact Assessment Regulations, 2014	All the triggered activities as per National Environmental Management Act (Act No. 107 of 1998) have been listed below.
National Development Plan: A Vision for 2030	The South African Government through the Presidency has published a National Development Plan. The Plan aims to eliminate poverty and reduce inequality by 2030. The Plan has the target of developing people's capabilities to be to improve their lives through education and skills development,

	health care, better access to public transport, jobs, social protection, rising income, housing and basic services, and safety. It proposes the following strategies to address the above goals: 1. Creating jobs and improving livelihoods; 2. Expanding infrastructure; 3. Transition to a low-carbon economy; 4. Transforming urban and rural spaces; 5. Improving education and training; 6. Providing quality health care; 7. Fighting corruption and enhancing accountability; 8. Transforming society and uniting the nation.
Lesedi nodal & corridor development study	Nodes of development have been considered and are carried over into the Spatial Development Framework listed below.
Review of the spatial development framework for The Lesedi Local Municipality: Spatial Development Framework: January 2016	The spatial development framework is important as it contains the framework for future development in the local municipality. Hallgate AH is earmarked as an agricultural area which is line with the proposed development.
Lesedi Local Municipality: Local Economic Development Strategy: 2014	The strategy was consulted to verify whether the proposed development was in line with the goals of local economic development for this municipality.

In terms of the NEMA EIA Regulations published in GNR 327 as Amended 07 April 2017 Government Gazette Number 40772, 2 a Basic Assessment (BA) process is required as the project applies to the following listed activities (detailed in Table 1 below).

Relevant Notice	Listed activity	Description
GN. R 327 as Amended 7 April 2017	5	The development and related operation of facilities or infrastructure for the concentration of— (ii) more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days; or (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

A.3 ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

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

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

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

The proposed alternative was bought by the applicant for the proposed development. The applicant had been performing the proposed activity on a small scale at another site (one which did not trigger any listed activities), and now that the proposed activity is considered to be commercially viable, the applicant is seeking to increase the size of their operation at this new locality.

The site is zoned for the agriculture and has supporting agricultural infrastructure in the area. The site has a borehole with suitable yields for the water supply. The roads are in good condition and the site is close to main roads for easy distribution of the product to their customers.

No sensitive environmental features have been identified on site and therefore layout alternatives weren't necessary.

There are no additional location alternatives as this is the only site available to the applicant. The applicant is an emerging farmer.

Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	Description
1	Proposal	The proposal is for the construction of 5x egg layer houses and supporting facilities to accommodate up to 100,000 chickens. The site for development is 1.7ha and it is anticipated that the facilities will cover an area of approximately 4,000 m2.
2	Alternative 2	**Energy efficiency alternative** The following energy efficiency alternatives usages are proposed for the development and could be implemented: • Use of low voltage or compact fluorescent lights. • Install large north-facing windows in staff houses where possible. • Use of solar water heating system in staff houses A discussion is provided below on the alternatives considered and adopted.

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

Site layout and Location: Alternatives

The applicant is an emerging farmer who purchased the property using proceeds from a small egg laying facility they have located in Dunnotar, Springs. The applicant is applying for this as a part of the emerging farmers programme. The Department of Agriculture visited the site and advised the proponent of the number of egg laying chickens the site should be suitable for and how the department will support their proposed development.

This property is therefore the only land that the applicant has available to undertake the proposed activities and it would not be economically feasible for the business to find and or purchase new property. No property alternatives have therefore been investigated in the Basic Assessment.

The surrounding properties are agricultural holdings of similar size and composition.

Activity Alternative

In their process of due diligence and market feasibility, Phola Poultry determined to undertake a business that could function at a small to medium scale focusing on producing high quality produce but with the ability and intension to grow in the future. Chicken egg layers are growing quickly in South Africa with an increase in production of approximately 6% per annum.

The site is an agricultural holding and zoned for this use. Alternative activities for this site are residential use, like those of surrounding properties, or an alternative type of agriculture. The small holding is however quite small and therefore is suitable for intensive agriculture. Based on the zoning, market conditions, locality of the site and envisaged development information from SANBI, the most productive land use is for animal farming such as the proposed activity.

Design or layout alternatives

The proposed design and layout will be placed on the property in means which will minimise the impact it will have on the environment, and the neighbours. The facilities will cover most of the site. The layout of the chicken laying houses is focused on the biosecurity measure, which allows for more effective management of chicken laying production as it reduce the risk of chicken catching diseases. These allow for the most efficient compliance to chicken welfare and egg-laying output.

Technology and Design: Alternatives

The technology chosen has been done in association with the Department of Agriculture. The pre-development research which has been conducted on this project has involved the South African Poultry Association, the Department of Agriculture, action market research with a pilot site in Dunnottar and local market research.

The site will initially make use of A-frame chicken house layers. As the site grows, and production of chickens ramps up, H-frame layer houses will be used. This will be done in line with accepted standards according to The South African Poultry Association, which is important for several reasons:

- It keeps chicken welfare in mind
- It helps ensure that the operation meets sanitary and health standards
- It helps run an efficient egg laying operation ensuring that eggs are turned over and distributed regularly

Management Alternatives

Applying the best practice in growing chickens will be adopted by Phola Poultry Farm. The proposed design and technology include the structure of the chicken houses will be made of slates and concrete floors, it will be cleaned out only at the end of every six week cycle where the combination of saw dust, will be used as bedding, and manure will be sold to local farmers as fertilizer.

The environment within the chicken house will be completely controlled powered by a generator or boilers, the ventilation will be natural with the drawing or closing of side curtain of the chicken houses to control airflow.

Energy efficiency alternative

The following energy efficiency alternatives usages are proposed for the development and could be implemented:

- Use of low voltage or compact fluorescent lights.
- Install large north-facing windows in staff houses where possible.
- Use of solar water heating system in staff houses

A.4 PHYSICAL SIZE OF THE ACTIVITY

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

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	4000 m^2
Alternatives:	
Alternative 1 (if any)	[redacted]
Alternative 2 (if any)	
	Ha/ m^2

or, for linear activities:

	Length of the activity:
Proposed activity	N/A
Alternatives:	
Alternative 1 (if any)	[redacted]
Alternative 2 (if any)	
	m/km

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

	Size of the site/servitude:
Proposed activity	1.7 ha
Alternatives:	
Alternative 1 (if any)	[redacted]
Alternative 2 (if any)	
	Ha/m^2

A.5 SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?	YES
If NO, what is the distance over which a new access road will be built	N/A

Describe the type of access road planned:

There is existing access from the municipal road system.

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

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	YES
If NO, what is the distance over which a new access road will be built	N/A

Describe the type of access road planned:

N/A

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

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?	YES
If NO, what is the distance over which a new access road will be built	N/A

Describe the type of access road planned:

N/A

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

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

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

(only complete when applicable)

A.6 LAYOUT OR ROUTE PLAN

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

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

Note from ESGiA: A Locality map depicting the current and proposed Chicken egg-laying facility on the farm has been included as Appendix A.

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

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

A.7 SITE PHOTOGRAPHS

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

Note from ESGiA: Site photographs in the eight major compass directions have been included as Appendix B, as well as other selected photographs.

A.8 FACILITY ILLUSTRATION

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

Note from ESGiA: An illustration of the structures for the proposed activities on site can be found in Appendix A.

SECTION B : DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

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

Instructions for completion of Section B for location/route alternatives

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

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

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

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route	N/A	(complete only when appropriate for above)
Section B – Location/route Alternative No.	N/A	(complete only when appropriate for above)

B.1 PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	Holding 84 of Hallgate Agricultural Holdings, Lesedi Local Municipality, Gauteng

B.2 ACTIVITY POSITION

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

Alternative:	**Latitude (S):**	**Longitude (E):**
	-26.425016 º	28.524133º

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
• Starting point of the activity		
• Middle point of the activity		
• End point of the activity		

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

Addendum of route alternatives attached | N/A

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**0**	**I**	**R**	**0**	**2**	**9**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**4**	**0**	**0**	**0**	**0**	**0**
ALT. 1																					
ALT. 2																					
etc.																					

T0IR02940000008400000

B.3 GRADIENT OF THE SITE

Indicate the general gradient of the site.

Flat	1:50 – 1:20					

B.4 LOCATION IN LANDSCAPE

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

				Plain		

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

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

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

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

b) are any caves located on the site(s) NO
If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)
Latitude (S): **Longitude (E):**

c) are any caves located within a 300m radius of the site(s) NO
If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)
Latitude (S): **Longitude (E):**

d) are any sinkholes located within a 300m radius of the site(s) NO
If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)
Latitude (S): **Longitude (E):**

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

B.6 AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)?	YES / NO

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

Note from ESGIA: The proposed activity is directly in line with realizing agricultural potential. The following is an exert from the Lesedi 2018/2019 IDP pg 68 "*Lesedi is a very important resource to Gauteng in terms of food production, and this fact should be taken into consideration in the future planning of the area. The performance of the agricultural sector is very dependent on climatic conditions and may fluctuate from year to year. The agricultural sector does however present opportunities for downstream economic activities and job creation in terms of further processing of agricultural produce (e.g. Karan Beef, Eskort, and Mancho Ranch all of which create opportunities within Lesedi). 60% of the area is agricultural (Gauteng Agriculture Development Strategy). The challenges to Land Reform centre around funding, proper planning (Area Based Plans), access to information, absence of rural development strategy to counter urban sprawl, pricing of properties, alignment of food security and small farm development initiatives to economic development*."

B.7 GROUNDCOVER

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

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

			Veld dominated by alien species % = 87	
	Cultivated land % = 5	Paved surface (hard landscaping) % = 1	Building or other structure % = 2	Bare soil % = 5

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

Are there any rare or endangered flora or fauna species (including red list species) present on the site	NO

If YES, specify and explain:

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	NO

If YES, specify and explain:

An ecological specialist performed a biodiversity screening study.

Are there any special or sensitive habitats or other natural features present on the site?	NO

If YES, specify and explain:

Was a specialist consulted to assist with completing this section	YES

If yes complete specialist details

Name of the specialist:	**The Biodiversity Company** Contributing Authors: 1. Martinus Erasmus 2. Dr. Lindi Steyn 3. Andrew Husted		
Qualification(s) of the specialist:	1. B.Tech Nature Conservation 2. PhD in Biodiversity and Conservation 3. Pr Sci Nat		
Postal address:			
Postal code:			
Telephone:		Cell:	+27 81 319 1225
E-mail:	info@thebiodiversitycompany.com	Fax:	+27 86 527 1965

Are any further specialist studies recommended by the specialist? NO

If YES, specify:	N/A
If YES, is such a report(s) attached?	[redacted]
If YES list the specialist reports attached below	
N/A	

Signature of specialist:	See note below	Date:	

Note from ESGiA: Please see the Specialist Declaration as per Appendix 6 of the NEMA EIA Regulations 2014) on Page ii of the Biodiversity Screening Report, attached as Appendix G.

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated.

B.8 LAND USE CHARACTER OF SURROUNDING AREA

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

1. Vacant land	2. River, stream, wetland	3. Natureconservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial[AN]	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport[N]	23. Train station or shunting yard[N]	24. Railway line[N]	25. Major road (4 lanes or more)[N]
26. Sewage treatment plant[A]	27. Landfill or waste treatment site[A]	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33.Spoil heap or slimes dam[A]	34. Small Holdings	
Other land uses (describe):				

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

NORTH

	34, 7	**34**	**34**	**34**	**34**
	34	**34**	**34**	**34**	**34, 12, 14**
WEST	**34**	**34**		**34**	**34**
	34	**34**	**34, 14**	**34**	**34, 12, 14**
	34	**34**	**34, 14, 15**	**34**	**34**

EAST

SOUTH

Note from ESGIA: There are several smaller activities such as car scrapping without any signage and not obvious from the street level. These can be observed through satellite remote sensing.

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

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

Have specialist reports been attached	NO
If yes indicate the type of reports below	

Appendix G1: biodiversity desktop screening for portion 84: hallgate agricultural holdings site. Note from ESGIA: The specialists conducted a site visit.
Appendix G2: Phase 1 Cultural Heritage Impact Assessment: the proposed development of a poultry farm on Portion 84 of Hallgate Agricultural Holdings, Lesedi Local Municipality, Sedibeng, Gauteng Province

B.9 SOCIO-ECONOMIC CONTEXT

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

Phola Poultry is in Ward 12 in the Lesedi Local Municipality (LLM), Sedibeng District Municipality, Gauteng. Ward 12 consists of all rural areas along the eastern and southern parts of the Lesedi Municipality. According to the Census (2011), approximately 25.1 % of the total population of LLM resides in rural areas (Lesedi Integrated Development Plan 2017 – 2018). As stated in the Lesedi Spatial Development Framework Review 2015, the Municipality is regarded as primarily rural, with Vischkuil/Endicott accounting for a smaller settlement located east of Springs.

The District is reported to portray high levels of unemployment (30%) and poverty (64%), and the Lesedi Municipality accounting for a 29.5% unemployment rate among the economically active sector of the community. Commercial agriculture is regarded as the biggest land use within the Municipality, which includes small holding agricultural land that takes up a total area of approximately 6473 ha of the Municipality. Agriculture is a significant sector in terms of creating employment within the Municipality, with the major economic activity of ward 12 comprising of commercial agriculture and dry land crop cultivation. There are concerns that the sector pays low wages paid due to low levels of skilled farm workers.

Overall information provided in the SDF indicates that potential opportunities for SMME's using agriculture and agro-processing are high, considering that the Municipality and District is faced with a high unemployment rate. This would provide some form of relief to households that are at risk of hunger and marginalization. The Gauteng Province is the largest producer of eggs in South Africa, Phola Poultry has thus identified an opportunity as the proposed chicken layer facility will add great socio-economic value to the poultry industry in the area, to the consumer, the business, and to allow local employment opportunities, as well as contributing greatly to the farming industry of South Africa.

Key statistics for Hallgate from Statistics South Africa 2011 census are as follows:

Characteristics	
Total population	909
Young (0-14)	16,2%
Working Age (15-64)	73,4%
Elderly (65+)	10,4%
Dependency ratio	36,2
Sex ratio	148,4
Population density	214 persons/km2
No schooling aged 20+	3,9%
Higher education aged 20+	6,5%

Matric aged 20+	38,1%
Number of households	261
Average household size	3,3
Female headed households	12,3%
Formal dwellings	85,4%
Housing owned/paying off	39,8%
Flush toilet connected to sewerage	13,8%
Weekly refuse removal	0,8%
Piped water inside dwelling	59,4%
Electricity for lighting	84%

B.10 CULTURAL/HISTORICAL FEATURES

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

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

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

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

(c) any development or other activity which will change the character of a site-

(i) exceeding 5 000 m2 in extent; or

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

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

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

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

If YES, explain:

N/A

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

Briefly explain the findings of the specialist if one was already appointed:

The specialist concluded that as no sites, features or objects of cultural significance are known to exist in the development area, there would be no impact as a result of the proposed development. The specialist recommends that from a heritage point of view, the proposed development be allowed to continue provided that the following conditions are met:

- The Palaeontological Sensitivity Map (SAHRIS) indicate that the study area has a high sensitivity of fossil remains to be found and therefore a palaeontological field assessment and protocol for finds is required.
- If archaeological sites or graves be exposed in other areas during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

Will any building or structure older than 60 years be affected in any way?	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	NO
If yes, please attached the comments from SAHRA in the appropriate Appendix	

SECTION C : PUBLIC PARTICIPATION (SECTION 41)

C.1 THE ENVIRONMENTAL ASSESSMENT PRACTITIONER MUST CONDUCT PUBLIC PARTICIPATION PROCESS IN ACCORDANCE WITH THE REQUIREMENT OF THE EIA REGULATIONS, 2014.

C.2 LOCAL AUTHORITY PARTICIPATION

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

Was the draft report submitted to the local authority for comment?	YES
If yes, has any comments been received from the local authority?	NO

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

This Draft BAR is hereby released for a 30-day commenting period. The report has been mailed to the Lesedi Local Municipality for comments. The comments will be incorporated into the final BAR which will be submitted to GDARD for decision-making.

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

The Draft BAR is only released now and will be submitted to the local authority for comments.

C.3 CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?	NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

N/A

If "NO" briefly explain why no comments have been received

The Draft Basic Assessment Report is released in conjunction with the first round of Public Participation. Stakeholders and Interested & Affected Parties will be notified of the release of the report as well as the Basic Assessment process, and will be given the opportunity to comment on the Draft BAR. Comments received from the Draft BAR will be addressed and included into the final BAR for the proposed Phola Poultry Farm.

C.4 GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

C.5 APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report

Appendix 9 – Copy of the register of I&Aps

SECTION D : RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
4) Each alterative needs to be clearly indicated in the box below
5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives (complete only when appropriate) **0** times

Section D Alternative No. 0 (complete only when appropriate for above)

D.1 WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? YES

If yes, what estimated quantity will be produced per month? 35 m^3

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

It is anticipated that construction solid waste to be produced includes building rubble, packaging material, overburden material and general litter from construction workers. Therefore, it is recommended that construction waste or rubble will be collected and stored temporarily in designated containers for the different waste streams, and thereafter disposed of at the nearest accredited/licensed waste disposal site.

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

Waste will be disposed of at an appropriate accredited/licensed landfill site, preferably at the nearest landfill site to dispose of building rubble.

Will the activity produce solid waste during its operational phase? YES

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

Estimated

Chicken Waste 30 m^3

Other Waste 1 m^3

How will the solid waste be disposed of (describe)?

Solid waste generated during the operational phase, normal (i.e. domestic) waste, constituting household rubbish and consumables, will be stored in separate suitable bins and transported to the nearest licenced disposal site. Medical waste such as needles will be disposed of through existing medical waste streams in the area. The chicken layer farming activities generate waste comprised of bird excrement, spilled feed, bird feathers, mortalities and used chicken bedding (wood shavings, sawdust and peanut hulls). The applicant plans to distribute the chicken waste as fertilizer to nearby farmers, as well as sell a portion of the waste. Further, there is the option to dry the compost and use it as feed to local cattle farmers. This will require the applicant to attain a Fertilizer permit if the compost is sold. Broiler chicken waste will be collected every cycle (6 weeks) when chicken houses are cleaned. Should there be no demand for the waste, the waste will be disposed of at a licenced facility. A waste management license will not be required as the amount of waste produced is below the recommended threshold stipulated in the National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA).

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity? NO

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

All waste generated, except chicken manure, cults and mortalities, will be disposed of at a nearest licensed disposal site

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

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation? If yes, inform the competent authority and request a change to an application for scoping and EIA.	NO
Is the activity that is being applied for a solid waste handling or treatment facility? If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.	NO

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

The bulk of the waste generated during the operational phase will be from chicken manure, bird excrement, spilled feed, bird feathers, and mortalities and used chicken bedding (i.e. wood shavings, sawdust and peanut hulls). The applicant plans to distribute the chicken waste as fertilizer to nearby farmers, as well as sell a portion of the waste. Further, there is the option to dry the compost and use it as feed to local cattle farmers. This will require the applicant to attain a Fertilizer permit if the compost is to be sold.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	NO
If yes, what estimated quantity will be produced per month?	N/A
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)?	NO

Will the activity produce any effluent that will be treated and/or disposed of on site?	YES
If yes, what estimated quantity will be produced per month?	Estimated 50 m^3

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

In the process of cleaning the chicken layer houses, a low toxicity biodegradable liquid will be used, this will result in a slurry mix of the liquid with parts of chicken manure and mortalities. This liquid will have minimal impact on the environment. The applicant plans that the manure, cults and mortality waste will be dried in the attempt to be distributed as fertilizer to local agricultural farms.

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?	NO

If yes, provide the particulars of the facility:

Facility name:	N/A		
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

N/A

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	NO
If yes, what estimated quantity will be produced per month?	N/A
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	NO

Will the activity produce any effluent that will be treated and/or disposed of on site?	NO

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

N/A

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES
If yes, is it controlled by any legislation of any sphere of government?	NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

During the construction phase the emissions which will be released will comprise dust from trucks and gravel roads. This dust will however be minimal due to the period of the construction activities and the traffic generated. Further, little dust will emanate from the clearing and levelling of land for construction.

During the operational phase of the proposed facility emissions will be in form of odour from the chicken waste, these are a result of the anaerobic metabolic process. Furthermore, odour from the chicken layer facility is not regarded as part of air quality emissions in terms of legislation. The smell should be considered as a nuisance which might possibly impact the quality of life.

D.2 WATER USE

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

municipal		groundwater	

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month: Estimated 33 kilo liters

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

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

If yes, list the permits required

The feasibility of the borehole is in the process of being examined for the proposed development.

For project will require a Water Use License under the National Water Act (Act 36 of 1998). The water uses triggered are:

- Section 21 (a): Taking water from a water resource (i.e. the use of borehole)
- Section 21 (b): Storage of water (Borehole water storage facilities such as tank or reservoir)

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

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

D.3 POWER SUPPLY

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

Eskom/ Lesedi Local Municipality

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

N/A

D.4 ENERGY EFFICIENCY

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

There will be great consideration for the extensive use of solar power for electrifying the broiler facility. This electricity would be used for lighting and powering of water pumps. This design proposal will aid self-efficiency in allowing the farm to continue with operations even during load shedding from Eskom.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A

SECTION E : IMPACT ASSESSMENT

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

E.1 ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

The comments and responses report following the release of the Draft BAR will inclusive in the Final BAR.

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

N/A

E.2 IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

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

Approach to the Basic Assessment

1) Methodology of impact assessment

According to the DEA IEM Series guideline on "Impact Significance" (2002), there are a number of quantitative and qualitative methods that can be used to identify the significance of impacts resulting from a development. The process of determining impact significance should ideally involve a process of determining the acceptability of a predicted impact to society. Making this process explicit and open to public comment and input would be an improvement of the EIA/BA process. ESGIA has used the CSIR's approach to determining significance and it is generally as follows:

- Use of expert opinion by the specialists ("professional judgement"), based on their experience, a site visit and analysis, and use of existing guidelines and strategic planning documents and conservation mapping (e.g. SANBI biodiversity databases);
- Review of specialist assessment by all stakeholders including authorities such as nature conservation officials, as part of the report review process (i.e. if a nature conservation official disagreed with the significance rating, then we could negotiate the rating); and
- The approach is more a qualitative approach - A formal matrix calculation of significance is not used as is sometimes done.

2) Criteria for impact assessment

Assessment of Potential Impacts

The assessment of impact significance is based on the following conventions:

Nature of Impact - this reviews the type of effect that a proposed activity will have on the environment and should include "what will be affected and how?"

Spatial Extent - this should indicate whether the impact will be:

- Site specific;
- Local (<2 km from site);
- Regional (within 30 km of site); or
- National.

Duration - The timeframe during which (lifetime of) the impact will be experienced:

- Temporary (less than 1 year);
- Short term (1 to 6 years);
- Medium term (6 to 15 years);
- Long term (the impact will cease after the operational life of the activity); or

- Permanent (mitigation will not occur in such a way or in such a time span that the impact can be considered transient).

Intensity - it should be established whether the impact is destructive or innocuous and should be described as either:

- High (severe alteration of natural systems, patterns or processes such that they temporarily or permanently cease);
- Medium (notable alteration of natural systems, patterns or processes; where the environment continues to function but in a modified manner); or
- Low (negligible or no alteration of natural systems, patterns or processes); can be easily avoided by implementing appropriate mitigation measures, and will not have an influence on decision-making.

Probability - this considers the likelihood of the impact occurring and should be described as:

- Improbable (little or no chance of occurring);
- Probable (<50% chance of occurring);
- Highly probable (50 – 90% chance of occurring); or
- Definite (>90% chance of occurring).

Reversibility - this considers the degree to which the adverse environmental impacts are reversible or irreversible. For example, an impact will be described as low should the impact have little chance of being rectified to correct environmental impacts. On the other hand, an impact such as the nuisance factor caused by noise impacts from wind turbines can be considered to be highly reversible at the end of the project lifespan. The assessment of the reversibility of potential impacts is based on the following terms:

- High - impacts on the environment at the end of the operational life cycle are highly reversible;
- Moderate - impacts on the environment at the end of the operational life cycle are reasonably reversible;
- Low - impacts on the environment at the end of the operational life cycle are slightly reversible; or
- Non-reversible - impacts on the environment at the end of the operational life cycle are not reversible and are consequently permanent.

Irreplaceability - this reviews the extent to which an environmental resource is replaceable or irreplaceable.

For example, if the proposed project will be undertaken on land that is already transformed and degraded, this will yield a low irreplaceability score; however, should a proposed development destroy unique wetland systems for example, these may be considered irreplaceable and thus be described as high. The assessment of the degree to which the impact causes irreplaceable loss of resources is based on the following terms:

- High irreplaceability of resources (this is the least favourable assessment for the environment);
- Moderate irreplaceability of resources;
- Low irreplaceability of resources; or
- Resources are replaceable (this is the most favourable assessment for the environment).

The status of the impacts and degree of confidence with respect to the assessment of the significance is stated as follows:

Status of the impact: A description as to whether the impact will be:

- Positive (environment overall benefits from impact);
- Negative (environment overall adversely affected); or
- Neutral (environment overall not affected).

Degree of confidence in predictions: The degree of confidence in the predictions, based on the availability of information and specialist knowledge. This should be assessed as:

- High;
- Medium; or

- Low.

Based on the above considerations, the specialist provides an overall evaluation of the significance of the potential impact, which should be described as follows:

- Low to very low: the impact may result in minor alterations of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated;
- Medium: the impact will result in moderate alteration of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated; or
- High: Where it could have a "no-go" implication for the project unless mitigation or re-design is practically achievable.

Furthermore, the following must be considered:

- Impacts should be described both before and after the proposed mitigation and management measures have been implemented.
- All impacts should be evaluated for the construction, operation and decommissioning phases of the project, where relevant.
- The impact evaluation should take into consideration the cumulative effects associated with this and other facilities which are either developed or in the process of being developed in the region, if relevant.

Management Actions:

- Where negative impacts are identified, mitigatory measures will be identified to avoid or reduce negative impacts. Where no mitigatory measures are possible this will be stated.
- Where positive impacts are identified, augmentation measures will be identified to potentially enhance these.
- Quantifiable standards for measuring and monitoring mitigatory measures and enhancements will be. This will include a programme for monitoring and reviewing the recommendations to ensure their ongoing effectiveness.

Monitoring:

Specialists should recommend monitoring requirements to assess the effectiveness of mitigation actions, indicating what actions are required, by whom, and the timing and frequency thereof.

Cumulative Impact:

Consideration is given to the extent of any accumulative impact that may occur due to the proposed development. Such impacts are evaluated with an assessment of similar developments already in the environment. Such impacts will be either positive or negative, and will be graded as being of negligible, low, medium or high impact.

Mitigation:

The objective of mitigation is to firstly avoid and minimise impacts where possible and where these cannot be completely avoided, to compensate for the negative impacts of the development on the receiving environment and to maximise re-vegetation and rehabilitation of disturbed areas. For each impact identified, appropriate mitigation measures to reduce or otherwise avoid the potentially negative

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

Note from ESGIA: Feasible alternatives (i.e. location, activity, and property alternatives) do not exist for the proposed project as this is the only piece of land the owner was able to acquire, and it will not be economically feasible for the business to find or purchase a new property. Environmental impacts could be significantly higher if this proposed facility were to be established in a different piece of land compared to expanding the already disturbed site with existing farming activities.

The no go alternative will be considered.

Proposal
Potential Impacts During Construction Phase

Potential impacts:	Extent:	Duration:	Consequence:	Probability:	Reversibility:	Irreplaceability:	Significance rating of impacts (positive or negative):	Degree of confidence:	Can Impact be avoided?	Can Impact be managed or mitigated?	Proposed mitigation:	Significance rating of impacts after mitigation:
Loss of indigenous vegetation due to the clearance for construction of the chicken layer facility	Site Specific	Less than 1 year	Low	Highly probable	Moderate	Low irreplaceability	Low Negative	High	No	Yes	The clearing of vegetation must be kept to a minimum and Remain within the stands earmarked for development – leave some open space area with natural vegetation intact; Construction must be completed as quickly as possible; Disturbed open areas must be rehabilitated immediately after construction has been completed in that area by planting appropriate indigenous trees and grass species; During the construction phase workers must be limited to areas Under construction. Rehabilitated areas must be monitored to ensure the establishment of re-vegetated areas.	Low
Introduction and proliferation of alien species from clearing of area from construction activities	Site	Short term	Moderate/Medium	Highly probable	Moderate	Low irreplaceability	Low Negative	Medium	No	Yes	Ongoing alien plant control must be undertaken; Monitor all sites disturbed by construction activities for colonization by alien plant species and control these as they merge; Avoiding planting of alien invasive species, use indigenous species.	Low
Loss of natural habitats	Site	Short term	Very low	Definite	Low	High irreplaceability	Low Negative	Medium	No	Yes	Vegetation clearance should be kept to a minimum and remain within proposed development footprint; The construction must be completed as quickly as possible - fauna species may be killed; Immediately after the construction period, all disturbed areas must be	Low

											rehabilitated by planting indigenous plant species; During the construction period staff must be limited to areas under construction and access to the undeveloped area must be firmly controlled; Rehabilitated areas should be monitored to ensure the timely establishment of re-vegetated area.	
Increased dust and erosion from clearance of vegetation, earth-moving activities and increased traffic flow	Local	Less than 1 year Temporary	High	Highly Probable	Moderate	Moderate	Moderate Negative	High	No	Yes	Limit vehicles, people and materials to the construction site; Commence (and preferably complete) construction during winter, when the risk of erosion should be least; Revegetate denudated area with local indigenous flora species; Implement erosion protection measures on site. Such as bunding around soil stockpiles, and vegetation of areas not to be developed; Implement effective and environmentally-friendly dust control measures, measures could be mulching or periodic wetting.	Very Low
Sensory disturbance of fauna associated with construction activities and with increased human presence in the area	Local	Temporary	High	Definite	Low	High	Low Negative	High	No	Yes	Movement of construction vehicles and workers beyond the boundary of the site should be minimized. Staff must be instructed to minimize disturbance of birds at all times, and steps must be taken to ensure that no illegal hunting occurs; All activities should remain within the already demarcated development footprint; Disturbance by residents of birds breeding and foraging in the area should be minimized; Provide adequate awareness for site personnel and residents;	Very Low

											Any bird's nests that are found during the construction phase must be reported to the ECO and residents should always be aware of birds in their built environment.	
Pollution associated with construction activities and residents (e.g. fuel spill, use of cleaning chemicals, management of waste products)	Site	Temporary	Low	Improbable	High	Low	Low Negative	High	No	Yes	Great care must be taken that no pollution or waste pollute the area or enter local water systems during construction; Measures to rapidly deal with spills of fuel, cleaning chemicals or any other potential pollutants must be put in place before construction commences; Construction staff must be suitably trained to deal with any such pollutants and spillages; Facilities to handle pollution and waste must be provided to residents.	Very Low
Electrocution and collision hazard of avian fauna	Site	Temporary	Low	Very Improbable	High	Low	Very Low Negative	High	No	Yes	Normal safety measures for electrical installations as used by Eskom.	
Indirect Impacts												
The creation of employment and skills development in the area, resulting in social upliftment in the area	Municipal district	Short Term	Moderate	Highly probable	High	High	High Positive	Medium	No	Yes	Ensure the employment of local people and development skills of people within the area. Knowledge should be passed on to the local community.	High
No-Go Alternative												
Direct Impacts: - All identified impacts will not occur (no clearance of natural vegetation); All structures on the site will remain												
Indirect Impacts: - No new construction employment will be created;												

- No new jobs in the construction period will occur.

Potential Impacts During Operational Phase

Potential impacts:	Extent:	Duration:	Consequence:	Probability:	Reversibility:	Irreplaceability:	Significance rating of impacts (positive or negative):	Degree of confidence:	Can Impact be avoided?	Can Impact be managed or mitigated?	Proposed mitigation:	Significance rating of impacts after mitigation:
Loss of indigenous vegetation due to the clearance for the chicken layer facility	Site specific	Permanent	Low	Highly probable	Low	Low	Low Negative	High	No	Yes	The clearance of vegetation must be kept to a minimum and remain within the area earmarked for development; Rehabilitated area must be monitored to ensure the natural establishment of re-vegetated area; Plant indigenous vegetation – no alien invasive species.	Very Low
Introduction and proliferation of alien species from clearing of area from construction activities	Site	Permanent	Moderate/Medium	Improbable	Moderate	Moderate	Very Low Negative	Medium	No	Yes	Ongoing alien plant control must be undertaken; Monitor all sites disturbed by construction activities for colonization by alien plant species and control these as they merge; Avoiding planting of alien invasive species, use indigenous species.	Very Low
Loss of habitats from operation activities	Site	Permanent	Low	Definite	Low	Low	Very Low Negative	Medium	No	Yes	Vegetation clearance should be kept to a minimum and remain within proposed development footprint; The construction must be completed as quickly as possible - fauna species may be killed; Immediately after the construction period, all disturbed areas must be rehabilitated by planting indigenous plant species;	Very low

											Rehabilitated areas should be monitored to ensure the establishment of re-vegetated area.	
Sensory disturbance of fauna associated with operational activities and with increased human presence in the area	Local	Temporary	High	Definite	Low	Low	Low Negative	High	No	Yes	All activities should remain within the already demarcated development footprint; Disturbance by residents of birds breeding and foraging in the area should be minimized; Provide adequate awareness training for site personnel and residents; Any bird's nests that are found during the operational phase must be reported to the ECO and residents should always be aware of birds in their built environment.	Low
Odours from the laying houses disturbing neighbours	Local	Medium Term	Moderate	Possible	Moderate	Low	Moderate Negative	Medium	No	Yes	Management of chicken droppings will be necessary including the regular cleaning of chicken droppings. Drying of the droppings and ventilation in the laying houses is important in managing the odours.	Low
Pollution associated with operational activities and residents (e.g. fuel spill, use of cleaning chemicals, management of waste products)	Site	Medium Term	Low	Improbable	High	Low	Low Negative	High	No	Yes	Great care must be taken that no pollution or waste pollute the area or enter local water systems during construction; Measures to rapidly deal with spills of fuel, cleaning chemicals or any other potential pollutants must be put in place before operations commence; Staff must be suitably trained to deal with any such pollutants and spillages; Facilities to handle pollution and waste must be provided to staff	Very Low
Electrocution and collision hazard of avian fauna	Site	Medium	Low	Improbable	High	Low	Very Low Negative	High	No	Yes	Normal safety measures for electrical installations as used by Eskom.	Very Low
Environmental contamination from	Local	Long term	High	Highly Probable	Low	Moderate	Moderate Negative	High	No	Yes	Ensure that the facility is designed in accordance with international best practice norms and standards, and advice from relevant specialist,	Low

chicken excrement, bedding, feed, carcasses and other operational waste											to ensure there is no environmental contamination from effluent, fodder, carcasses and other waste, and ensure that there is also effective storm water management Adhere to best practice chicken husbandry and waste disposal standards; Waste recycling should be incorporated into the facility's operations as far as possible; Train workers about the facility's waste management; Establish adequate emergency procedures for accidental contamination of the surrounding; Rehabilitate contaminated area as quickly as possible in accordance with advice from the relevant contamination and environmental specialist; Educate staff regarding the facility's waste emergency procedures with training and notices.	
Poor/inadequate control of animal pests from poor waste management and hygiene, and insufficient, and or ineffective pest control	Local	Long Term	Moderate	Highly Probable	Moderate	Moderate	Moderate Negative	High	No	Yes	Ensure that floors are sloped to facilitate drainage; Ensure that there is effective storm water drainage around the Facility; Concrete floors should be properly sealed to close all cracks and limit the pooling of effluent and water; Effectively seal and maintain all pipes and reservoirs containing slurry, to prevent animals from accessing the effluent; Ensure that the facility is sufficiently ventilated to keep floors, bedding, and fodder as dry as possible; Check that fan louvers (if installed) work properly, and close fans completely when off;	Low Negative

											Prevent and manage unwanted animal access to fodder; Clean the floors regularly; Keep area around the facility free of spilled manure and litter; Keep weeds and grass mowed to 5cm or less immediately around the facilities to prevent and reduce the prevalence of inserts; Remove all trash, and sources of feed and water for pests from the outside perimeter of the facilities; Electrocution devices are available to kill flies, while other mechanical devices include traps, sticky tapes or baited traps; Control rodents through effective sanitation, rodent proofing and (as humane as possible) extermination; Ensure that measures to control pests are tightly restricted to areas where these are problematic; Rodenticides are not advised.	
Disease transmission from poor waste management and hygiene, and insufficient, inadequate or ineffective pest control	Local	Long term	High	Probable	Moderate	Moderate	Moderate Negative	High	No	Yes	Ensure that floors are sloped to facilitate drainage; Ensure that there is effective storm water drainage around the Facility; Concrete floors should be properly sealed to close all cracks and limit the pooling of effluent and water; Effectively seal and maintain all pipes and reservoirs containing slurry, to prevent animals from accessing the effluent; Ensure that the facility is sufficiently ventilated to keep floors, bedding, and fodder as dry as possible;	Low

											Check that fan louvers (if installed) work properly, and close fans completely when off; Prevent and manage unwanted animal access to fodder; Clean the floors regularly; Keep area around the facility free of spilled manure and litter; Keep weeds and grass mowed to 5cm or less immediately around the facilities to prevent and reduce the prevalence of inserts; Remove all trash, and sources of feed and water for pests from the outside perimeter of the facilities; Electrocution devices are available to kill flies, while other mechanical devices include traps, sticky tapes or baited traps; Control rodents through effective sanitation, rodent proofing and (as humane as possible) extermination; Ensure that measures to control pests are tightly restricted to areas where these are problematic; Rodenticides are not advised.	
Indirect Impacts												
Potential impacts:	**Extent:**	**Duration:**	**Consequence:**	**Probability:**	**Reversibility:**	**Irreplaceability:**	**Significance rating of impacts (positive or negative):**	**Degree of confidence:**	**Can Impact be avoided?**	**Can Impact be managed or mitigated?**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**
Proposed development will contribute to local economy through	Local	Long term	Moderate – High	Probable	High	High	Moderate Positive	Medium	Yes	Yes	Increase the possibility of local economy improvement through employment and skills development;	Moderate

employment and skills development												
The proposed Phola Poultry may contribute to the local poultry market by supplying increase products to local distributors	Municipal district	Long term	Moderate – High	Probable	High	High	Moderate Positive	Medium	Yes	Yes	Make provisions that business are the target of the Phola Poultry output products.	Moderate

No-Go Alternatives	
Direct Impacts	Significance Rating
Potential impact on vegetation and faunal habitats:	None
Impacts on soil erosion and dust:	None
Impact on water quality and downstream aquatic ecology:	Moderate (Current inhabitants of the house will continue to use water)
Potential for groundwater impact:	None
Air quality impact:	None
Waste generation:	Low (the current inhabitants will still produce a small amount of waste)
Indirect impacts: - There will not be any contribution to the poultry industry output; - There will be improving of food security in the district municipality; - There will not be any employment increase in employment opportunities in the area.	

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

The above tables were completed with the assistance of an Ecological and Heritage Specialist.

The ecological specialist deemed it unnecessary for the scale of the proposed development and consideration of the local ecological area.

- Appendix G1: biodiversity desktop screening for portion 84: hallgate agricultural holdings site.
- Appendix G2: Phase 1 Cultural Heritage Impact Assessment: the proposed development of a poultry farm on Portion 84 of Hallgate Agricultural Holdings, Lesedi Local Municipality, Sedibeng, Gauteng Province

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

None have been identified.

E.3 IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

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

Note from ESGIA: Decommissioning and/or closure phase is not expected to occur for the proposed Phola Poultry Farm. Should there be plans to close the production facility; a closure plan will be submitted to the competent authority for approval and it will comply with the relevant legislation at the time of closure.

Proposal

Potential Impacts During Decommissioning Phase

Potential Impacts:	Extent	Duration:	Consequence	Probability:	Reversibility:	Irreplaceability:	Significance Rating/ Positive/ Negative:	Degree Of Confidence	Can Impact be Avoided ?	Can Impact be Managed Or Mitigated?	Proposed Mitigation:	Significance Rating After Mitigation
Introduction and proliferation of alien species from influx of vehicles, people and material, site disturbance and lack of alien	Local	Permanent	High	Definite	Moderate	Moderate irreplaceability	Moderate Negative	High	No	Yes	Remove category alien species using mechanical methods, and minimize soil disturbance as far possible; Alien wood may be donated to the surrounding community.	Low

species control												
Increased dust and erosion demolishing infrastructure, earth-moving activities and increased traffic flow	Local	Less than 1 year Temporary	High	Highly Probable	Moderate	Moderate	Moderate Negative	High	No	Yes	Limit vehicles, people and materials to the decommissioning site; Commence (and preferably complete) decommissioning during winter, when the risk of erosion should be least; Revegetate denudated area with local indigenous flora species; Implement erosion protection measures on site. Such as bunding around soil stockpiles, and vegetation of areas not to be developed; Implement effective and environmentally-friendly dust control measures, measures could be mulching or periodic wetting.	Low
Sensory disturbance of fauna from noise, dust and light associated with decommissioning activities	Local	Temporary	Moderate	Probable	Moderate	Low	Low Negative	High	No	Yes	Commence (and preferably complete) decommissioning during winter, when the risk of disturbing active(including breeding and migratory) animals should be least; Minimize noise to limit its impact on sensitive fauna; Limit demolition to day time hours (07:00am – 17:00pm); Minimize or eliminate security and decommissioning lighting, to reduce disturbance of nocturnal fauna.	Low

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

The above tables were completed with the assistance of an Ecological and Heritage Specialist.

The ecological specialist deemed it unnecessary for the scale of the proposed development and consideration of the local ecological area.

- Appendix G1: biodiversity desktop screening for portion 84: hallgate agricultural holdings site.

Appendix G2: Phase 1 Cultural Heritage Impact Assessment: the proposed development of a poultry farm on Portion 84 of Hallgate Agricultural Holdings, Lesedi Local Municipality, Sedibeng, Gauteng Province

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

N/A

E.4 CUMULATIVE IMPACTS

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

Sensory disturbances

The most significant cumulative impact is likely odours from the chicken layers. These can be a disturbance to surrounding landowners if the layer houses are properly managed. It is important that the chicken waste be dried out as early as possible as wet droppings are the main source of odours. Proper ventilation and dryers are therefore necessary. The site is however in an agricultural area with chickens being kept in various quantities in the area. During initial consultation, many adjacent owners expressed that they kept chickens themselves. The activity is in line with the general land use of the area.

During the construction phase, trucks bringing in the construction materials. During operational phase, trucks will be required for the transportation of the eggs. The impacts are in the generation of noise and dust when the trucks access the site. Further, there could the potential of increased traffic due to accessing the sight by the trucks. These impacts are considered to not be severe based on the proximity of the site to the main road, and the larger size of the plots creating distance between the owners.

Water use

The continued use for domestic and washing equipment could increase. A water saving strategy will be established which is the storing of rainwater in tanks for domestic uses.

Loss of indigenous vegetation

During the construction phase there will be a loss of some vegetation. Specialists have reviewed the vegetation on the site and found it to be disturbed with little chance of recovery. The site also covers a relatively small area and is in an agricultural holdings area with peri-urban development and fragmentation due to roads and walling. As a result, this impact is deemed to be low, provided that the mitigation measures are implemented correctly.

Alien and invasive species

Additional alien and invasive species may be introduced to the site. The site bounded by a brick wall lowering the risk of a spread of disturbed species. Alien plants species do however pose an ecological threat as they alter the habitat structure. There is no residual risk anticipated, provided that the mitigation measures are implemented correctly and rehabilitation of the site is undertaken.

Socio-economic

The proposed project will facilitate job creation, skills development and increased food supply. These are all positive impacts and are encouraged.

E.5 ENVIRONMENTAL IMPACT STATEMENT

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

Proposal

The proposed chicken egg-layer facility is located on transformed land. According to the ecologist, the vegetation on site is indigenous but is fragmented and in a degraded state with little chance of recovery. The proposed development is agricultural which is in line with the zoning of the site and the zoning of the surrounding sites. Agricultural holdings tend to be smaller in size and are suitable for intensive agriculture.

No sensitive environmental features such as rivers, wetlands, aquifer fed ecosystems, pristine habitats, red list species have been identified on or in close proximity to the site. The small holdings in the area are fenced off and located in a peri-urban area with a grid road system.

The site is therefore suitable and planned for intensive agricultural activities such as the proposed development.

The proposed chicken layer facility is concluded, based the environmental impacts assessment shown, to have relatively low negative impact on the natural environment. If the proposed mitigation and management measures are implemented as recommended the significance of these impacts found on the site will be relatively low environmentally. Other potential impacts will be on vegetation and habitat, water quality, soil, dust, and odour as a result of earthworks associated with the activity, influx of vehicles, waste generated by the chicken egg layers houses and chicken egg farming.

ESGIA has no objections to the proposed project going forward. An Environmental Management Programme (EMPr) supporting this BA outlines appropriate mitigation methods that need to be implemented for the identified impacts to not pose any environmental flaws associated with the proposed development of the chicken egg-layer facility and associated infrastructure.

The most significant environmental impacts identified are as follows.

Site preparation and clearance

The clearance of land in preparation for the construction of the chicken layer facilities and supporting infrastructure is unavoidable. This may result in the exposing of soil leading to potential erosion and dust from the wind. These impacts will be a temporary on one hand and permanent in the other, they will be contained to some extent, with the aid of construction measures which minimise these from occurring, this will limit probability.

Vegetation and habitat loss

Vegetation loss during construction will be unavoidable due to the clearance of land for the facilities. However, with the appropriate mitigation measures suggested in the report, the significance of impacts on site can be reduced.

Waste generated during construction and operational phases

There will be waste generated in both stages of the project, construction and operational, and this will be ongoing during the operational phase. The proposed methods of dealing with the waste generated through the operational stage will minimise any impact occurring therefore resulting in a low probability. The recycling of the waste will be practiced to minimise impacts.

Socio-economic

The proposed project is expected to contribute to the growth of the local economy during both the construction and operational phases. These may be in the form of local labour to produce the eggs to be sold in the local market as well as commercial market. Overall this can be said to be the creation of employment opportunities and skills development in the area. The impact will be of temporal nature during the construction phase and permanent for the operational phase. The probability of this impact occurring is high and as such a potential high positive impact.

Heritage

The Palaeontological Sensitivity Map (SAHRIS) indicate that the study area has a high sensitivity of fossil remains to be found and therefore a palaeontological field assessment and protocol for finds is required. Should archaeological sites or graves be exposed in other areas during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

Alternative 1

N/A

Alternative 2

N/A

No-go (compulsory)

Should the No-Go alternative take preference, there will be no change to the land or surrounding area. The economic potential from the egg production facility will not be realised, and an opportunity for a small emerging farmer will be lost. This will have general economic knock-on effects.

It is likely that the landowner will attempt another form of agriculture on site or prefer to try sell the site.

The increase in requirements relating to the chicken waste, odour and pest control not be increased and complicated waste to be managed will not be present. The status quo of the environment will be maintained.

The environmental impacts associated with the proposed development are considered to be, with mitigations, of an acceptable level and can be effectively managed with the implementation of effective mitigation methods as discussed in the EMPr.

E.6 IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

Note from ESGIA: All negative impacts for the proposal could be managed by correctly implementing mitigation measures.

For proposal:

- Impact on soil (erosion and dust) (Negative)
- Loss of vegetation and faunal habitat (Negative)
- Introduction and increase in alien vegetation (Negative)
- Potential for pollution of water sources (Negative
- Waste generation (Negative)
- Impact of pests and disease transmission (Negative)
- Employment opportunities created (Positive – This impact will be encouraged)

For alternative:

N/A

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

This proposed project is the development of a chicken egg layer facility and associated infrastructure. These developments will be according to best guidelines when it comes to broiler farming within the environmental legislation and ensuring minimal environmental impacts.

It is not feasible for the relocating of the proposed chicken layer site as firstly, this is the only available land to the applicant; secondly by default the chosen sight potentially has the smallest impact on the environment, with the required mitigations. The site further ensure minimal biosecurity threats to the chicken layer facility where there is controlled access by people as well as other animals, by this preventing pests and transmission of infections posing a threat to the poultry.

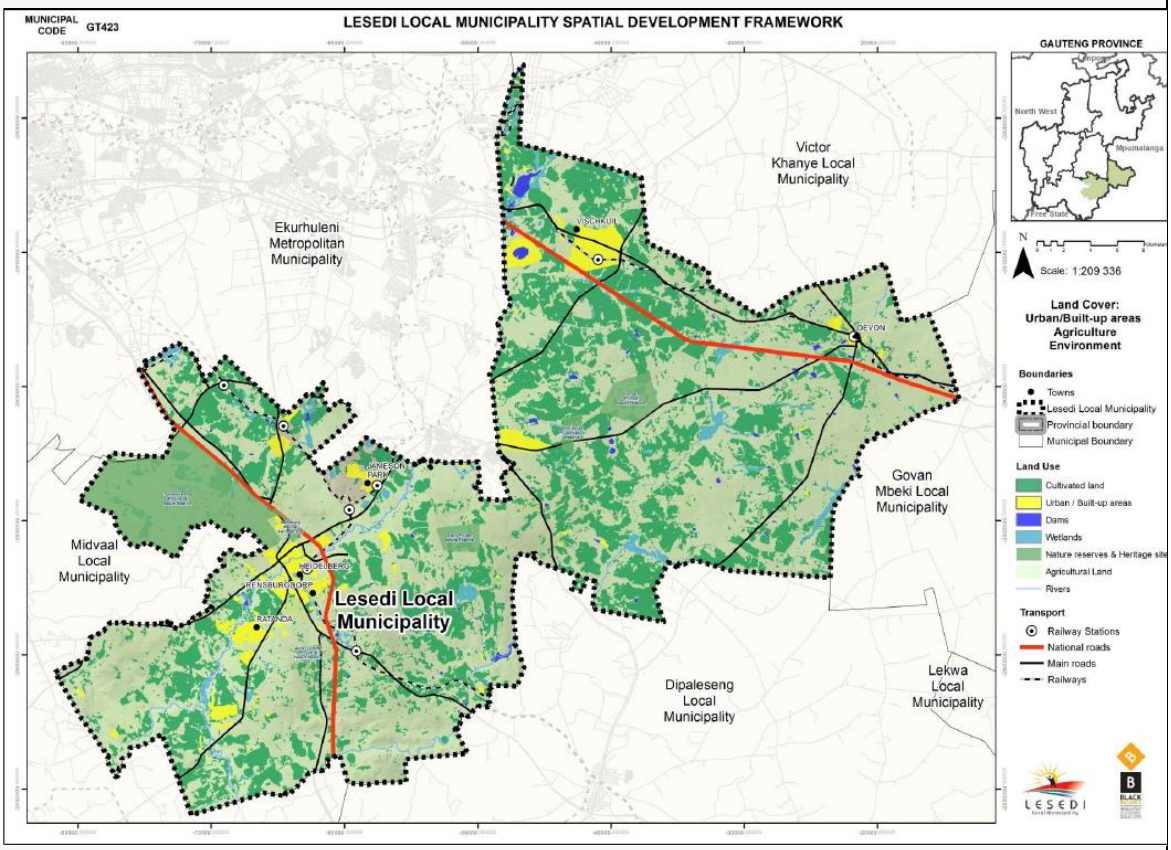
E.7 SPATIAL DEVELOPMENT TOOLS

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

The SDF is the legislated component of the municipality's IDP that prescribes development strategies and Policy guidelines to restructure and reengineer the urban and rural form. The SDF is the municipality's long-Term vision of what it wishes to achieve spatially, and within the IDP Programmes and projects. The SDF should not be interpreted as a blueprint or master plan aimed at controlling physical development, but rather the Framework giving structure to an area while allowing it to grow and adapt to changing circumstances.

The Proposed project has considered and is guided by the Lesedi municipality's IDP and SDF as well as the Sedibeng District municipality's SDF and IDP priorities of the area. Lesedi local municipality can be described as a Primarily rural area. The proposed project is located in Hallgate AH which are agricultural holdings. According to the Lesedi IDP, Lesedi is a very important resource to Gauteng in terms of food

production, and this fact should be taken into consideration in the future planning of the area (Lesedi Local Municipality 2018/19 Final IDP: page 68). Commercial agriculture takes up 95% of the area, And this land includes small holding areas within Lesedi that have a total area of ±6473 ha. This makes Lesedi A very important resource to gauteng in terms of food production, and this fact should be taken into Consideration in the future planning of the area. The map below depicts the broad land use (agriculture and Mining) within the Lesedi municipality.



E.8 RECOMMENDATION OF THE PRACTITIONER

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

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

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

Through this BAR process, there has been the detailed analysis of all potential impacts of the proposed project. According to the assessments conducted on site with the assistance of an Ecological Specialist, the overall impact of the project results in a low environmental impact. This was however aided by certain management and mitigation measures as suggested in both the BAR report and EMPr. Based on these findings, it is suggested that this proposal be approved, with the implementation of the following mitigation measures:

- The EMPr of this proposed development must form part of the contractual agreement and be adhered to by both the contractors and the applicant.
- The recommended mitigation measures must be implemented.

- The applicant to ascertain that there is representation of the applicant on site, at all times of the project phases, ensuring compliance with the conditions of the EMPr and Environmental Authorisation thereof.
- A Water Use Licence/ Borehole license must be obtained for the water usage associated with the chicken Egg-layer operations.

It is the opinion of the EAPs that the proposed development will comply with current relevant legislation, and that with the implementation of the mitigation measures recommended in this Report.

The following mitigation measures are recommended for the proposed development:

Construction Phase Mitigation Measures:

- Implement the Environmental Management Plan (EMP).
- Construction should be limited to daytime hours (i.e. 08h00am to 17h00pm).
- Undue noise disturbance should be limited between 08h00am to 17h00pm weekdays and Saturdays.
- Good housekeeping and regular removal of rubble on the site should be implemented.
- Should any fossils, coins, human remains, articles of value or antiquities and other items of archaeological or paleontological significance, be uncovered during construction the local Heritage Authority shall be contacted immediately?
- Forum for complaints to be raised (via a complaints register) should be provided.
- No construction staff shall remain on site after hours or overnight except for a night security guard if required.
- A register of construction staff shall be maintained by the contractor.
- Relevant regulations relating to traffic management (especially speeding and behaviour at intersections) shall be applicable.
- No overloading of trucks shall occur.
- All roads used for access during construction activities must be left in an acceptable condition on completing of the project.
- The access road shall be graded as part of the proposed development, at the commencement of construction, as part of the general earthworks.
- Movement of construction personnel shall be restricted to the construction site.
- During construction contaminated water and soil shall be disposed of appropriately as to prevent runoff into the natural environment and to prevent any damage to flora.
- Movement of construction personnel shall be restricted to the construction site.
- Flora shall be protected.
- Fauna shall be protected, and animals found on site shall not be harmed or killed.
- No surface water, ground or storm water shall be polluted as a result of any activities on the site. The applicant shall ensure that effluent will be managed and disposed of in a manner that complies with the National Water Act, 1998(Act 36 of 1998).
- All requirements of the National Water Act, 1998 (Act 36 of 1998) shall always be adhered to.
- Solid waste shall be managed in accordance with the requirements of relevant legislation.

Operational Phase Mitigation Measures:

- Poultry litter shall be cleaned from the sheds on a regular basis.
- Poultry litter should be regularly removed from site by the farmer for use as compost.
- No solid waste shall be stored on site.
- Recycling, where possible, is recommended.
- Poultry houses shall be washed down every second week with high pressure water. The wash water will drain into the surrounding grass and soil. If necessary, in areas where inadequate infiltration takes place, wash water shall be drained into a retention pond and appropriately disposed of.
- No surface water, ground or storm water shall be polluted as a result of any activities on the site. The applicant shall ensure that effluent will be managed and disposed of in a manner that complies with the National Water Act, 1998(Act 36 of 1998).

- All requirements of the National Water Act, 1998 (Act 36 of 1998) shall be adhered to at all times.
- Solid waste shall be managed in accordance with the requirements of relevant legislation.
- Dead chickens should be stored, transported and disposed of in a proper manner.
- Utilisation of lighting with focused light sources should be chosen to minimise the light spillage and glare.
- Relevant regulations relating to traffic management (especially speeding and behaviour at intersections) should be applicable.
- Effluent shall not be released into the natural environment in order to prevent contamination and nutrient enrichment.
- The type and colour of the building materials shall be carefully selected so as to mitigate potential visual impacts.
- Materials with matt finishes and natural colours that blend in with the surroundings should be used.
- Accommodation shall be provided on site for 8 of the workers and therefore the no worker will be required to commute daily to the farm.
- Eggs would usually be collected/ delivered once per day.
- Use of low voltage or compact fluorescent lights.
- Install large north-facing windows in staff houses where possible.
- Use of solar water heating system in staff houses.

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

Vacant agricultural land within the peri-urban area is a valuable commodity and resource. It is important that this kind of resource is not left vulnerable to the causes and effects of urban decay. The property is currently zoned for agricultural purposes. The facility will be erected on approximately 1.7ha of land.

Development of the proposed project will transform the property into an investment in the area and a resource to the surrounding community.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED *(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)*

The Environmental Authorisation is required for a minimum of 20 years.

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

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

EMPr attached	Yes

SECTION F: APPENDIXES

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

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

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

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

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

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

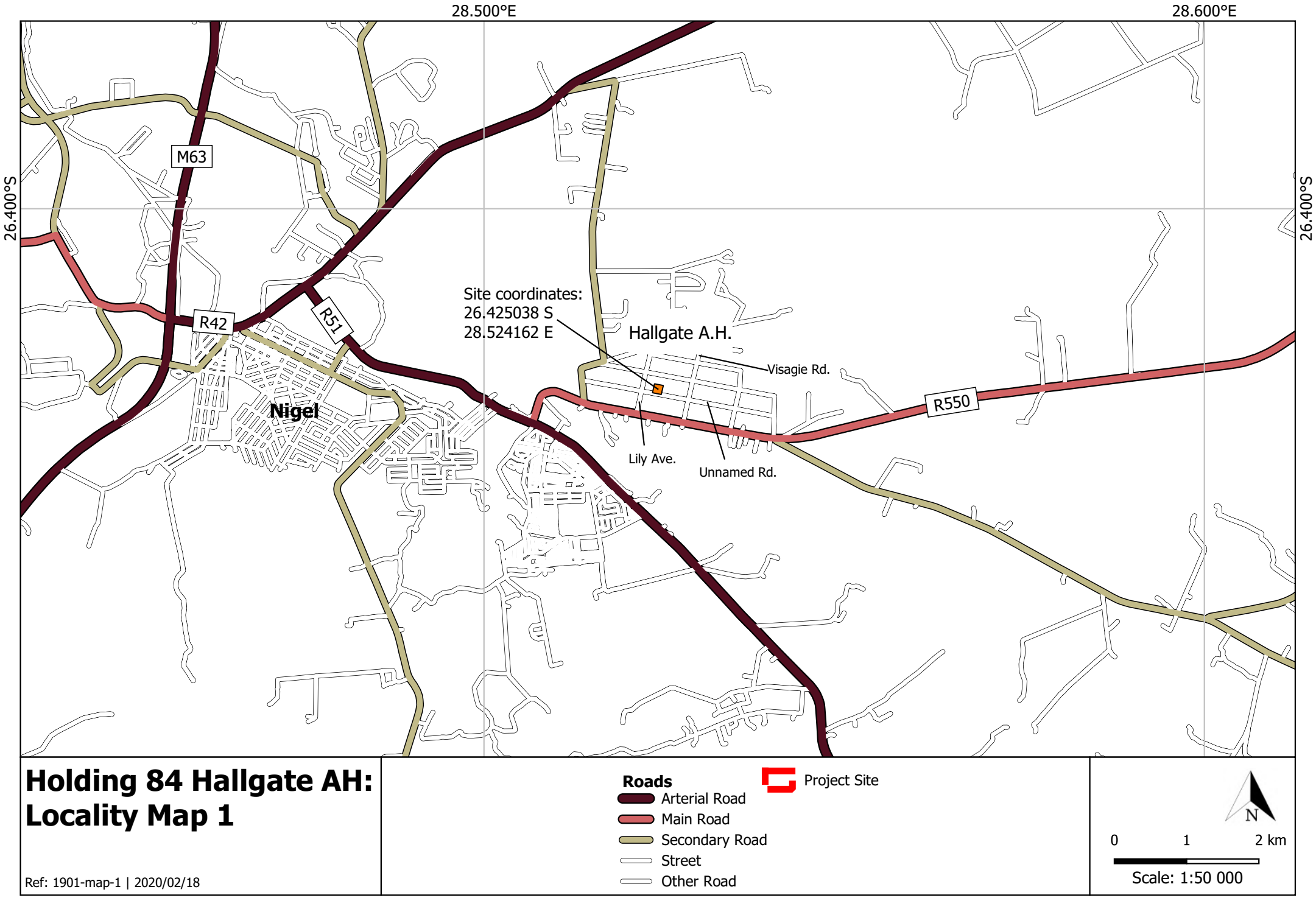
CHECKLIST

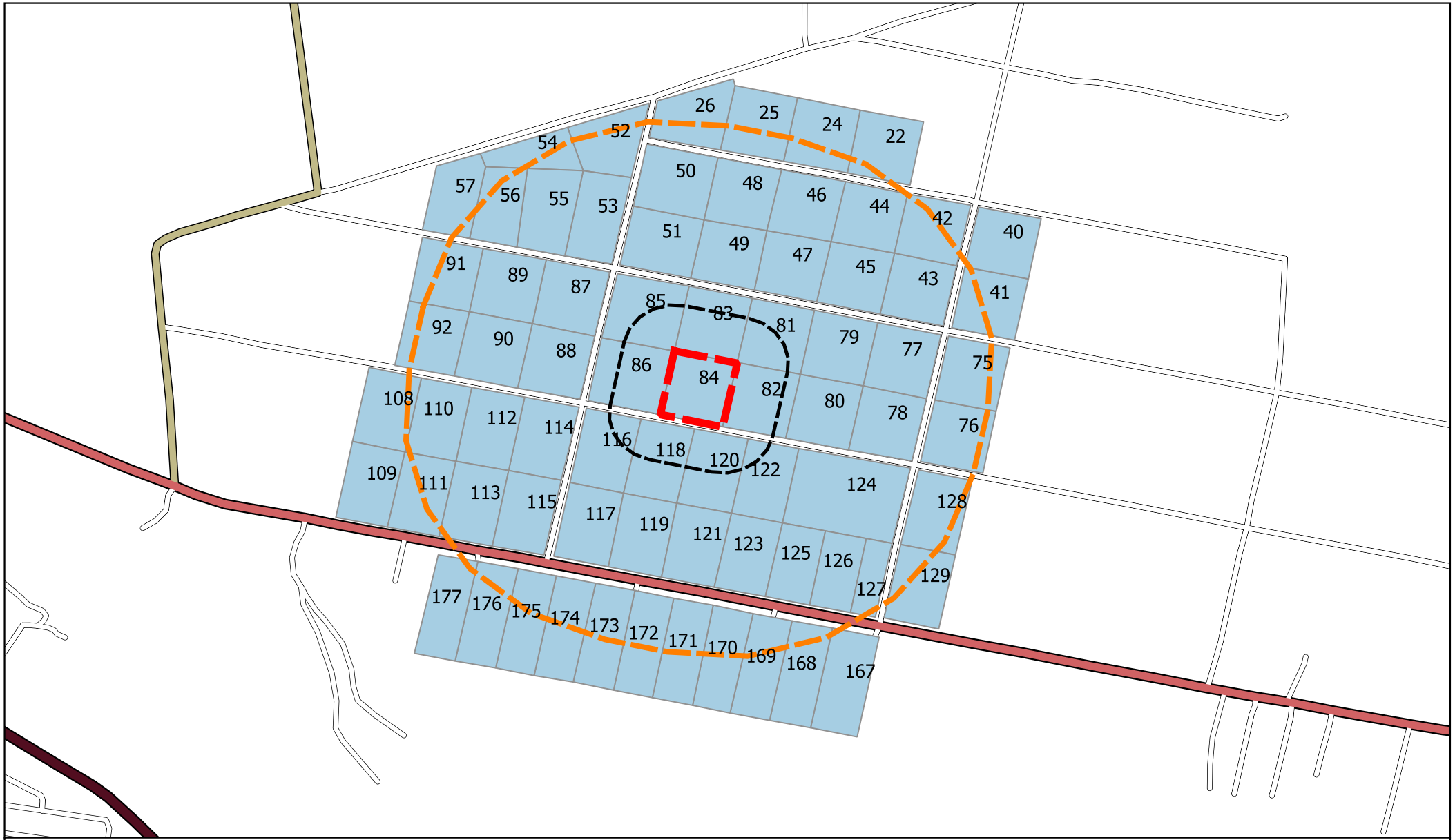
To ensure that all information that the Department needs to be able to process this application, please check that:

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

Appendix A:

Site plan(s)


28.500°E
28.600°E
26.400°S
26.400°S
M63
R42
R51
R550
Site coordinates:
26.425038 S
28.524162 E
Hallgate A.H.
Visagie Rd.
Nigel
Lily Ave.
Unnamed Rd.
Holding 84 Hallgate AH:
Locality Map 1
Ref: 1901-map-1 | 2020/02/18
Roads
Arterial Road
Main Road
Secondary Road
Street
Other Road
Project Site
N
0
1
2 km
Scale: 1:50 000



Holding 84 Hallgate AH: Locality Map 2

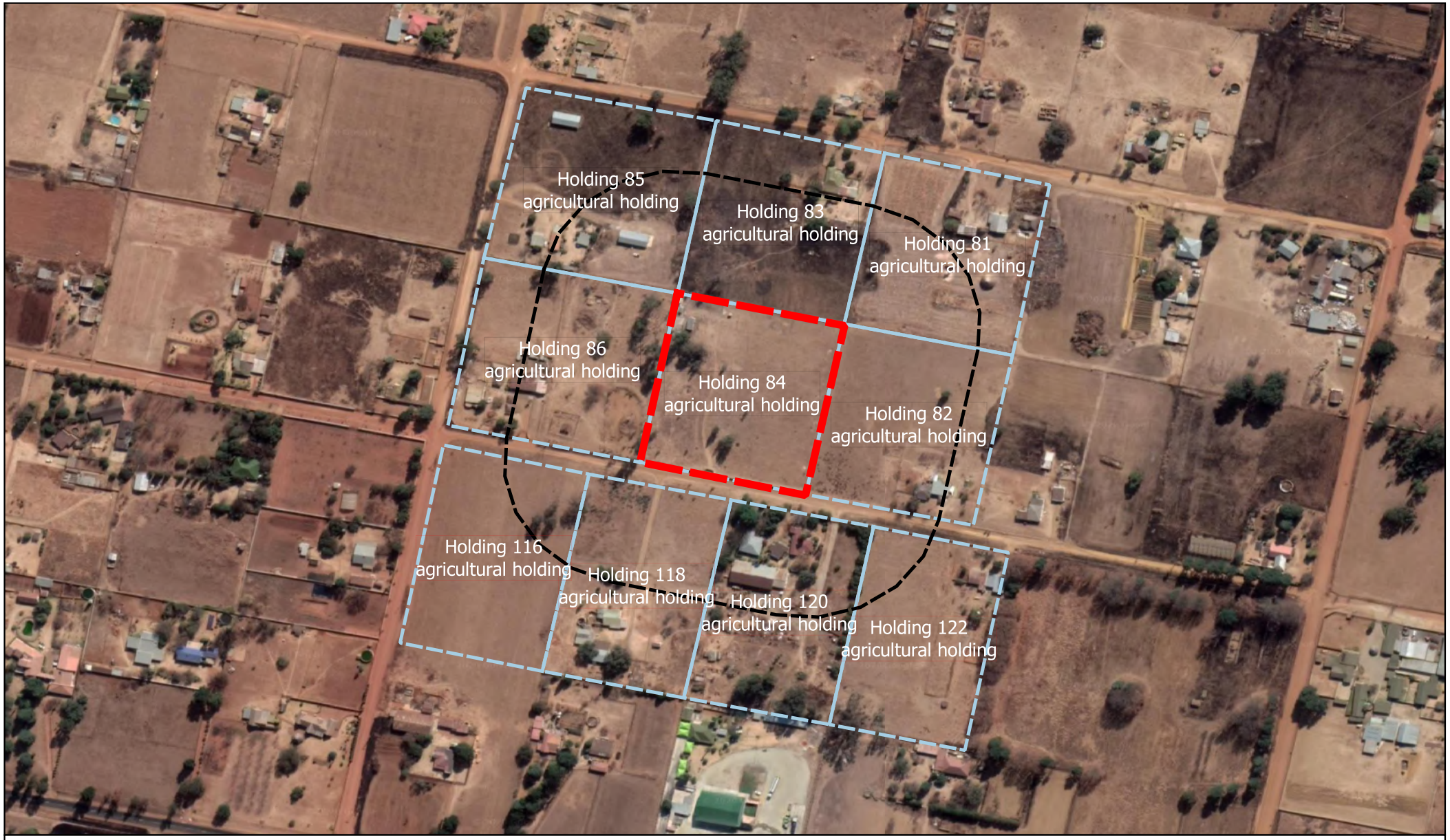
Project Site
100m buffer
500m buffer
Land parcels

Roads
Arterial Road
Main Road
Secondary Road
Street
Other Road

wind direction

N
0 100 200 m
Scale: 1:8 000

Ref: 1901-map-2 | 2020/02/19



Holding 84 Hallgate AH: Locality Map 3

Project Site

100m buffer

Adjacent owners with zoning

Google satellite data

wind direction

N

0 40 80 m

Scale: 1:3 000

Ref: 1901-map-3 | 2020/02/19

Holding 84 Hallgate AH: Locality Map 4

* 1m contour extrapolated from elevation data from satellite data.

Ref: 1901-map-4 | 2020/02/19

Project site

Land cover

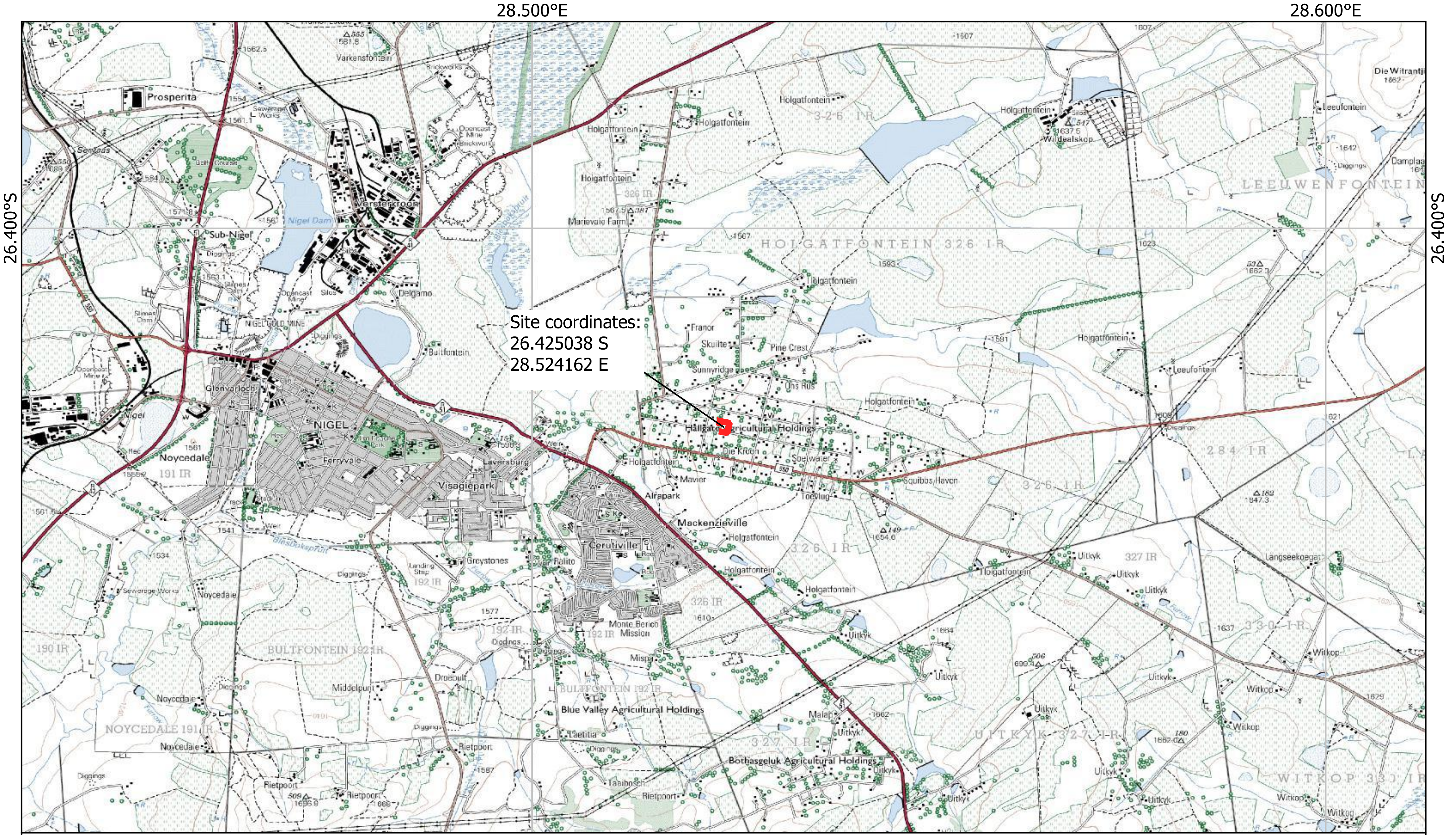
degraded framgemented grassland

1m contour

N

0 10 20 m

Scale: 1:1 000



Holding 84 Hallgate AH: Locality Map Topographical

Ref: 1901-map-1 | 2020/02/18

Project site

2628AD & 2628BC

0 1 2 km

Scale: 1:50 000

Holding 84 Hallgate AH: Layout Map 1

* 1m contour extrapolated from elevation data from satellite data. sources: https://csg.esri-southafrica.com/spatialdataviewer/

Ref: 1901-map-5 | 2020/02/19

Project site
1m contour
100m buffer
Borehole

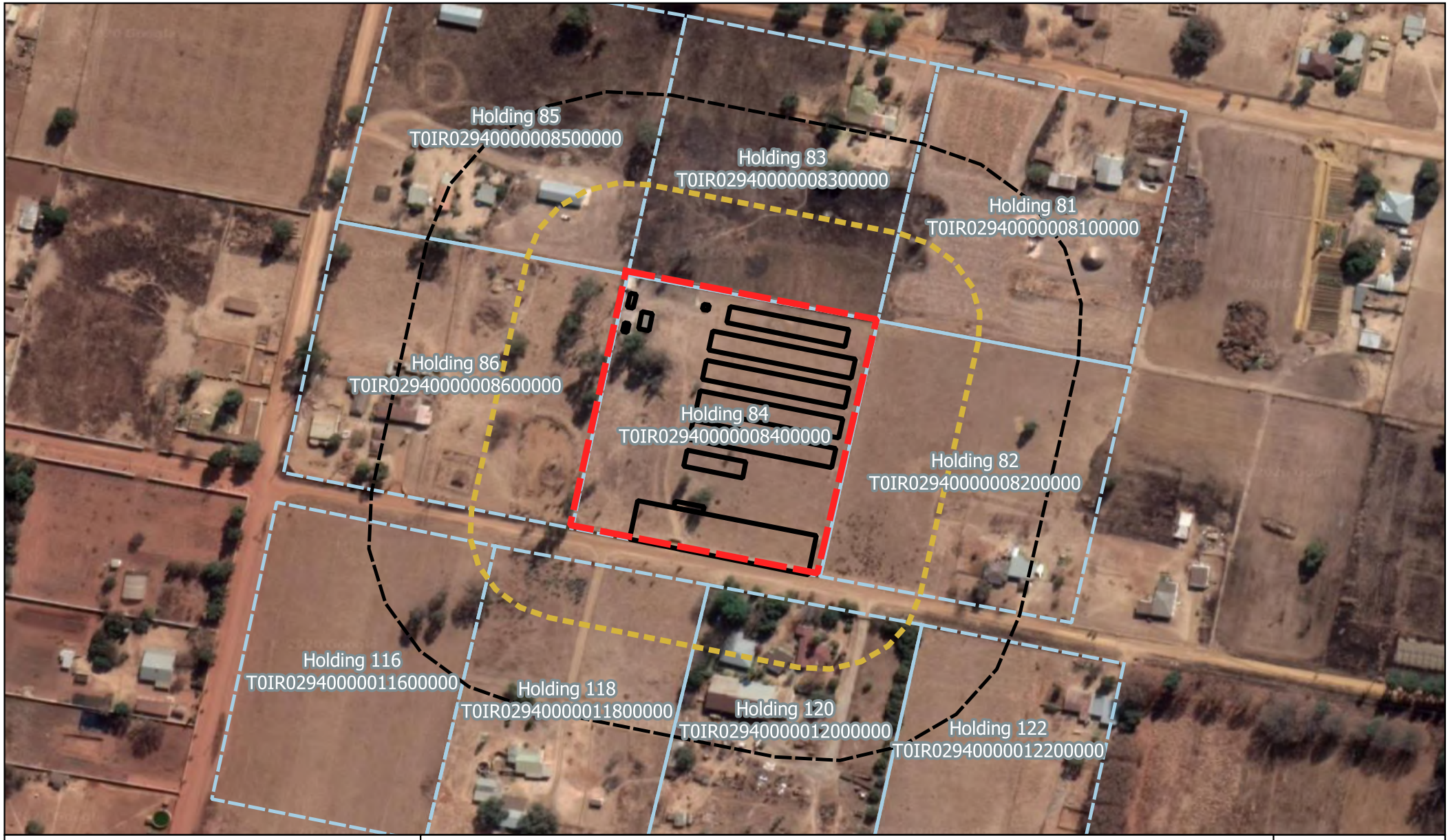
Land cover

Agriculture
Buildings & hard surfaces
Degraded fragmented grassland
Disturbed area
Disturbed grassland
Residence & garden
Road - Driveway
Road & pavement
Light Industrial

N

0 30 60 m

Scale: 1:2 000



Holding 84 Hallgate AH: Layout Map 2

* 1m contour extrapolated from elevation data from satellite data. sources: https://csg.esri-southafrica.com/spatialdataviewer/

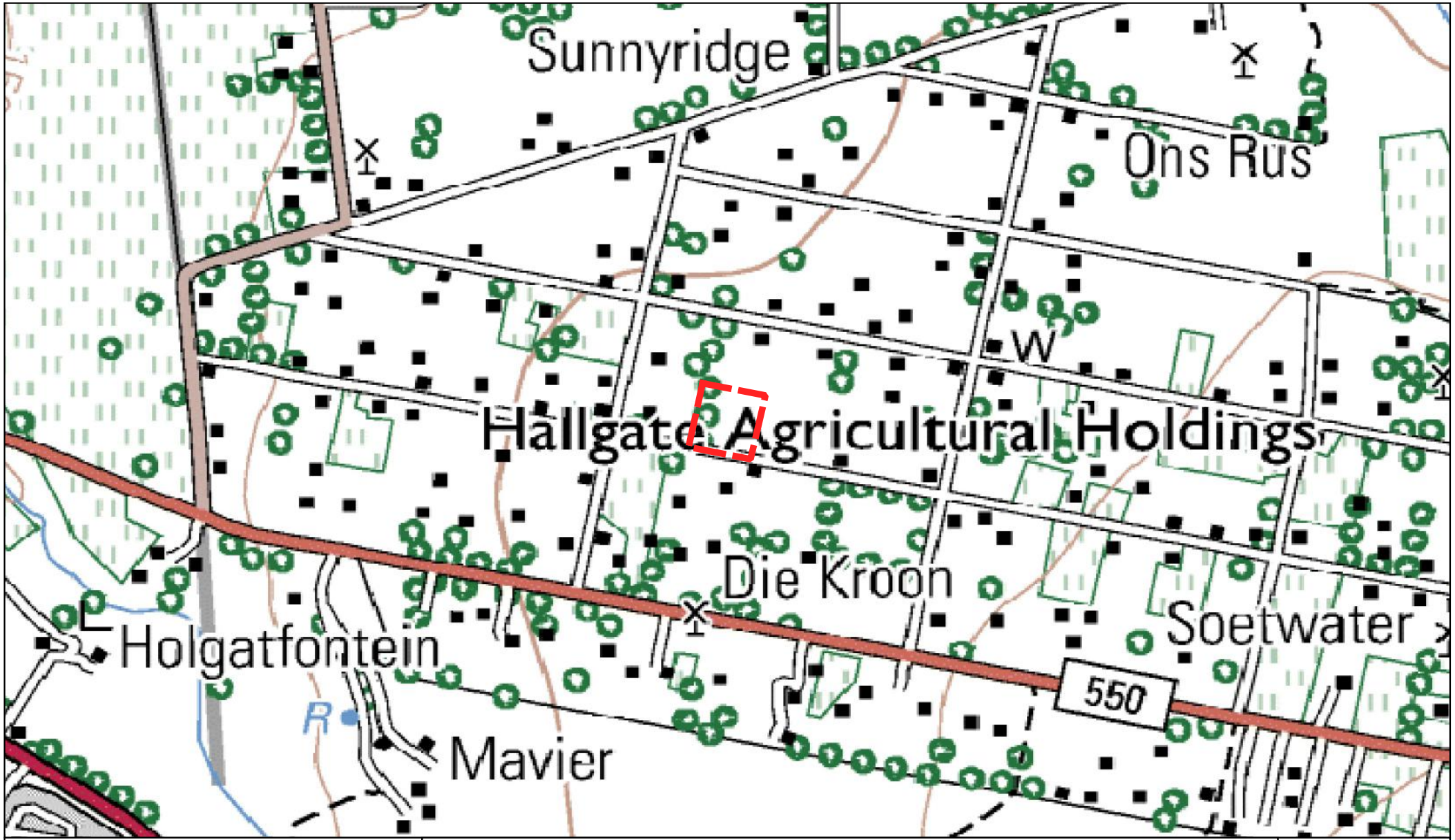
Ref: 1901-map-6 | 2020/02/19

- Project site
- 100m buffer
- 50m Buffer
- Adjacent parcels

N

0 30 60 m

Scale: 1:2 000



Holding 84 Hallgate AH: Layout Map 3

* 1m contour extrapolated from elevation data from satellite data. sources: 2628BC& AD 2010

Ref: 1901-map-7 | 2020/02/19

N

0 100 200 m

Scale: 1:8 000

Holding 84 Hallgate AH: Layout Map 4

* 1m contour extrapolated from elevation data from satellite data. sources: 2628BC& AD 2010

Ref: 1901-map-8 | 2020/02/19

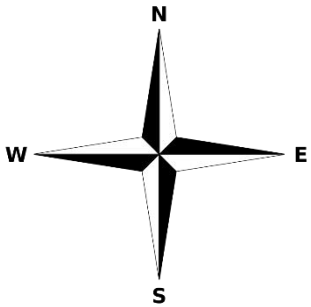
N

0 10 20 m

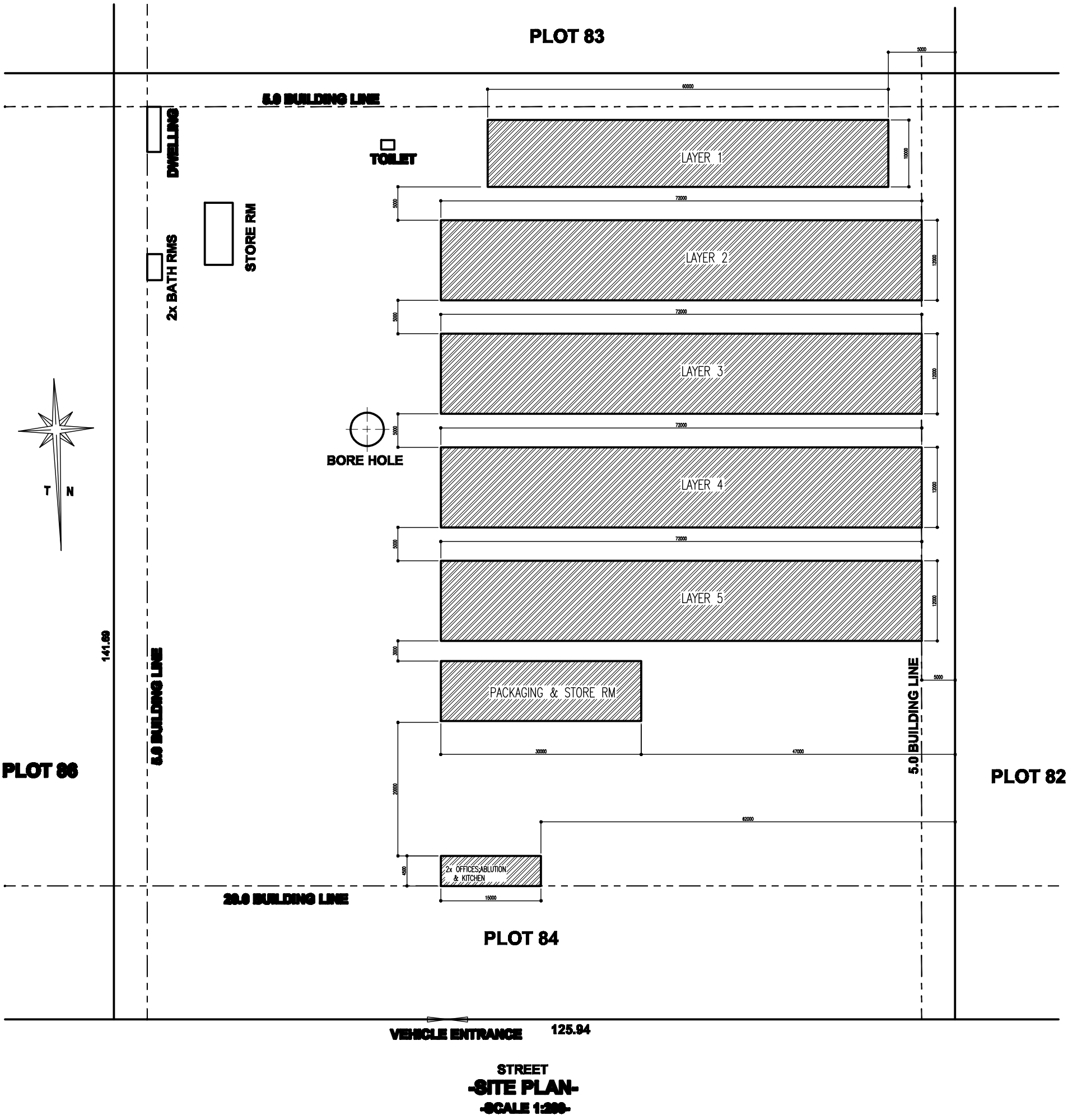
Scale: 1:700

Appendix B:

Photographs


N
W
E
S

Appendix C:
Facility Illustrations



-SITE PLAN-

-SCALE 1:200-

Appendix D:

Route position information

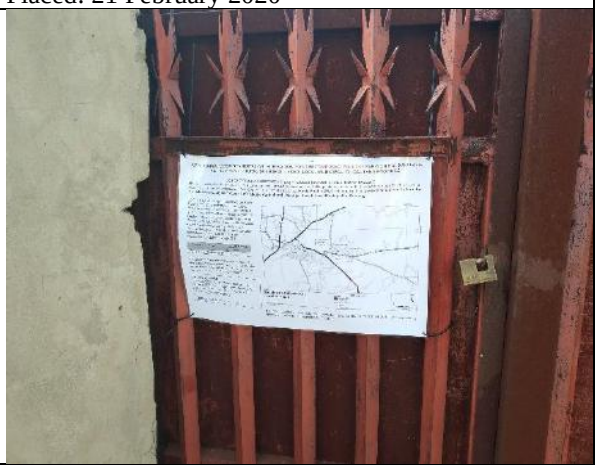
This appendix is not applicable

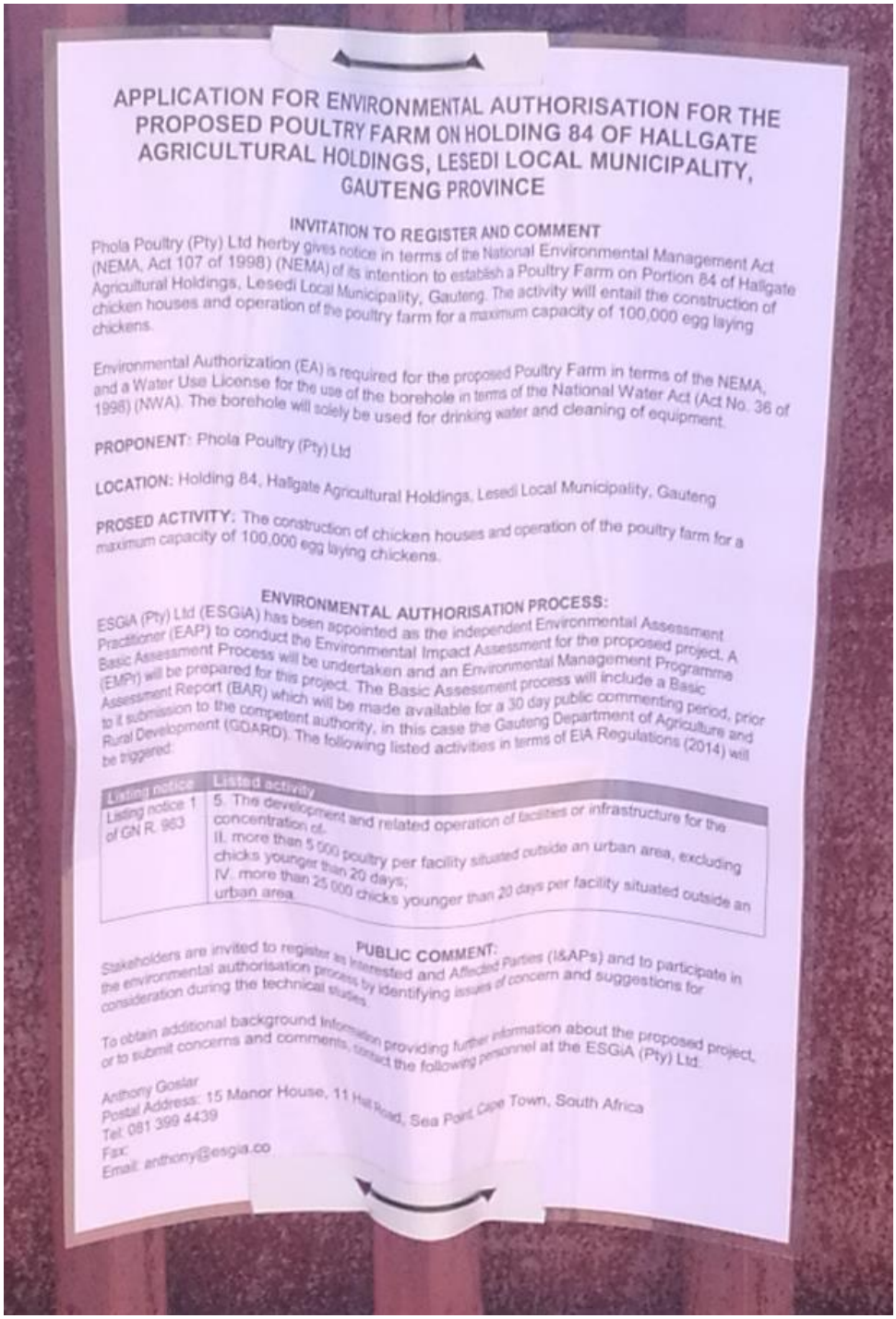
Appendix E:

Public Participation Information

Appendix 1 – Proof of site notice

Site notices were initially placed on 6 March 2019, and then later on 21 February 2020 to coincide with the release of the Draft BA Report.

Placed: 6 March 2019	Placed: 6 March 2019
	
Placed: 21 February 2020	Placed: 21 February 2020
	



APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED POULTRY FARM ON HOLDING 84 OF HALLGATE AGRICULTURAL HOLDINGS, LESEDI LOCAL MUNICIPALITY, GAUTENG PROVINCE

INVITATION TO REGISTER AND COMMENT

Phola Poultry (Pty) Ltd herby gives notice in terms of the National Environmental Management Act (NEMA, Act 107 of 1998) (NEMA) of its intention to establish a Poultry Farm on Portion 84 of Hallgate Agricultural Holdings, Lesedi Local Municipality, Gauteng. The activity will entail the construction of chicken houses and operation of the poultry farm for a maximum capacity of 100,000 egg laying chickens.

Environmental Authorization (EA) is required for the proposed Poultry Farm in terms of the NEMA, and a Water Use License for the use of the borehole in terms of the National Water Act (Act No. 36 of 1998) (NWA). The borehole will solely be used for drinking water and cleaning of equipment.

PROPONENT: Phola Poultry (Pty) Ltd

LOCATION: Holding 84, Hallgate Agricultural Holdings, Lesedi Local Municipality, Gauteng

PROSED ACTIVITY: The construction of chicken houses and operation of the poultry farm for a maximum capacity of 100,000 egg laying chickens.

ENVIRONMENTAL AUTHORISATION PROCESS:

ESGiA (Pty) Ltd (ESGiA) has been appointed as the independent Environmental Assessment Practitioner (EAP) to conduct the Environmental Impact Assessment for the proposed project. A Basic Assessment Process will be undertaken and an Environmental Management Programme (EMPr) will be prepared for this project. The Basic Assessment process will include a Basic Assessment Report (BAR) which will be made available for a 30 day public commenting period, prior to it submission to the competent authority, in this case the Gauteng Department of Agriculture and Rural Development (GDARD). The following listed activities in terms of EIA Regulations (2014) will be triggered:

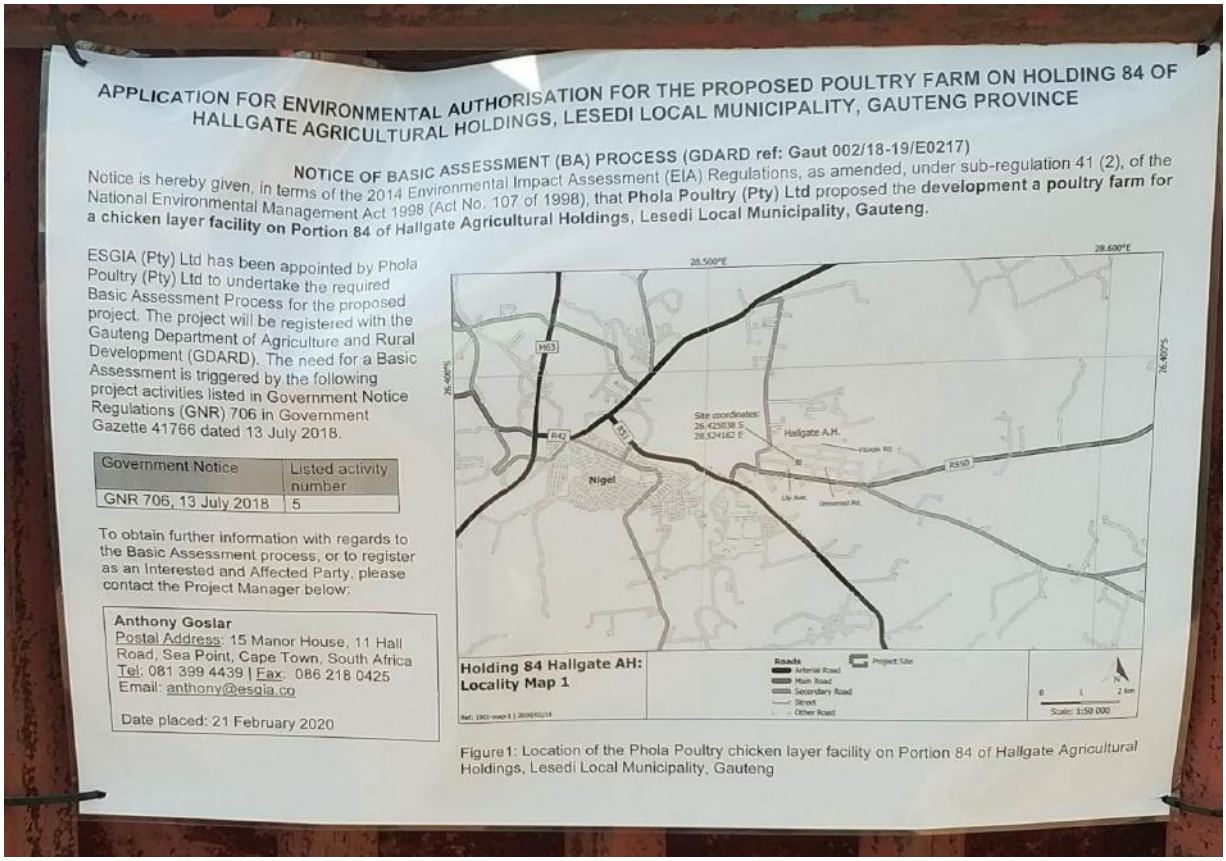
Listing notice	Listed activity
Listing notice 1 of GN R. 983	5. The development and related operation of facilities or infrastructure for the concentration of: II. more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days; IV. more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

PUBLIC COMMENT:

Stakeholders are invited to register as Interested and Affected Parties (I&APs) and to participate in the environmental authorisation process by identifying issues of concern and suggestions for consideration during the technical studies.

To obtain additional background information providing further information about the proposed project, or to submit concerns and comments, contact the following personnel at the ESGiA (Pty) Ltd.

Anthony Goslar
Postal Address: 15 Manor House, 11 Hall Road, Sea Point, Cape Town, South Africa
Tel: 081 399 4439
Fax:
Email: anthony@esgia.co



APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED POULTRY FARM ON HOLDING 84 OF HALLGATE AGRICULTURAL HOLDINGS, LESEDI LOCAL MUNICIPALITY, GAUTENG PROVINCE

NOTICE OF BASIC ASSESSMENT (BA) PROCESS (GDARD ref: Gaut 002/18-19/E0217)

Notice is hereby given, in terms of the 2014 Environmental Impact Assessment (EIA) Regulations, as amended, under sub-regulation 41 (2), of the National Environmental Management Act 1998 (Act No. 107 of 1998), that **Phola Poultry (Pty) Ltd** proposed the **development a poultry farm for a chicken layer facility on Portion 84** of Hallgate **Agricultural Holdings**, Lesedi Local Municipality, Gauteng.

ESGIA (Pty) Ltd has been appointed by Phola Poultry (Pty) Ltd to undertake the required Basic Assessment Process for the proposed project. The project will be registered with the Gauteng Department of Agriculture and Rural Development (GDARD). The need for a Basic Assessment is triggered by the following project activities listed in Government Notice Regulations (GNR) 706 in Government Gazette 41766 dated 13 July 2018.

Government Notice	Listed activity number
GNR 706, 13 July 2018	5

To obtain further information with regards to the Basic Assessment process, or to register as an Interested and Affected Party, please contact the Project Manager below:

Anthony Goslar
Postal Address: 15 Manor House, 11 Hall Road, Sea Point, Cape Town, South Africa
Tel: 081 399 4439 | Fax: 086 218 0425
Email: anthony@esgia.co

Date placed: 21 February 2020

Figure1: Location of the Phola Poultry chicken layer facility on Portion 84 of Hallgate Agricultural Holdings, Lesedi Local Municipality, Gauteng

Appendix 2 – Written notices issued as required in terms of the regulations

Written notices were initially delivered to adjacent landowners on 6 March 2019, and then later on 21 February 2020. Notices of the Draft BA Report were sent on 9 March 2020.

Appendix 3 – Proof of newspaper advertisements

An advertisement was initially place on 6 March 2019, and then later on 26 February 2020.

heraut **Mini MarketPlace**

Deadline for bookings: STRICTLY on Thursdays at 16:00 No exceptions!

804

GENERAL EMPLOYMENT AVAILABLE

JOURNALIST
Position available at
Heraut - Heidelberg/Nigel

An exciting and challenging position for an experienced journalist exists at the Heraut - Heidelberg & Nigel. The incumbent will be required to work individually as well as in a team producing a variety of news covering crime, politics, disasters, accidents, sport, human interest and feature articles for the paper as well as for various online platforms. The journalist will also have to attend and cover social events on behalf of the publication.

Responsibilities:
- Initiating stories including features
- Managing short and long term diaries
- Project a positive image of the title
- Follow up on news
- Establish and maintain a sound network of reliable contacts
- Have a sharp news sense and an ability to generate stories suitable for the title with minimum supervision
- Be able to write a wide variety of in-depth, quality articles
- Assist in the allocation of stories and design of the paper.
- Meet daily online deadlines.

Educational and job specific requirements:
- A proven track record in journalism (Degree or diploma a plus)
- A sound knowledge of the socio-economic conditions and challenges affecting the community we serve in the Heidelberg & Nigel municipalities would be a plus.
- Sound general knowledge
- Reliable vehicle and valid driver's licence
- A good contract base would be a plus
- Well-developed writing skills in both Afrikaans & English
- High literacy level and skilled in relevant computer systems
- Excellent command of English and Afrikaans
- Availability to work abnormal working hours = evenings & weekends included

Personal attributes:
- Ability to work in a fast-paced environment
- Able to operate under stressful conditions at all hours
- A 'can do' attitude
- Articulate and pleasant
- Strong commitment to excellence and accuracy
- Ability to multi-task between project and adhere to strict deadlines
- Good people skills

Send your CV to heraut@lantic.net

CLOSING DATE: 15 March 2019

If you have not heard from us by 22 March 2019, please consider your application unsuccessful.

heraut

We want YOU to join our team of experienced Sales representatives!

If you are a driven, experienced sales rep with a desire to succeed, then give us a call to discuss our packages and requirements!

JOIN OUR TEAM NOW!

Personal requirements
- Matric Certificate
- Driver's Licence and own reliable transport a must.
- **Excellent selling skills & after sales service skills**
- Good communication skills in both English and Afrikaans
- Must have a proven sales record
- Previous sales experience in advertising will be beneficial
- Must be able to work in a team as well as self driven

This position offers a remuneration package consisting of:
- Basic salary
- Fuel allowance
- Commission on reaching targets
- Pension fund

Female Candidates ONLY

Interested candidates who meet the requirements can e-mail **CV plus Matric Certificate, ID copy** and valid driver's licence to **heraut@lantic.net,** or hand deliver it to the office at 9 Ueckermann Street, Heidelberg.

NO SMOKERS

To commence employment asap.

LEGAL NOTICES AND TENDERS

ERRATUM

DIPALESENG LOCAL MUNICIPALITY

PUBLIC NOTICE FOR THE INSPECTION OF THE DRAFT VALUATION ROLL FOR THE PERIOD 2019 TILL 2023

Notice is hereby given in terms of Section 49(1) (a) (i) of the Local Government: Municipal Property Rates Act, 2004 (Act No.6 of 2004), hereinafter referred to as the "Act", that the supplementary valuation roll for the period starting 2019 ending 2023 is open for inspection at Dipaleseng Municipality Offices (Budget and Treasury Department) from **Wednesday, 20th February 2019** until **Tuesday, 30th April 2019.**

For any enquiries please contact the Municipality on these numbers: 082 872 1427/ 071 296 5675/ 071 302 1061

PI MUTSHINYALI
MUNICIPAL MANAGER

NOTICE

APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED POULTRY FARM ON HOLDING 84 OF HALLGATE AGRICULTURAL HOLDINGS, LESEDI LOCAL MUNICIPALITY, GAUTENG PROVINCE.

INVITATION TO REGISTER AND COMMENT:
Phola Poultry (Pty) Ltd herby gives notice in terms of the National Environmental Management Act (NEMA, Act 107 of 1998) (NEMA) of its intention to establish a Poultry Farm on Portion 84 of Hallgate Agricultural Holdings, Lesedi Local Municipality, Gauteng. The activity will entail the construction of chicken houses and operation of the poultry farm for a maximum capacity of 100,000 egg laying chickens. Environmental Authorization (EA) is required for the proposed Poultry Farm in terms of the NEMA, and a Water Use Licence for the use of the borehole in terms of the National Water Act (Act No. 36 of 1998) (NWA). The borehole will solely be used for drinking water and cleaning of equipment.

ENVIRONMENTAL AUTHORISATION PROCESS:
ESGIA (Pty) Ltd (ESGIA) has been appointed as the independent Environmental Assessment Practitioner (EAP) to conduct the Environmental Impact Assessment for the proposed project. A Basic Assessment Process will be undertaken and an Environmental Management Programme (EMPr) will be prepared for this project. The Basic Assessment process will include a Basic Assessment Report (BAR) which will be made available for a 30 day public commenting period, prior to it submission to the competent authority, in this case the Gauteng Department of Agriculture and Rural Development (GDARD). The following listed activities in terms of EIA Regulations (2014) will be triggered: Listing notice 1 of GN R. 983. 5. The development and related operation of facilities or infrastructure for the concentration of-

II. more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days;

IV. more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

PUBLIC COMMENT:
Stakeholders are invited to register as Interested and Affected Parties (I&APs) and to participate in the environmental authorisation process by identifying issues of concern and suggestions for consideration during the technical studies. To obtain additional background information providing further information about the proposed project, or to submit concerns and comments, contact the following personnel at the ESGIA (Pty) Ltd:
Anthony Goslar; Postal Address: 15 Manor House, 11 Hall Road, Sea Point, Cape Town, South Africa; Tel: 081 399 4439; Email: anthonyg@esgia.co

1885

Gert Sibande
District Municipality

ERRATUM

NOTICE OF ANNUAL REPORT 2017/2018

This advert is published in terms of section 21A of the Municipal Systems Act, No 32 of 2000 and section 127(5) of the Municipal Finance Management Act.

Gert Sibande District Municipality had invited members of the public, communities, government institutions, the private sector and Civil Society Organisations to comment on the Annual Report for the 2017/2018 financial year. The first report omitted the Annual Performance Scorecard, which is an addendum to the annual report document.

Hard copies of the report are also available at the Gert Sibande District Municipal Offices and the following local municipalities: • Chief Albert Luthuli Local Municipality • Dipaleseng Local Municipality • Dr Pixley Ka Isaka Seme Local Municipality • Govan Mbeki Local Municipality • Lekwa Local Municipality • Mkhondo Local Municipality • Msukaligwa Local Municipality. This report is also accessible on the municipal website: www.gsibande.gov.za

Community members who may require further assistance with regard to the Annual Report may visit the Gert Sibande District Municipal Office. Mr Lungisizwe Mkhwanazi will be available to respond to the enquiries. The office address is corner Joubert and Oosthuise Streets, Ermelo.

The closing date for written representations or submissions has been extended to Monday, 8 March 2019 at 12:00.

For further enquiries, please do not hesitate to contact Mr Lungisizwe Mkhwanazi at (017) 801-7108 or LungisizweM@gsibande.gov.za

Comments, if posted, should addressed to the Municipal Manager, Gert Sibande District Municipality, PO Box 1748, Ermelo 2350.

CA Habile - Municipal Manager

Human Communications 116754

TENDERS

Check out our website to enter

private property

www.privateproperty.co.za
087 35 111 66

heraut **PLEASE NOTE:** Deadline for classifieds, vacancies, legal notices, auctions & properties is on **Thursdays at 16:00.**

0950 Legal Notices

APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED POULTRY FARM ON HOLDING 84 OF HALLGATE AGRICULTURAL HOLDINGS, LESEDI LOCAL MUNICIPALITY, GAUTENG PROVINCE. INVITATION TO REGISTER AND COMMENT:

Phoko Poultry (Pty) Ltd hereby gives notice in terms of the National Environmental Management Act (NEMA, Act 107 of 1998) (NEMA) of its intention to establish a Poultry Farm for an egg laying facility on Portion 84 of Hallgate Agricultural Holdings, Lesedi Local Municipality, Gauteng. The activity will entail the construction of chicken houses and operation of the poultry farm for a maximum capacity of 100,000 egg laying chickens.
Environmental Authorization (EA) is required for the proposed Poultry Farm in terms of the NEMA.
ENVIRONMENTAL AUTHORISATION PROCESS: ESGIA (Pty) Ltd (ESGIA) has been appointed as the Independent Environmental Assessment Practitioner (EAP) to conduct the Environmental Impact Assessment for the proposed project. A Basic Assessment Process will be undertaken and an Environmental Management Programme (EMPr) will be prepared for this project.
The Basic Assessment process will include a Basic Assessment Report (BAR) which will be made available for a 30 day public commenting period, prior to it submission to the competent authority, in this case the Gauteng Department of Agriculture and Rural Development (GDARD). Activity 5 is triggered in the listed activities in Government Notice Regulations (GNR) 708 in Government Gazette 41766 dated 13 July 2018.

PUBLIC COMMENT:
Stakeholders are invited to register as Interested and Affected Parties (I&APs) and to participate in the environmental authorisation process by identifying issues of concern and suggestions for consideration during the technical studies. To obtain additional background information providing further information about the proposed project, or to submit concerns and comments, contact the following personnel at the ESGIA (Pty) Ltd: Anthony Goslar; Postal Address: 15 Manor House, 11 Hall Road, Sea Point, Cape Town, South Africa;Tel: 081 999 4439, Fax: 089 218 3425, Email: anthony@esgia.co.za

JL039626

LOST OR DESTROYED DEED

Notice is hereby given in terms of Regulation 68 of the Deeds Registries Act, 1937, of the intention to apply for the issue of a certified copy of Deed of Transfer T38845/73 passed by ANNA MAGDALENA BUITENDAG, Identity Number: 310516 0048 082 in respect of:

1. ERF 121 DEVON TOWNSHIP, Registration Division I.R. TRANSVAAL;
2. ERF 122 DEVON TOWNSHIP, Registration Division I.R. TRANSVAAL;
3. ERF 123 DEVON TOWNSHIP, Registration Division I.R. TRANSVAAL;

which has been lost or destroyed.

All persons having objection to the issue of such copies are hereby required to lodge the same in writing with the Registrar of Deed at The Deeds Office Information Section, Merino Building, 140 Pretorius Street, Pretoria Central, Pretoria, 0002 within two (2) weeks after the date of the publication of this notice.

Dated at PRETORIA this 19th day of FEBRUARY 2020

LOUW LE ROUX INCORPORATED
500 Botterklapper Street
Lynnwood
Pretoria
Tel: (012) 361 3675
e-mail: una@llilaw.co.za

A21870

Spogatlete na volgende ronde

NIGEL - Laerskool Tini Vorster spog met atlete wat tydens die Nigel Sentraal atletiekbyeenkoms op 12 Februarie vir deelname aan die Groter Nigel atletiekbyeenkoms gekwalifiseer het. Hulle is Lizé Lötter (o/11 meisies hoogspring), Christiaan Steyn (o/13 seuns gewigstoot), Juan Joubert (o/13 seuns skyfwerp en spiesgooi), Theuns van der Merwe (80m hekkies seuns o/13), Jané Wepener (1500m en 800m meisies o/13), Dawie Naudé (skyfwerp en spiesgooi seuns o/13), Liza Gouws (gewigstoot meisies o/13), Esmari Pieterse (75m hekkies, 200m hekkies, verspring, hoogspring en gewigstoot meisies o/13), Linél Claassens (150m hekkies, verspring, hoogspring en gewigstoot meisies o/12), Kayla Kleinhans (hoogspring meisies o/13), Jaden de Witt (verspring en hoogspring seuns o/12), Mickyla Knoësen (hoogspring meisies o/12), Tyron Munro (verspring en gewigstoot seuns o/12), Luné Wepener (1500m, 200m en 800m meisies o/13), Adriaan Botha (1500m seuns o/13), DW Alberts (1200m seuns o/12), Blehan Wepener (800m en 1500m seuns o/13), Janco van Rooyen (gewigstoot seuns o/13), Jaundré van der Merwe (verspring seuns o/13), Lohané Aucamp (70m hekkies, 80m, 100m, 1200m en verspring meisies o/11), Mischa Heyneke (gewigstoot meisies o/11), Jessica Johst (1200m meisies o/10), Michaela Grüng (hoogspring en 80m meisies o/10), Connor Cannon (75m hekkies seuns o/11), Jamie van der Merwe (gewigstoot meisies o/10), Nielette Janse van Vuuren (1200m en hoogspring meisies o/11), Dizelle du Toit (hoogspring meisies o/11), Leyla Smith (verspring, hoogspring en gewigstoot meisies o/12), Marco Lötter (gewigstoot seuns o/10), Rickus Bornman (1200m seuns o/11), Layla Lighthelm (hoogspring meisies o/10), Keagan Hurley (80m naellope seuns o/8), Adriaan Brandt (1200m en verspring seuns o/10), Amy Erasmus (100m naellope, verspring en hoogspring meisies o/10), Quinton Botha (1200m seuns o/11), Ruhardt van Niekerk (hoogspring seuns o/11), Donavan Wagner (70m hekkies en gewigstoot seuns o/10), Ruan Bekker (hoogspring en gewigstoot seuns o/11) en Linden Manuel (150m hekkies seuns o/12).

Hierdie atlete van Laerskool Tini Vorster het vir deelname aan die Groter Nigel atletiekbyeenkoms wat op 21 Februarie plaasgevind het, gekwalifiseer: Lizé Lotter, Christiaan Steyn, Juan Joubert, Theuns van der Merwe, Jané Wepener, Dawie Naudé, Liza Gouws, Esmari Pieterse, Linél Claasens, Kayla Kleinhans, Jaden de Witt, Michaela Knoësen, Tyron Munro, Luné Wepener, Adriaan Botha, DW Alberts, Blehan Wepener, Janco van Rooyen, Juandré van der Merwe, Lohané Aucamp, Mischa Heyneke, Jessica Johst, Michaela Grüng, Thinus Erasmus, Connor Cannon, Jamie van der Merwe, Nielette Janse van Vuuren, Dizelle du Toit, Leyla Smith, Marco Lötter, Danté Gheza, Rikus Bornman, Layla Lighthelm, Keagan Hurley, Adriaan Brandt, Amy Erasmus, Quinton Botha, Ruhardt van Niekerk, Donavan Wagner, Ruan Bekker en Linden Manuel.

Post road-trip checks worth considering

Holidaymakers who traveled extensively over the festive season would have had their vehicles checked or serviced thoroughly in advance.

The road trips are now done and dusted and there may be some issues that need attention. Post road-trip maintenance is equally important for the safety of both drivers and passengers.

"A quick diagnostic check at your accredited workshop will provide a heads-up, should the vehicle need urgent attention," said Dewald Ranft, chairman of the Motor Industry Workshop Association (MIWA).

Vehicle owners can also do basic spot checks before the diagnostic assessment to flag problem areas for the mechanic. Cleaning your vehicle inside and out will make it easier to spot obvious damage and problem areas. Ensure that you have travel and emergency accessories in place. These include basic tools, spare wheel, breakdown triangles, jump-start cables, first-aid kit and tyre pressure gauge.

According to the Automobile Association (AA), damaged tyres and wheels are among the top 10 causes of breakdowns. Check the pressure along with the condition of the tyres and wheels, including the spare. Use a tread gauge to measure sufficient traction. Should the gauge show less than 1.6mm, it is time to replace the tyre.

Ensure that you have your vehicle's wheel balance, alignment and brake pads checked. The windshield should be inspected for small cracks or distracting chips. Most vehicle insurers will cover the cost to repair or replace a windshield. Have your cooling system and water levels checked.

Inspect any radiator leaks and ensure that the electric cooling fan is working properly and oil levels are intact. Test your battery performance and charging capacity to avoid being left stranded next to the road.

"We highly recommend using accredited workshops to ensure the highest standard of service and accountability. Should any repairs or maintenance be needed, the mechanic will be able to manage these for you accordingly," Ranft concluded.

A quick diagnostic check at your accredited workshop will provide a heads-up, should the vehicle need urgent attention.

Appendix 4 –Communications to and from interested and affected parties

To be provided in the finalised report.

Appendix 5 – Minutes of any public and/or stakeholder meetings

No stakeholder meetings were held.

Appendix 6 - Comments and Responses Report

To be provided in the finalised report.

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

To be provided in the finalised report.

Appendix 8 –Comments from I&APs on amendments to the BA Report

To be provided in the finalised report.

Appendix 9 – Copy of the register of I&Aps

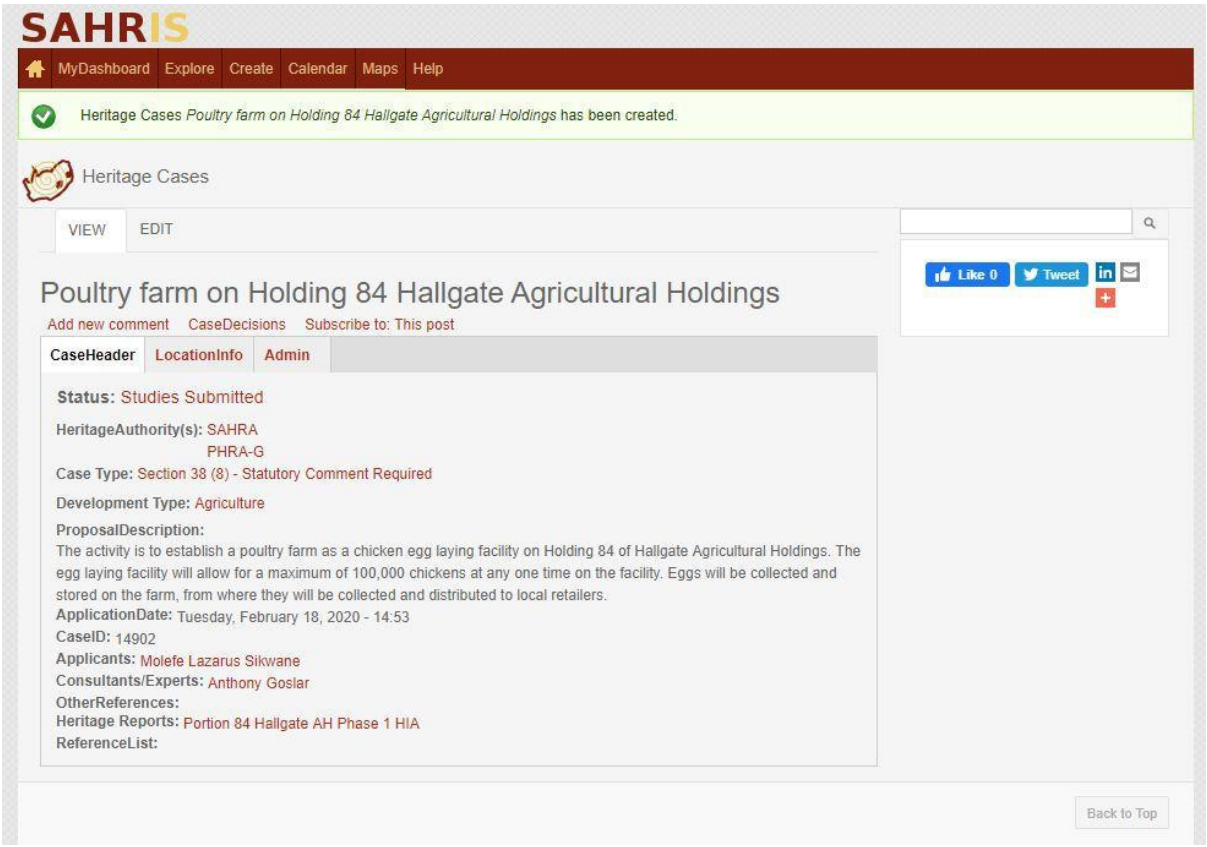
This will updated as the PPP process is currently being conducted.

First Name	Family Name	Company / Organisation	Position / Unit / Farm Portion
Molefe	Sikwane	Applicant	Holding 84 Hallgate AH
Simon	Mnyakeni	Ward Councillor	Ward Councillor
Christina	Rademan	Adjacent Landowner	Holding 82 Hallgate AH
Zimele	Khanyile	Adjacent Landowner	Holding 81 Hallgate AH
Nelisiwe	Khanyile	Adjacent Landowner	Holding 81 Hallgate AH
Johannes	Rudolph	Adjacent Landowner	Holding 83 Hallgate AH
Yvonne	Rudolph	Adjacent Landowner	Holding 83 Hallgate AH
Tommy	Swanepoel	Adjacent Landowner	Holding 85 Hallgate AH
Hannelie	Robberts	Adjacent Landowner	Holding 85 Hallgate AH

First Name	Family Name	Company / Organisation	Position / Unit / Farm Portion
Pieter	Moolman	Adjacent Landowner	Holding 85 Hallgate AH
Arrie	Nell	Adjacent Landowner	Holding 86 Hallgate AH
Daniela	du Plooy	Adjacent Landowner	Holding 86 Hallgate AH
Salomo	van Heerden	Adjacent Landowner	Holding 118 Hallgate AH
Maria	van Heerden	Adjacent Landowner	Holding 118 Hallgate AH
Mark	Idensohn	Adjacent Landowner	Holding 120 Hallgate AH
	River of Hope Ministries	Adjacent Landowner	Holding 116 Hallgate AH
Phiwe	Mhlola	Lesedi Local Municipality	Development Planning
Zwelibanzi	Majola	Sedibeng District Municipality	Strategic Planning and Economic Development
Stanley	Khanyile	Sedibeng District Municipality	Municipal Manager
		Endangered Wildlife Trust	
		Birdlife Africa	
Anneliza	Collett	AgriLand	
Petunia	Ramanenyiwa	Gauteng Department of Water and Sanitation	
Howard	Hendriks	SANS Parks	
		Council of Geosciences	
Albert	Marumo	Department of Health	
Zingisa	Smale	Gauteng Department of Agriculture & Rural Development	
		Department of Water & Sanitation	
Bonginkosi	Zulu	Department of Rural Development and Land Reform	
Tebogo	Molokomme	The Provincial Heritage Resources Agency Gauteng	
Bethuel	Netshiswinzhe	Gauteng Department of Infrastructure Development	
Phindile	Mbanjwa	Gauteng Department of Economic Development	

Appendix F:

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


SAHRIS
MyDashboard
Explore
Create
Calendar
Maps
Help
Heritage Cases Poultry farm on Holding 84 Hallgate Agricultural Holdings has been created.
Heritage Cases
VIEW
EDIT
Like 0
Tweet
Poultry farm on Holding 84 Hallgate Agricultural Holdings
Add new comment
CaseDecisions
Subscribe to: This post
CaseHeader
LocationInfo
Admin
Status: Studies Submitted
HeritageAuthority(s): SAHRA
PHRA-G
Case Type: Section 38 (8) - Statutory Comment Required
Development Type: Agriculture
ProposalDescription:
The activity is to establish a poultry farm as a chicken egg laying facility on Holding 84 of Hallgate Agricultural Holdings. The egg laying facility will allow for a maximum of 100,000 chickens at any one time on the facility. Eggs will be collected and stored on the farm, from where they will be collected and distributed to local retailers.
ApplicationDate: Tuesday, February 18, 2020 - 14:53
CaseID: 14902
Applicants: Molefe Lazarus Sikwane
Consultants/Experts: Anthony Goslar
OtherReferences:
Heritage Reports: Portion 84 Hallgate AH Phase 1 HIA
ReferenceList:
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Appendix G:
Specialist Reports

G1: Biodiversity specialist study

G2: Heritage impact assessment

BIODIVERSITY DESKTOP SCREENING FOR PORTION 84: HALLGATE AGRICULTURAL HOLDINGS SITE

Hallgate, Gauteng

Date
September 2019

Prepared for:

ESGiA

Prepared by:
The Biodiversity Company
Cell: +27 81 319 1225
Fax: +27 86 527 1965
info@thebiodiversitycompany.com
www.thebiodiversitycompany

Phase 1 Cultural Heritage Impact Assessment:

THE PROPOSED DEVELOPMENT OF A POULTRY FARM ON PORTION 84 OF HALLGATE AGRICULTURAL HOLDINGS, LESEDI LOCAL MUNICIPALITY, SEDIBENG, GAUTENG PROVINCE

Prepared for:
ESGIA (Pty) Ltd: Mr A Goslar

- Address: 15 The Manor House, 11 Hall Road, Sea Point, Cape Town, 8005; Tel. no.: 082 928 0621; E-mail: anthonyg@esgia.co

Prepared by:
J A van Schalkwyk (D Litt et Phil),

- Heritage Consultant: ASAPA Registration No.: 164 - Principal Investigator: Iron Age, Colonial Period, Industrial Heritage.
- Postal Address: 62 Coetzer Avenue, Monument Park, 0181; Tel: 076 790 6777; E-mail: jvschalkwyk@mweb.co.za

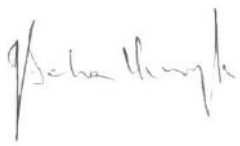
Report No: 2019/JvS/091

- Status: Final
- Date: September 2019
- Revision No: -
- Date: -

Report Name	**BIODIVERSITY DESKTOP SCREENING FOR PORTION 84: HALLGATE AGRICULTURAL HOLDINGS SITE**
Submitted to	ESGiA
Report Writer	**Martinus Erasmus** 
	Martinus Erasmus (Cand Sci Nat) obtained his B-Tech degree in Nature Conservation in 2016 at the Tshwane University of Technology. Martinus has been conducting EIAs, basic assessments and assisting specialists in the field during his studies since 2015.
Report Writer	**Lindi Steyn** 
	Lindi Steyn has a PhD in Biodiversity and Conservation from the University of Johannesburg. She specialises in avifauna and has worked in this specialisation since 2013.
Report Reviewer	**Andrew Husted** 
	Andrew Husted is Pr Sci Nat registered (400213/11) in the following fields of practice: Ecological Science, Environmental Science and Aquatic Science. Andrew is an Aquatic, Wetland and Biodiversity Specialist with more than 12 years' experience in the environmental consulting field. Andrew has completed numerous wetland training courses, and is an accredited wetland practitioner, recognised by the DWS, and also the Mondi Wetlands programme as a competent wetland consultant.
Declaration	The Biodiversity Company and its associates operate as independent consultants under the auspice of the South African Council for Natural Scientific Professions. We declare that we have no affiliation with or vested financial interests in the proponent, other than for work performed under the Environmental Impact Assessment Regulations, 2014 (as amended). We have no conflicting interests in the undertaking of this activity and have no interests in secondary developments resulting from the authorisation of this project. We have no vested interest in the project, other than to provide a professional service within the constraints of the project (timing, time and budget) based on the principles of science.

Specialist competency:

Johan A van Schalkwyk, D Litt et Phil, heritage consultant, has been working in the field of heritage management for more than 40 years. Originally based at the National Museum of Cultural History, Pretoria, he has actively done research in the fields of anthropology, archaeology, museology, tourism and impact assessment. This work was done in Limpopo Province, Gauteng, Mpumalanga, North West Province, Eastern Cape Province, Northern Cape Province, Botswana, Zimbabwe, Malawi, Lesotho and Swaziland. Based on this work, he has curated various exhibitions at different museums and has published more than 70 papers, most in scientifically accredited journals. During this period, he has done more than 2000 impact assessments (archaeological, anthropological, historical and social) for various government departments and developers. Projects include environmental management frameworks, roads, pipeline-, and power line developments, dams, mining, water purification works, historical landscapes, refuse dumps and urban developments.



J A van Schalkwyk
Heritage Consultant
July 2019

DECLARATION

I, Martinus Erasmus, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.

Martinus Erasmus

Terrestrial Ecologist

The Biodiversity Company

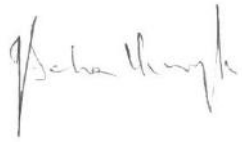
September 2019

SPECIALIST DECLARATION

I, J A van Schalkwyk, as the appointed independent specialist, in terms of the 2014 EIA Regulations (as amended), hereby declare that I:

- I act as the independent specialist in this application;
- I perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 (as amended) and any specific environmental management Act;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I have no vested interest in the proposed activity proceeding;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- I have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- all the particulars furnished by me in this specialist input/study are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Signature of the specialist



J A van Schalkwyk
September 2019

DECLARATION

I, Lindi Steyn, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.

Lindi Steyn

Terrestrial Ecologist

The Biodiversity Company

September 2019

EXECUTIVE SUMMARY

Phase 1 Cultural Heritage Impact Assessment:
THE PROPOSED DEVELOPMENT OF A POULTRY FARM ON PORTION 84 OF HALLGATE AGRICULTURAL HOLDINGS, LESEDI LOCAL MUNICIPALITY, SEDIBENG, GAUTENG PROVINCE

It is proposed to develop a poultry farm on Portion 84 of Hallgate Agricultural Holdings in the Lesedi Local Municipality of Gauteng Province.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by *ESGIA (Pty) Ltd* to conduct a cultural heritage assessment to determine if the development of the poultry farm would have an impact on any sites, features or objects of cultural heritage significance.

This report describes the methodology used, the limitations encountered, the heritage features that were identified and the recommendations and mitigation measures proposed relevant to this. The HIA consisted of a desktop study (archival sources, database survey, maps and aerial imagery) and a physical survey that included the interviewing of relevant people. It should be noted that the implementation of the mitigation measures is subject to SAHRA/PHRA's approval.

The cultural landscape qualities of the region essentially consist of two components. The first is a rural area in which the human occupation is made up of a pre-colonial (Stone Age and Iron Age) occupation and a much later colonial (farmer) component. The second component is an urban one which, in the last few decades underwent intensive urbanisation, much of which occurred during the last 50 years or less.

Identified sites

During the physical survey, no sites, features or objects of cultural significance were identified.

Impact assessment

Impact analysis of cultural heritage resources under threat of the proposed development, is based on the present understanding of the development:

- As no sites, features or objects of cultural significance are known to exist in the development area, there would be no impact as a result of the proposed development.

Heritage sites	Significance of impact	Mitigation measures
Phola Poultry Farm: Construction Phase		
Without mitigation	n/a	n/a
With mitigation	n/a	n/a
Phola Poultry Farm: Operation Phase		
Without mitigation	n/a	n/a
With mitigation	n/a	n/a

Legal requirements

The legal requirements related to heritage specifically are specified in Section 3 of this report. For this proposed project, the assessment has determined that no sites, features or objects of heritage significance occur in the study area. If heritage features are identified during construction, as stated in the management recommendation, these finds would have to be assessed by a specialist, after which a decision will be made regarding the application for relevant permits.

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Tables

Reasoned opinion as to whether the proposed activity should be authorised:

- From a heritage point of view, it is recommended that the proposed development be allowed to continue on acceptance of the conditions proposed below.

Conditions for inclusion in the environmental authorisation:

- The Palaeontological Sensitivity Map (SAHRIS) indicate that the study area has a high sensitivity of fossil remains to be found and therefore a palaeontological field assessment and protocol for finds is required.
- Should archaeological sites or graves be exposed in other areas during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

J A van Schalkwyk
Heritage Consultant
September 2019

Figures

TECHNICAL SUMMARY

Project description	
Description	Development of a poultry farm
Project name	Phola Poultry

Applicant
Phola Poultry (Pty) Ltd

Environmental assessors
ESGIA (Pty) Ltd
Mr A Goslar

Property details						
Province	Gauteng					
Magisterial district						
Local municipality	Lesedi					
Topo-cadastral map	2628BC					
Farm name	Holgatfontein 326IR					
Closest town	Benoni					
Coordinates	Centre point (approximate)					
	No	Latitude	Longitude	No	Latitude	Longitude
	1	S 26,42504	E 28,52417			

Development criteria in terms of Section 38(1) of the NHR Act	Yes/No
Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	No
Construction of bridge or similar structure exceeding 50m in length	No
Development exceeding 5000 sq m	Yes
Development involving three or more existing erven or subdivisions	No
Development involving three or more erven or divisions that have been consolidated within past five years	No
Rezoning of site exceeding 10 000 sq m	No
Any other development category, public open space, squares, parks, recreation grounds	No

Land use	
Previous land use	Farming
Current land use	Small holding

1 Introduction

The Biodiversity Company was appointed to undertake a biodiversity screening study for an agricultural holdings area, with the purpose of identifying any likely fatal flaws or red flags for the proposed development.

The project entails the construction of new infrastructure as seen in Figure 1.The project area is situated on portion 84, in Hallgate AH, Gauteng Province (Figure 2).

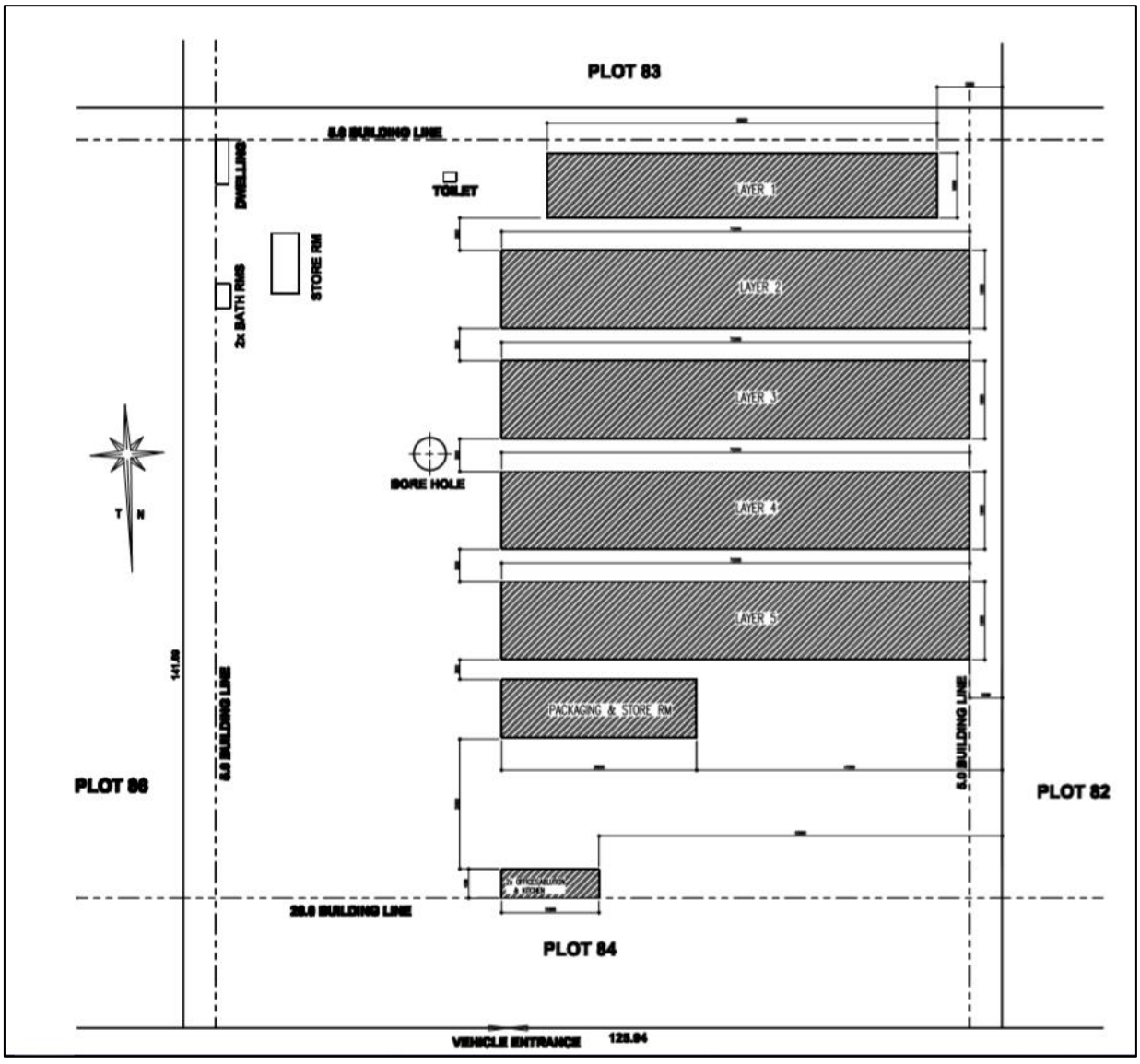

Figure 1:Site layout for the Hallgate development

2 Project Area

The area surrounding the project area consists of an assemblage of other agricultural holdings and associated infrastructure as well as secondary roads.(Figure 2).

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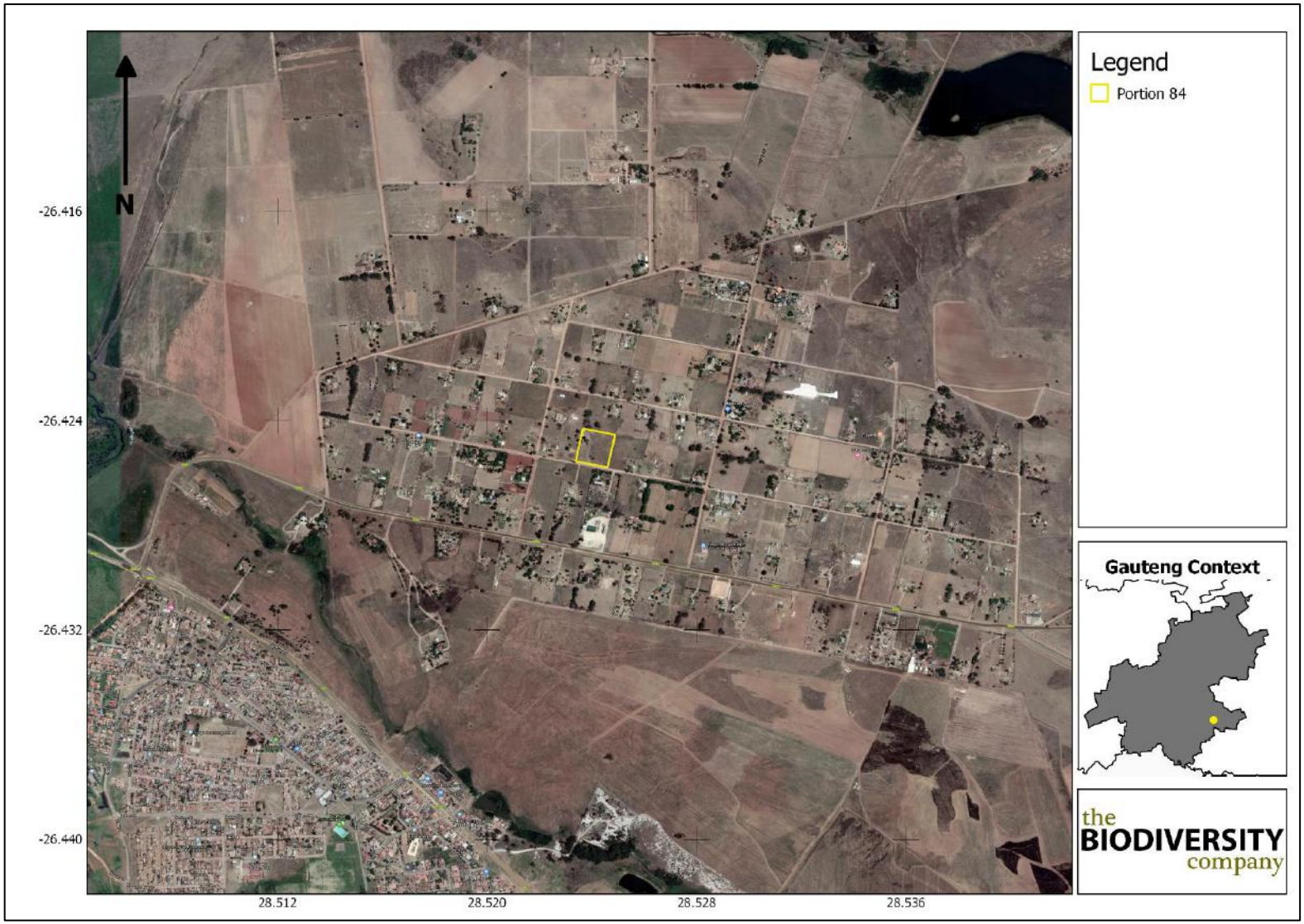

Figure 2: The general location of the project area

GLOSSARY OF TERMS AND ABBREVIATIONS

TERMS

Bioturbation: The burrowing by small mammals, insects and termites that disturb archaeological deposits.

Cumulative impacts: "Cumulative Impact", in relation to an activity, means the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may become significant when added to existing and reasonably foreseeable impacts eventuating from similar or diverse activities.

Debitage: Stone chips discarded during the manufacture of stone tools.

Factory site: A specialised archaeological site where a specific set of technological activities has taken place – usually used to describe a place where stone tools were made.

Historic Period: Since the arrival of the white settlers - c. AD 1830 - in this part of the country.

Holocene: The most recent time period, which commenced c. 10 000 years ago.

Iron Age (also referred to as **Early Farming Communities**)**:** Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. As they produced their own iron tools, archaeologists call this the Iron Age.

Early Iron Age	AD 200 - AD 900
Middle Iron Age	AD 900 - AD 1300
Later Iron Age	AD 1300 - AD 1830

Midden: The accumulated debris resulting from human occupation of a site.

Mitigation, means to anticipate and prevent negative impacts and risks, then to minimise them, rehabilitate or repair impacts to the extent feasible.

National Estate: The collective heritage assets of the Nation.

Pleistocene: Geological time period of 3 000 000 to 20 000 years ago.

Stone Age: The first and longest part of human history is the Stone Age, which began with the appearance of early humans between 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who did not live in permanently settled communities. Their stone tools preserve well and are found in most places in South Africa and elsewhere.

Early Stone Age	2 500 000 - 150 000 Before Present
Middle Stone Age	150 000 - 30 000 BP
Later Stone Age	30 000 - until c. AD 200

Tradition: As used in archaeology, it is a seriated sequence of artefact assemblages, particularly ceramics.

ACRONYMS and ABBREVIATIONS

ASAPA	Association of Southern African Professional Archaeologists
BCE	Before the Common Era (the year 0)

3 Terms of Reference

The Terms of Reference (ToR) included the following:

- Desktop description of the baseline receiving environment specific to the field of expertise (general surrounding area as well as site specific environment);
- Identification and description of any sensitive receptors in terms of relevant specialist disciplines that occur in the project area, and the manner in which these sensitive receptors may be affected by the activity;
- Identify 'significant' ecological and floral features within the proposed development areas; and
- Screening to identify any critical issues (potential fatal flaws) that may result in project delays or rejection of the application.

4 Methodologies

4.1 Terrestrial Biodiversity

4.1.1 Geographic Information Systems

Existing data layers were incorporated into a Geographic Information Systems (GIS) to establish how the proposed project interact with these important entities. Emphasis was placed around the following spatial datasets:

- Vegetation Map of South Africa, Lesotho and Swaziland (Mucina *et al*., 2007);
- Important Bird Areas 2015 – BirdLife South Africa (vector geospatial dataset); and
- Terrestrial critical biodiversity areas for Gauteng.

Field surveys will later be conducted to confirm (or refute) the presence of species identified in the desktop assessment. The specialist disciplines to be completed for this study included:

- Botanical;

Brief descriptions of the standardised methodologies applied in each of the specialist disciplines are provided below. More detailed descriptions of survey methodologies are available upon request.

4.1.2 Botanical Assessment

The botanical study will consist of an assessment of all the vegetation units and habitat types within the project area. The focus will be on an ecological habitat assessment of habitat types as well as identification for any red-data species within the known distribution of the project area. The methodology included the following survey techniques:

- Timed meanders;
- Sensitivity analysis based on structural and species diversity; and
- Identification of floral red-data species.

BP	Before Present (calculated from 1950 when radio-carbon dating was established)
CE	Common Era (the year 0)
ESA	Early Stone Age
EIA	Early Iron Age
HIA	Heritage Impact Assessment
I & AP's	Interested and Affected Parties
LIA	Late Iron Age
LSA	Later Stone Age
MIA	Middle Iron Age
MSA	Middle Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System

A literature review was conducted as part of the desktop study to identify the potential habitats present within the project area. The SANBI provides an electronic database system, namely the Botanical Database of Southern Africa (BODATSA), to access distribution records on southern African plants. This is a new database which replaces the old Plants of Southern Africa (POSA) database. The POSA database provided distribution data of flora at the quarter degree square (QDS) resolution.

The Red List of South African Plants website (SANBI, 2016) was utilized to provide the most current account of the national status of flora. Relevant field guides and texts consulted for identification purposes in the field during the surveys included the following:

- Field Guide to the Wild Flowers of the Highveld (Van Wyk & Malan, 1997);
- A Field Guide to Wild flowers (Pooley, 1998);
- Guide to Grasses of Southern Africa (Van Oudtshoorn, 1999);
- Orchids of South Africa (Johnson & Bytebier, 2015);
- Guide to the Aloes of South Africa (Van Wyk & Smith, 2014);
- Medicinal Plants of South Africa (Van Wyk *et al*., 2013);
- Freshwater Life: A field guide to the plants and animals of southern Africa (Griffiths & Day, 2016); and
- Identification Guide to Southern African Grasses. An identification manual with keys, descriptions and distributions (Fish *et al*., 2015).

Additional information regarding ecosystems, vegetation types, and species of conservation concern (SCC) included the following sources:

- The Vegetation of South Africa, Lesotho and Swaziland (Mucina & Rutherford, 2012);
- Grassland Ecosystem Guidelines: landscape interpretation for planners and managers (SANBI, 2013); and
- Red List of South African Plants (Raimondo *et al*., 2009; SANBI, 2019).

5 Key Legislative Requirements

The legislation, policies and guidelines listed below are applicable to the current project in terms of biodiversity and ecological support systems. The list below, although extensive, may not be complete and other legislation, policies and guidelines may apply in addition to those listed below.

Explanation of certain documents or organisations is provided (Table 1) where these have a high degree of relevance to the project and/or are referred to in this assessment.

COMPLIANCE WITH APPENDIX 6 OF THE 2014 EIA REGULATIONS (AS AMENDED)

Requirements of Appendix 6 – GN R982	**Addressed in the Specialist Report**
1. (1) A specialist report prepared in terms of these Regulations must contain-	
a) details of-	
i. the specialist who prepared the report; and	Front page
ii. the expertise of that specialist to compile a specialist report including a curriculum vitae;	Page i Addendum Section 6
b) a declaration that the specialist is independent in a form as may be specified by the competent authority;	Page ii
c) an indication of the scope of, and the purpose for which, the report was prepared;	Section 1
(cA) an indication of the quality and age of base data used for the specialist report;	Section 4
(cB) a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	Section 7.3
d) the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Section 4.2.2
e) a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	Section 4
f) details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	Addendum Section 5; Figure 11
g) an identification of any areas to be avoided, including buffers;	Section 8
h) a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Figure 11 Addendum Section 5
i) a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 2
j) a description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	Section 7
k) any mitigation measures for inclusion in the EMPr;	Section 9 & 10
l) any conditions for inclusion in the environmental authorisation;	Section 10
m) any monitoring requirements for inclusion in the EMPr or environmental authorisation;	Section 9
n) a reasoned opinion-	
i. whether the proposed activity, activities or portions thereof should be authorised; (iA) regarding the acceptability of the proposed activity or activities; and	Section 10
ii. if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;	Section 8, 9, 10
o) a description of any consultation process that was undertaken during the course of preparing the specialist report;	-
p) a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	-
q) any other information requested by the competent authority.	-
(2) Where a government notice by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	-

Table 1: A list of key legislative requirements relevant to biodiversity and conservation in Gauteng

INTERNATIONAL	Convention on Biological Diversity (CBD, 1993)
	The United Nations Framework Convention on Climate Change (UNFCC,1994)
	The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES 1973)
	The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention, 1979)
NATIONAL	Constitution of the Republic of South Africa (Act No. 108 of 2006)
	The National Environmental Management Act (NEMA) (Act No. 107 of 1998)
	The National Environmental Management Protected Areas Act (Act No. 57 of 2003)
	The National Environmental Management Biodiversity Act (Act No. 10 of 2004)
	The National Environmental Management: Waste Act, 2008 (Act 59 of 2008);
	The Environment Conservation Act (Act No. 73 of 1989)
	National Environmental Management Air Quality Act (No. 39 of 2004)
	National Protected Areas Expansion Strategy (NPAES)
	Natural Scientific Professions Act (Act No. 27 of 2003)
	National Biodiversity Framework (NBF, 2009)
	National Forest Act (Act No. 84 of 1998)
	National Water Act, 1998 (Act 36 of 1998)
	National Freshwater Ecosystem Priority Areas (NFEPA's)
	National Spatial Biodiversity Assessment (NSBA)
	World Heritage Convention Act (Act No. 49 of 1999)
	National Heritage Resources Act, 1999 (Act 25 of 1999)
	Municipal Systems Act (Act No. 32 of 2000)
	Alien and Invasive Species Regulations, 2014
	South Africa's National Biodiversity Strategy and Action Plan (NBSAP)
	Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)
	Sustainable Utilisation of Agricultural Resources (Draft Legislation).
	White Paper on Biodiversity
PROVINCIAL	GDARD Requirements for Biodiversity Assessments (Version 3, 2014a)
	Gauteng Department of Agriculture and Rural Development (GDARD): Checklist for Biodiversity Assessments
	GDARD Mining and Environmental Impact Guide

6 Desktop Spatial Assessment

The following features describes the general area and habitat, this assessment is based on spatial data that are provided by various sources such as the provincial environmental authority and SANBI. The desktop analysis and their relevance to this project are listed in Table 2.

Table 2: Desktop spatial features examined.

Desktop Information Considered	Relevant/Not relevant	Section
Conservation Plan	None of the proposed development area falls on any areas listed. Closest listed area is 923 meters South West of the project area, CBA: Irreplaceable.	7.1

Phase 1 Cultural Heritage Impact Assessment:
THE PROPOSED DEVELOPMENT OF A POULTRY FARM ON PORTION 84 OF HALLGATE AGRICULTURAL HOLDINGS, LESEDI LOCAL MUNICIPALITY, SEDIBENG, GAUTENG PROVINCE

1. INTRODUCTION

1.1 Background

It is proposed to develop a poultry farm on Portion 84 of Hallgate Agricultural Holdings in the Lesedi Local Municipality of Gauteng Province.

ESGIA (Pty) Ltd was contracted as independent environmental consultant to undertake the EIA process for the development of the proposed poultry farm.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. However, according to Section 27(18) of the National Heritage Resources Act (NHRA), No. 25 of 1999, no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by *ESGIA (Pty) Ltd* to conduct a cultural heritage assessment to determine if the development of the poultry farm would have an impact on any sites, features or objects of cultural heritage significance.

This report forms part of the Environmental Impact Assessment (EIA) as required by the EIA Regulations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended and is intended for submission to the South African Heritage Resources Agency (SAHRA).

1.2 Terms and references

The aim of a full HIA investigation is to provide an informed heritage-related opinion about the proposed development by an appropriate heritage specialist. The objectives are to identify heritage resources (involving site inspections, existing heritage data and additional heritage specialists if necessary); assess their significances; assess alternatives in order to promote heritage conservation issues; and to assess the acceptability of the proposed development from a heritage perspective.

The result of this investigation is a heritage impact assessment report indicating the presence/ absence of heritage resources and how to manage them in the context of the proposed development.

Depending on SAHRA's acceptance of this report, the developer will receive permission to proceed with the proposed development, on condition of successful implementation of proposed mitigation measures.

1.2.1 *Scope of work*

The aim of this study is to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where the development of the poultry farm is to take place. This included:

- Conducting a desk-top investigation of the area;
- A visit to the proposed development site.

The objectives were to:

Rocky Ridges	Irrelevant: the closest ridge (Class1) is 2.5 km away from the project area	-
Ecosystem Threat Status	Falls within a *Critically Endangered* ecosystem	7.2.1
Ecosystem Protection Level	The ecosystem of the project area is rated as *not protected*	7.2.2
Protected Areas	The Blesbokspruit protected area occurs 4.6 km North-West of the project area.	7.3
NFEPA Rivers and Wetlands	The project area, nor the 500 m regulated area, does not overlap with a true FEPA river nor does it overlap with a true FEPA wetland.	7.3
Mining and Biodiversity Guidelines	Irrelevant: no mining component	-
Important Bird and Biodiversity Areas	The Blesbokspruit IBA occurs 4.6 km North-West of the project area	8.5.1.1

6.1 Gauteng Critical Biodiversity Areas

The Gauteng Conservation Plan (Version 3.3) (GDARD, 2014b) classified areas within the province on the basis of its contribution to reach the conservation targets within the province. These areas are classified as Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) to ensure sustainability in the long term. The CBAs are classified as either 'Irreplaceable' (must be conserved), or 'Important'.

CBAs are terrestrial and aquatic areas of the landscape that need to be maintained in a natural or near-natural state to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. Thus, if these areas are not maintained in a natural or near natural state then biodiversity targets cannot be met.

According to the Gauteng Terrestrial CBA Plan (C-Plan), none of the proposed development area falls on any listed areas (Figure 3).

- Identify possible archaeological, cultural and historic sites within the proposed development areas;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

1.2.2 *Assumptions and Limitations*

The investigation has been influenced by the following factors:

- It is assumed that the description of the proposed project, provided by the client, is accurate.
- The unpredictability of buried archaeological remains.
- No subsurface investigation (i.e. excavations or sampling) were undertaken, since a permit from SAHRA is required for such activities.
- It is assumed that the public consultation process undertaken as part of the Environmental Impact Assessment (EIA) is sufficient and that it does not have to be repeated as part of the heritage impact assessment.

2. LEGISLATIVE FRAMEWORK

2.1 Background

Heritage Impact Assessments are governed by national legislation and standards and International Best Practise. These include:

- South African Legislation
    - National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA);
    - Mineral and Petroleum Resources Development Act, 2002 (Act No. 22 of 2002) (MPRDA);
    - National Environmental Management Act 1998 (Act No. 107 of 1998) (NEMA); and
    - National Water Act, 1998 (Act No. 36 of 1998) (NWA).
- Standards and Regulations
    - South African Heritage Resources Agency (SAHRA) Minimum Standards;
    - Association of Southern African Professional Archaeologists (ASAPA) Constitution and Code of Ethics;
    - Anthropological Association of Southern Africa Constitution and Code of Ethics.
- International Best Practise and Guidelines
    - ICOMOS Standards (Guidance on Heritage Impact Assessments for Cultural World Heritage Properties); and
    - The UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage (1972).

2.2 Heritage Impact Assessment Studies

South Africa's unique and non-renewable archaeological and palaeontological heritage sites are 'generally' protected in terms of the National Heritage Resources Act (Act No 25 of 1999, Section 35) and may not be disturbed at all without a permit from the relevant heritage resources authority.
The National Heritage Resources Act (Act No. 25 of 1999, Section 38) provides guidelines for Cultural Resources Management and prospective developments:

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

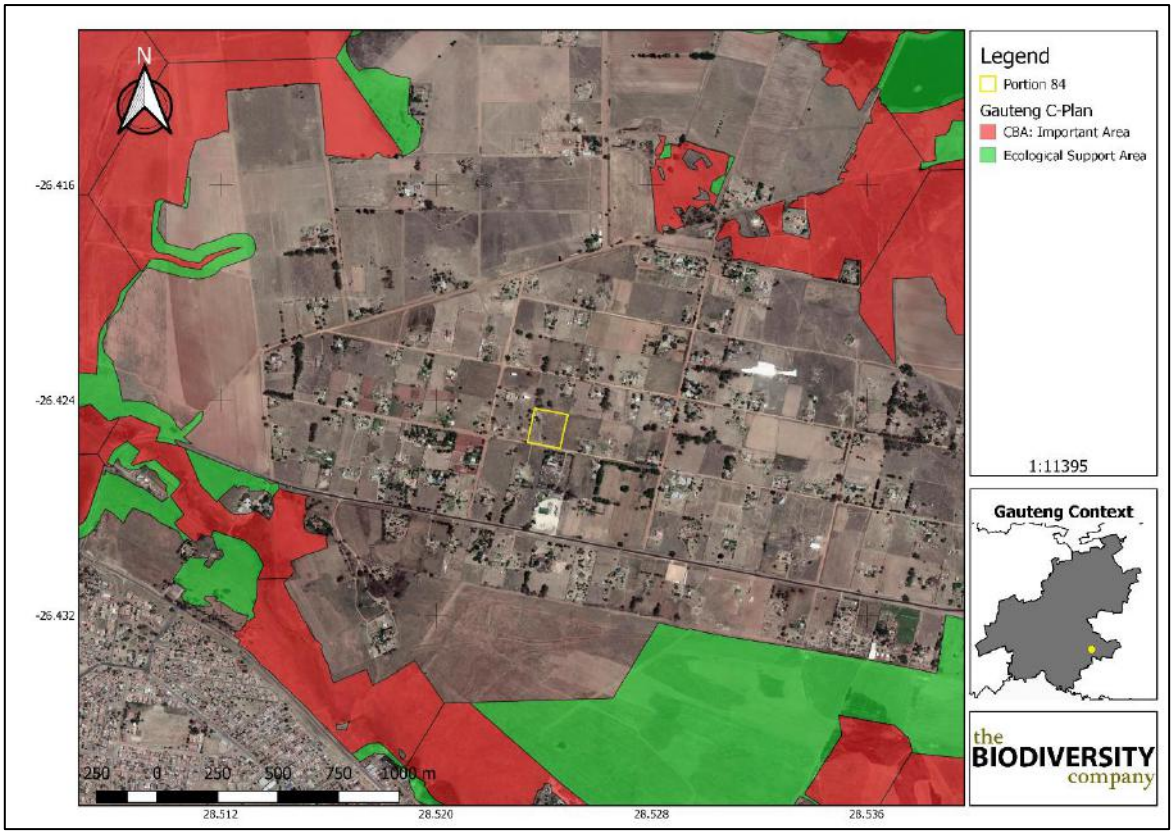

Figure 3: The project area superimposed on the Gauteng CBA dataset

6.2 National Biodiversity Assessment

The National Biodiversity Assessment (NBA) was completed as a collaboration between the SANBI, the DEA and other stakeholders, including scientists and biodiversity management experts throughout the country over a three-year period (Driver *et al*., 2011).

The purpose of the NBA is to assess the state of South Africa's biodiversity with a view to understanding trends over time and informing policy and decision-making across a range of sectors (Driver *et al*., 2011).

The two headline indicators assessed in the NBA are *ecosystem threat status* and *ecosystem protection level* (Driver *et al*., 2011).

6.2.1 Ecosystem Threat Status

Ecosystem threat status outlines the degree to which ecosystems are still intact or alternatively losing vital aspects of their structure, function and composition, on which their ability to provide ecosystem services ultimately depends (Driver *et al*., 2011).

Ecosystem types are categorised as Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Least Threatened (LT), based on the proportion of each ecosystem type that remains in good ecological condition (Driver *et al*., 2011).

The project area was superimposed on the terrestrial ecosystem threat status (Figure 4). As seen in Figure 4 the project area falls within an ecosystem which are listed as CR.

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site:
(i) exceeding 5 000 m^2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within he past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m^2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development."

And:

"38 (3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:
(a) The identification and mapping of all heritage resources in the area affected;
(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
(c) an assessment of the impact of the development on such heritage resources;
(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
(g) plans for mitigation of any adverse effects during and after the completion of the proposed development."

3. HERITAGE RESOURCES

3.1 The National Estate

The National Heritage Resources Act (No. 25 of 1999) defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, including-
    - ancestral graves;
    - royal graves and graves of traditional leaders;
    - graves of victims of conflict;
    - graves of individuals designated by the Minister by notice in the Gazette;
    - historical graves and cemeteries; and

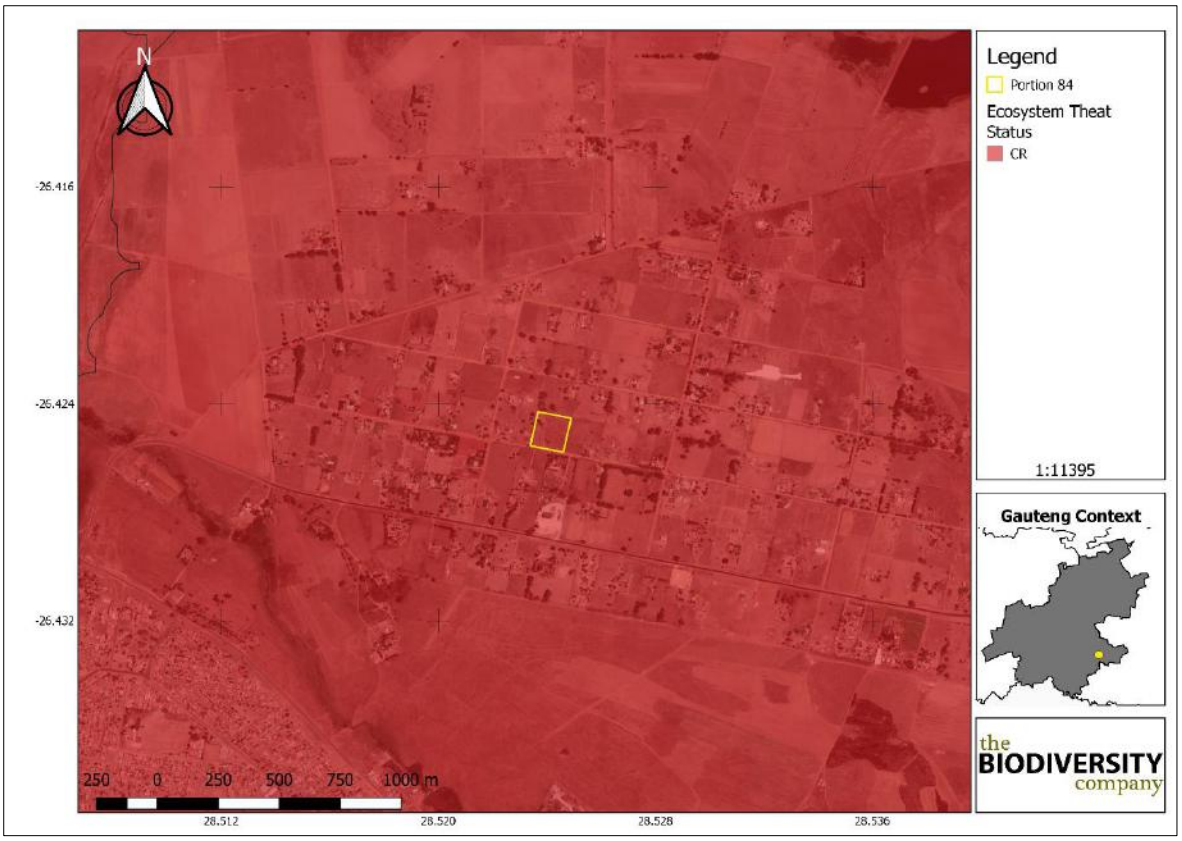

Figure 4: The project area showing the ecosystem threat status of the associated terrestrial ecosystems (NBA, 2012)

6.2.2 Ecosystem Protection Level

Ecosystem protection level tells us whether ecosystems are adequately protected or under-protected. Ecosystem types are categorised as not protected, poorly protected, moderately protected or well protected, based on the proportion of each ecosystem type that occurs within a protected area recognised in the Protected Areas Act (Driver *et al*., 2011).

The project area was superimposed on the ecosystem protection level map to assess the protection status of terrestrial ecosystems associated with the development (Figure 5). Based on Figure 5 the terrestrial ecosystems associated with the development (entire project area and surrounds) are rated as *not protected*.

  - other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- sites of significance relating to the history of slavery in South Africa;
- movable objects, including-
  - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - objects to which oral traditions are attached or which are associated with living heritage;
  - ethnographic art and objects;
  - military objects;
  - objects of decorative or fine art;
  - objects of scientific or technological interest; and
  - books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

3.2 Cultural significance

In the NHRA, Section 2 (vi), it is stated that ''cultural significance'' means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This is determined in relation to a site or feature's uniqueness, condition of preservation and research potential.

According to Section 3(3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of

- its importance in the community, or pattern of South Africa's history;
- its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- sites of significance relating to the history of slavery in South Africa.

A matrix (see **Section 2** of **Addendum**) was developed whereby the above criteria were applied for the determination of the significance of each identified site. This allowed some form of control over the application of similar values for similar identified sites.

4. STUDY APPROACH AND METHODOLOGY

4.1 Extent of the Study

This survey and impact assessment cover all facets of cultural heritage located in the study area as presented in Section 5 below and illustrated in Figures 3 & 4.

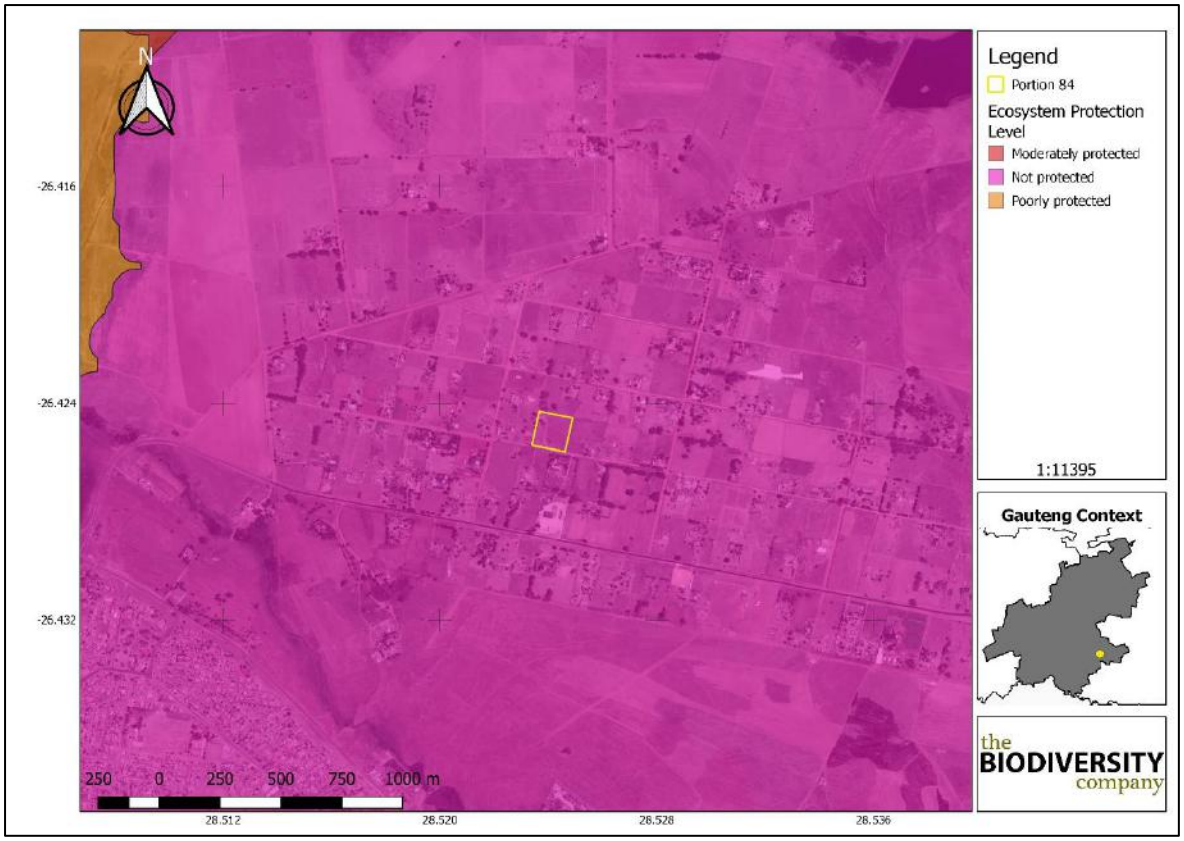

Figure 5: The project area showing the level of protection of terrestrial ecosystems (NBA, 2012)

6.3 National Freshwater Ecosystem Priority Areas Status and Inland Water Courses

In an attempt to better conserve aquatic ecosystems, South Africa has recently categorised its river systems according to set ecological criteria (i.e. ecosystem representation, water yield, connectivity, unique features, and threatened taxa) to identify Freshwater Ecosystem Priority Areas (FEPAs) (Driver *et al*., 2011). The FEPAs are intended to be conservation support tools and envisioned to guide the effective implementation of measures to achieve the National Environment Management Biodiversity Act (NEM:BA) biodiversity goals (Nel *et al.,* 2011).

The project area as well as the 500 m regulated area do not overlap with a true FEPA river nor does it overlap with a true FEPA wetland. (Figure 6).

4.2 Methodology

4.2.1.1 Survey of the literature
A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various anthropological, archaeological and historical sources were consulted – see list of references in Section 11.

- Information on events, sites and features in the larger region were obtained from these sources.

4.2.1.2 Survey of heritage impact assessments (HIAs)
A survey of HIAs done for projects in the region by various heritage consultants was conducted with the aim of determining the heritage potential of the area – see list of references in Section 11.

- Information on sites and features in the larger region were obtained from these sources.

4.2.1.3 Data bases
The *Heritage Atlas Database,* various SAHRA databases, the *Environmental Potential Atlas*, the *Chief Surveyor General* and the *National Archives of South Africa* were consulted.

- Database surveys produced a number of sites located in the larger region of the proposed development.

4.2.1.4 Other sources
Aerial photographs and topocadastral and other maps were also studied - see the list of references below.

- Information of a very general nature were obtained from these sources

The results of the above investigation are presented in Figure 1 below – see list of references in Section 11 – and can be summarised as follows:

- Historic structures, inclusive of buildings, monuments and bridges, occur mostly in an urban environment, although they also occur sporadically on farms in the region;
- Formal and informal burial sites occur sporadically throughout the countryside.

Based on the above assessment, the probability of cultural heritage sites, features and objects occurring in the study area is deemed to be **low**.

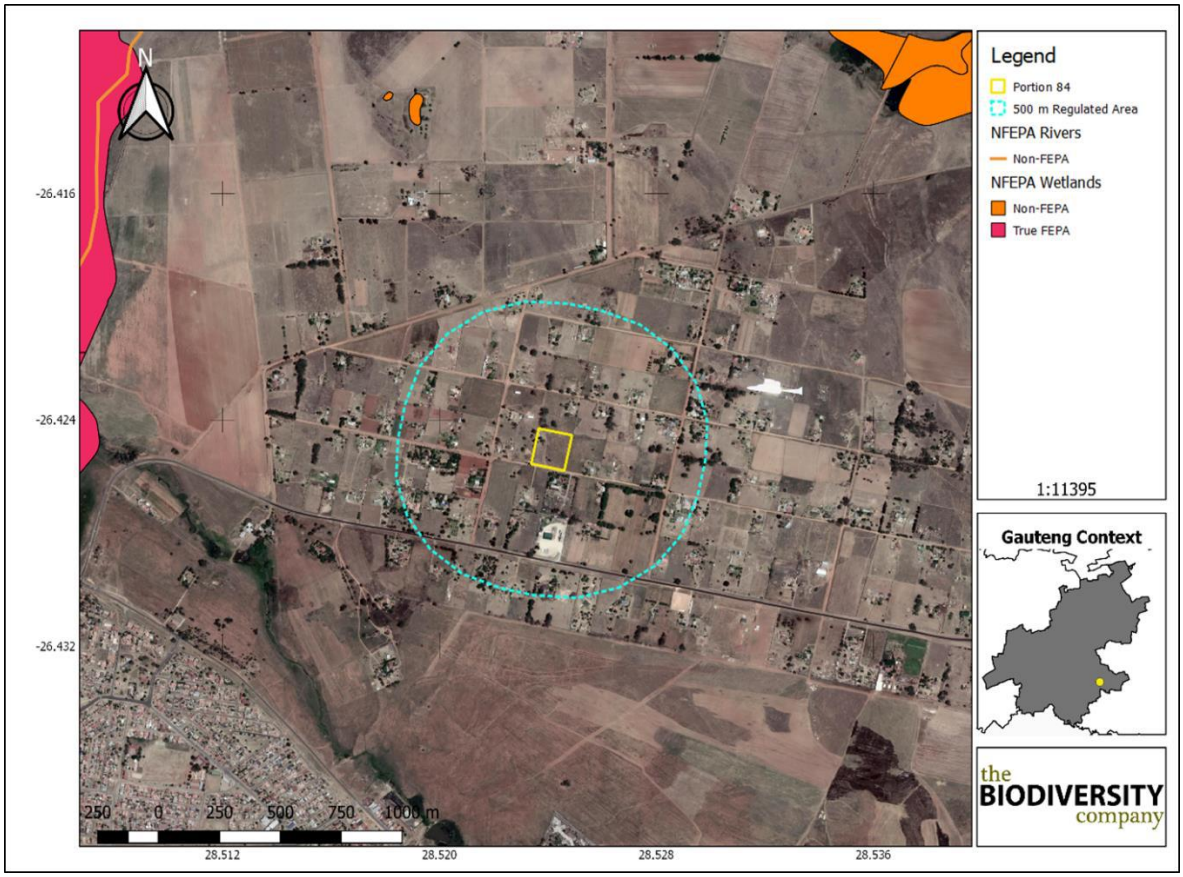

Figure 6: The project area in relation to the National Freshwater Ecosystem Priority Areas (BGIS, 2018)

7 Desktop Results

7.1 Vegetation Assessment

The project area is situated across one biome, the grassland biome. This grassland biome is centrally located in southern Africa, and adjoins all except the desert, fynbos and succulent Karoo biomes (Mucina & Rutherford, 2006). Major macroclimatic traits that characterise the grassland biome include:

a) Seasonal precipitation; and

b) The minimum temperatures in winter (Mucina & Rutherford, 2006).

The grassland biome is found chiefly on the high central plateau of South Africa, and the inland areas of KwaZulu-Natal and the Eastern Cape. The topography is mainly flat and rolling but includes the escarpment itself. Altitude varies from near sea level to 2 850 m above sea level.

Grasslands are dominated by a single layer of grasses. The amount of cover depends on rainfall and the degree of grazing. The grassland biome experiences summer rainfall and dry winters with frost (and fire), which are unfavourable for tree growth. Thus, trees are typically absent, except in a few localized habitats. Geophytes (bulbs) are often abundant. Frosts, fire and grazing maintain the grass dominance and prevent the establishment of trees.

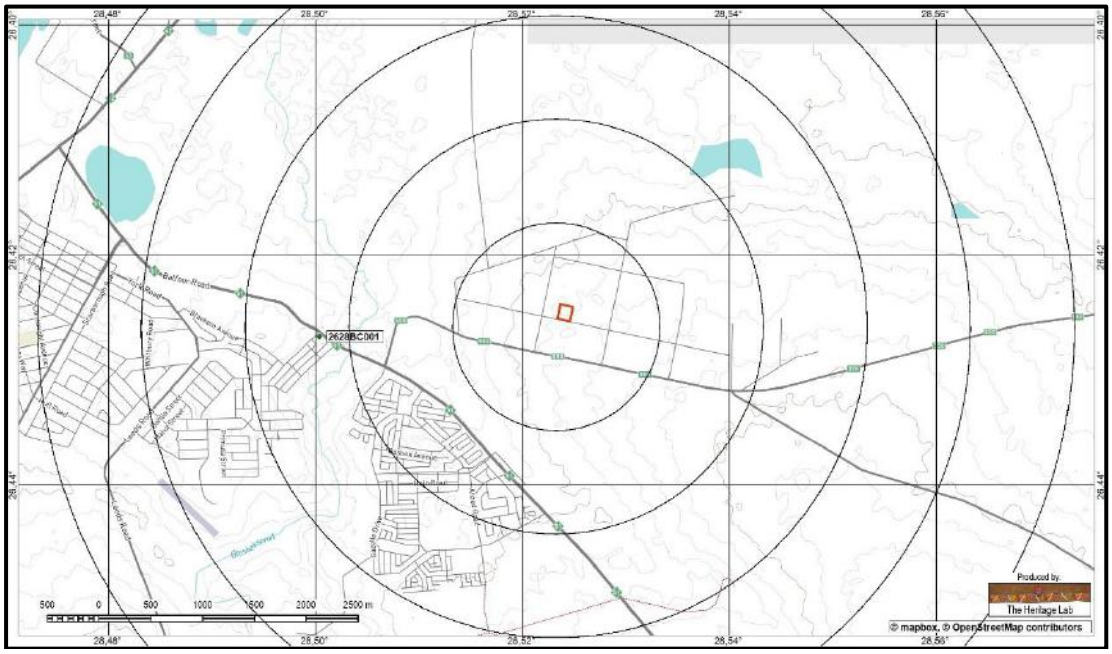

Figure 1. Location of known heritage sites and features in relation to the study area
(Circles spaced at a distance of 1km: heritage sites = coded green dots)

4.2.2 *Field survey*

The field survey was done according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. The area that had to be investigated was identified by the *ESGIA (Pty) Ltd* by means of maps and .k*ml* files indicating the development area. This was loaded onto an ASUS digital device and used in Google Earth during the field survey to access the areas.

The site was visited on 13 September 2019. It was investigated by walking transects across the site – see Fig. 2 below. During the site visit, archaeological visibility acceptable due to the winter vegetation conditions encountered (see Fig. 5 below).

During the site visit, Mr L. Sithole, the owner and developer of the property explained the proposed development to the specialist.

4.2.4 *Documentation*

All sites, objects and structures that are identified are documented according to the general minimum standards accepted by the archaeological profession. Coordinates of individual localities are determined by means of the *Global Positioning System* (GPS) and plotted on a map. This information is added to the description in order to facilitate the identification of each locality.

The track log and identified sites were recorded by means of a Garmin Oregon 550 handheld GPS device. Photographic recording was done by means of a Canon EOS 550D digital camera.

7.2 Vegetation Types

The project area occurs within one vegetation type: Soweto Highveld Grassland, according to Mucina & Rutherford (2006) (Figure 7).

Figure 7: Project area showing the vegetation type based on the Vegetation Map of South Africa, Lesotho & Swaziland (BGIS, 2017)

7.3 Soweto Highveld Grassland

The Soweto Highveld Grassland vegetation type is found in Mpumalanga, Gauteng and to a little extent also in neighbouring Free State and North-West Provinces. This vegetation type typically comprises of an undulating landscape on the Highveld plateau supporting short to medium-high, dense, tufted grassland dominated almost entirely by *Themeda triandra* and accompanied by a variety of other grasses such as *Elionurus muticus, Eragrostis racemosa, Heteropogon contortus* and *Tristachya leucothrix*. Scattered small wetlands, narrow stream alluvia, pans and occasional ridges or rocky outcrops interrupt the continuous grassland cover (Mucina & Rutherford, 2006).

7.3.1 Important Plant Taxa

Important plant taxa are those species that have a high abundance, a frequent occurrence or are prominent in the landscape within a particular vegetation type (Mucina & Rutherford, 2006). The following species are important in the Soweto Highveld Grassland.

Graminoids: *Andropogon appendiculatus, Brachiaria serrata, Cymbopogon pospischilii, Cynodon dactylon, Elionurus muticus , Eragrostis capensis, E. chloromelas, E. curvula, E. plana, E. planiculmis, E. racemosa, Heteropogon contortus, Hyparrhenia hirta, Setaria*

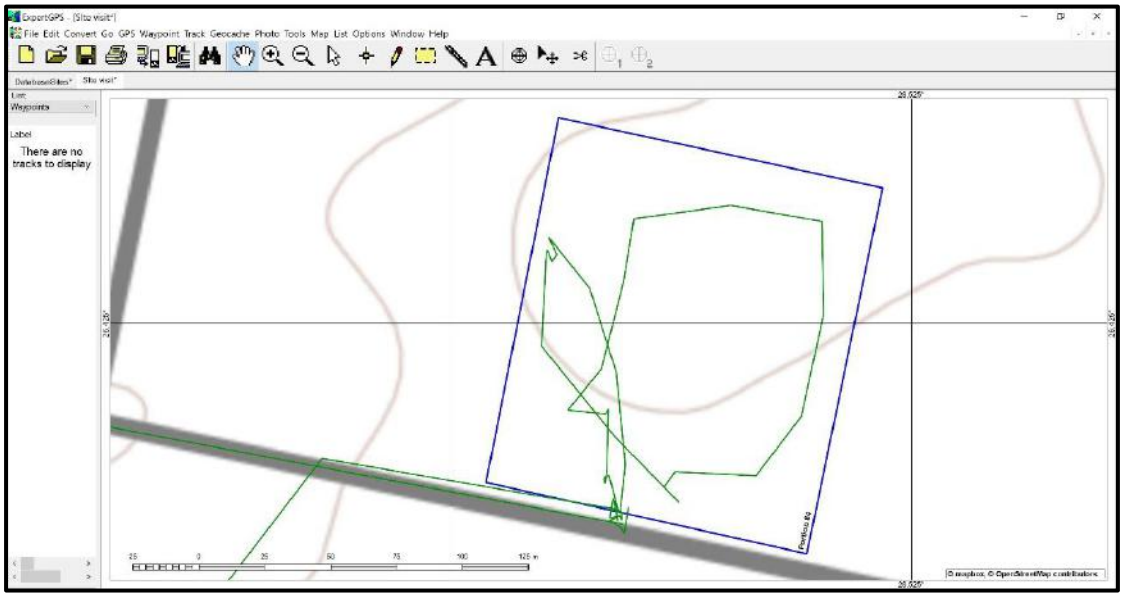

Figure 2. Map indicating the track log of the field survey.
(Site = blue polygon; track log = green line)

5. PROJECT DESCRIPTION

5.1 Site location

The proposed poultry farm is to be developed on Holding 84 of Hallgate Agricultural Holdings, about 5km east of central Nigel in the Lesedi Local Municipality of Gauteng Province (Fig. 3). For more information, see the Technical Summary on p. V above.

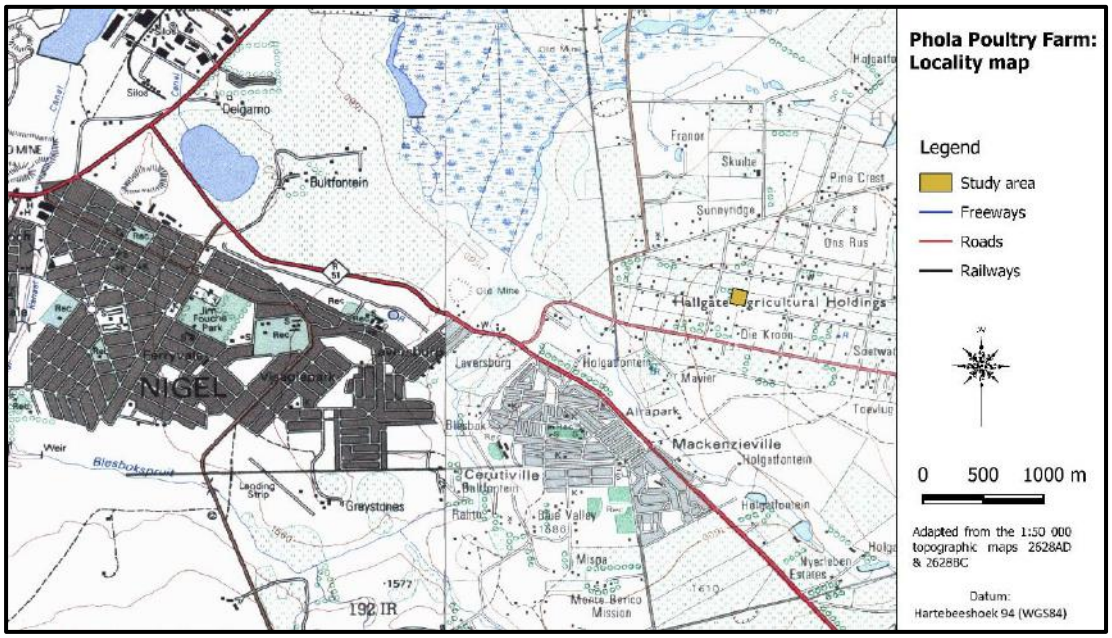

Figure 3. Location of the study area in regional context

nigrirostris, S. sphacelata, Themeda triandra, Tristachya leucothrix, Andropogon schirensis, Aristida adscensionis, A. bipartita, A. congesta, A. junciformis subsp. galpinii, Cymbopogon caesius, Digitaria diagonalis, Diheteropogon amplectens, Eragrostis micrantha, E. superba, Harpochloa falx, Microchloa caffra, Paspalum dilatatum (Mucina & Rutherford, 2006).

Herbs: *Hermannia depressa, Acalypha angustata, Berkheya setifera, Dicoma anomala, Euryops gilfillanii, Geigeria aspera var. aspera, Graderia subintegra, Haplocarpha scaposa, Helichrysum miconiifolium, H. nudifolium var. nudifolium, H. rugulosum, Hibiscus pusillus, Justicia anagalloides, Lippia scaberrima, Rhynchosia effusa, Schistostephium crataegifolium, Selago densiflora, Senecio coronatus, Vernonia oligocephala, Wahlenbergia undulata* (Mucina & Rutherford, 2006).

***Geophytic Herbs*:** *Haemanthus humilis subsp. hirsutus, H. montanus. Herbaceous Climber: Rhynchosia totta* (Mucina & Rutherford, 2006).

Low Shrubs: *Anthospermum hispidulum, A. rigidum subsp. pumilum, Berkheya annectens, Felicia muricata, Ziziphus zeyheriana* (Mucina & Rutherford, 2006).

7.3.2 Conservation Status

According to Mucina and Rutherford (2006), the Soweto Highveld Grassland vegetation type is classified as Endangered. The national target for conservation protection for both these vegetation types is 24%, but only a few patches are statutorily conserved in Waldrift, Krugersdorp, Leeuwkuil, Suikerbosrand, Rolfe's Pan Nature Reserves or privately conserved in Johanna Jacobs, Tweefontein, Gert Jacobs, Nikolaas and Avalon Nature Reserves and the Heidelberg Natural Heritage Site.

By 2006 nearly half of the area of occupancy of this vegetation type had already been transformed by cultivation, urban sprawl, mining and building of road infrastructure. The amount of area transformed has most likely increased substantially. Some Soweto Grassland areas have been flooded by dams including Grootdraai, Leeukuil, Trichardtsfontein, Vaal and Willem Brummer.

8 Field survey

The field survey for the project area was conducted on the 10th of September 2019 by one terrestrial ecologist. During the surveys the floral communities within the project development footprint were assessed as well as the ecological status of the area. The project area was ground-truthed on foot, which included spot checks in pre-selected areas to validate desktop data. Photographs were recorded during the site visits and some are provided in this section of the report. All site photographs are available on request.

8.1 Vegetation Assessment

The vegetation assessment was conducted throughout the extent of the project area. A total of 13 tree, shrub and herbaceous plant species were recorded in the project area during the field assessment (Table 3). Plants listed as Category 1 alien or invasive species under the National Environmental Management: Biodiversity Act (NEMBA) appear in green text. Plants listed in Category 2 or as 'not indigenous' or 'naturalised', appear in blue text.

5.2 Development proposal

It is proposed to develop five chicken houses as well as related support infrastructure such as accommodation for workers, ablution facilities and storerooms (Fig. 4). This facility will have a capacity of 100 000 egg laying chickens.

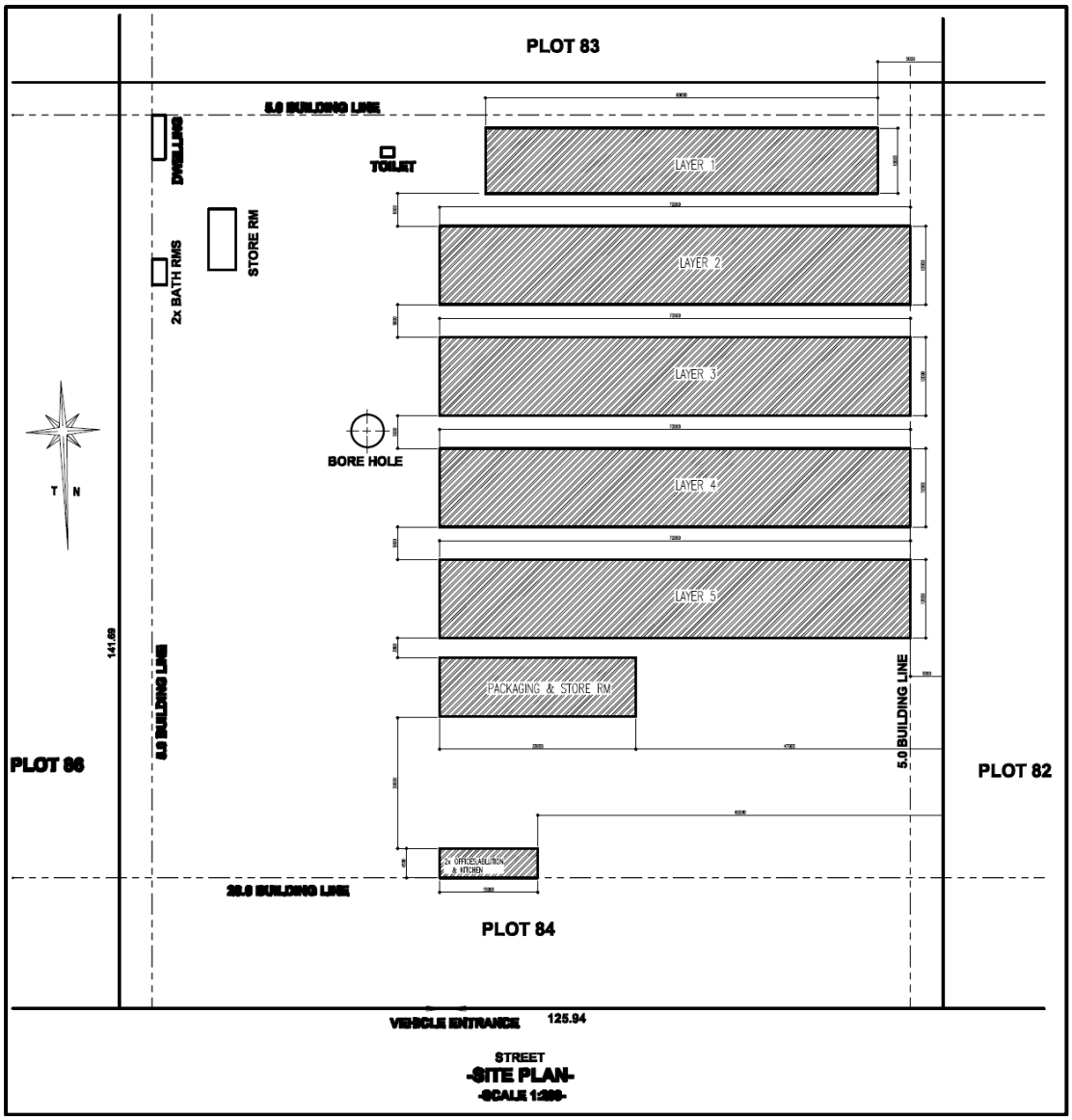

Figure 4. Layout of the proposed development
(Map supplied by *ESGIA (Pty) Ltd*)

6. DESCRIPTION OF THE AFFECTED ENVIRONMENT

6.1 Natural Environment

The geology of the region is made up of fine- to coarse-grained sandstone, shale and coal seams of the Dwyka and Ecca Groups of the Karoo Supergroup. The topography of the region is classified as plains

Table 3: Trees, shrubs and weeds recorded at the proposed project area

Scientific Name	Threat Status (SANBI, 2017)	SA Endemic	Alien Category
Conyza bonariensis			**Naturalized exotic weed**
Cynodon dactylon			**NEMBA Category 2**
Eragrostis chloromelas	LC	No	
Eragrostis curvula	LC	No	
Eragrostis gummiflua	LC	No	
Eragrostis lehmanniana	LC	No	
Eucalyptus camaldulensis			**NEMBA Category 1b**
Helichrysum rugulosum	LC	No	
Hyparrhenia hirta	LC	No	
Pogonarthria squarrosa	LC	No	
Solanum sisymbriifolium			**NEMBA Category 1b**
Sporobolus africanus	LC	No	
Stoebe plumosa	LC	No	

and pans. The original vegetation is classified as Soweto Highveld Grassland, a grassland biome falling in the Mesic Highveld Grassland Bioregion (Muncina & Rutherford 2006). However, most of this has been transformed due to farming activities (Fig 5).

Existing building on the site

Looking west

Looking south

Looking north

Figure 5. Views over the study area

The Palaeontological Sensitivity Map (SAHRIS) indicate that the study area (indicated by the white arrow in Fig. 6) has a high sensitivity of fossil remains to be found and therefore a palaeontological field assessment and protocol for finds is required.

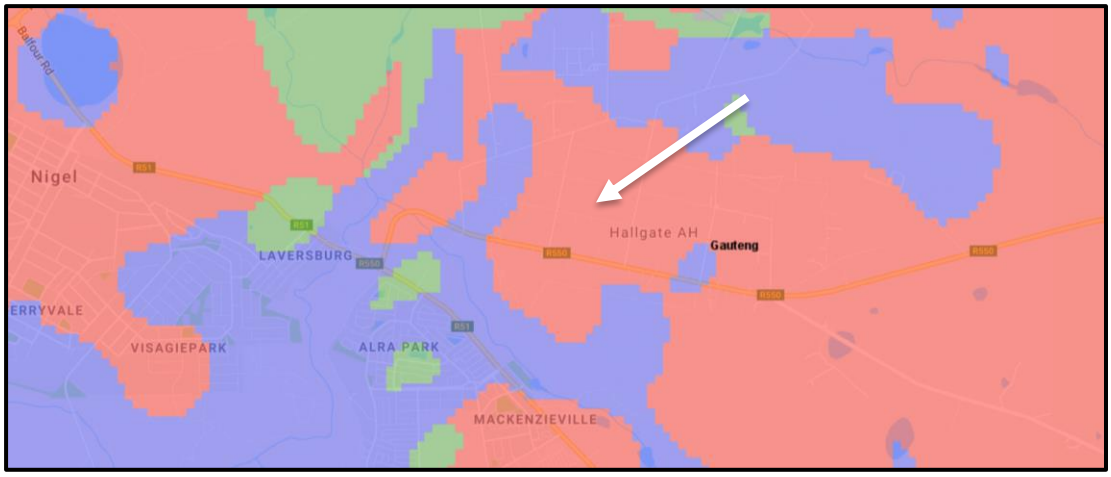

Figure 8:General condition of the project area: A) Existing infrastructure, B) Brick fence that surrounds the entire property, C & D) Degraded and Fragmented Grassland

Colour	Sensitivity	Required Action
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 6. The Palaeontological sensitivity of the study area (arrowed)

6.2 Cultural Landscape

The aim of this section is to present an overview of the history of the larger region in order to eventually determine the significance of heritage sites identified in the study area, within the context of their historic, aesthetic, scientific and social value, rarity and representivity.

The cultural landscape qualities of the region essentially consist of two components. The first is a rural area in which the human occupation is made up of a pre-colonial (Stone Age and Iron Age) occupation and a much later colonial (farmer) component. The second component is an urban one which, in the last few decades underwent intensive urbanisation, much of which occurred during the last 50 years or less.

6.2.1 *Stone Age*

Records indicate that stone tools dating to the Early and Middle Stone Age occurred all over, for example in Benoni (Smuts 1938), the Primrose Ridge (Harcus 1945) area in adjacent Germiston, as well as to the south at Henly-On-Klip (Louw & Van der Elst 1949). Tools dating to this period are mostly found in the vicinity of watercourses, and no sealed, stratified sites (i.e. rock shelter or cave) are known from the region.

6.2.2 *Iron Age*

Iron Age people started to settle in southern Africa c. AD 300, with one of the oldest known sites at Broederstroom south of Hartebeespoort Dam dating to AD 470. Having only had cereals (sorghum, millet) that need summer rainfall, Early Iron Age (EIA) people did not move outside this rainfall zone, and neither did they occupy the central interior highveld area.

The occupation of the larger geographical area (including the study area) did not start much before the 1500s. By the 16th century things changed, with the climate becoming warmer and wetter, creating condition that allowed Late Iron Age (LIA) farmers to occupy areas previously unsuitable, for example the Witwatersrand in the region of Klipriviersberg. Here, a large number of settlements dating to the Later Iron Age occur and, according to Huffman et al (2006/2007) these sites can be related to the Bafokeng people.

6.2.3 *Historic period*

9 Conclusion

Based on the biodiversity desktop screening assessment as well as the field survey, it can be concluded that the development is expected to have a low impact and has a low risk to biodiversity.

The degraded fragmented grassland habitats areas which have been disturbed by the livestock present and previous agricultural holding's activities is in a low ecological state and is unlikely to recover due to the brick fence as well as the surrounding land use. Due to the extent of the previous and current disturbances, the 1,77 Ha area is in a degraded state dominated by a monoculture of grass species which includes *Eragrostis curvula* and *Eragrostis chloromelas*.

The results of the assessment confirmed that no indigenous vegetation remains in a natural state. It is therefore concluded that the EIA regulations (GNR 983 & GNR 985) are not triggered.

White settlers moved into the area during the first half of the 19th century. They were largely self-sufficient, basing their survival on cattle/sheep farming and hunting. Few towns were established and it remained an undeveloped area until the discovery of gold and later of coal. From early days this region was subjected to intense gold mining activities (Praagh 1906). The result is that most sites and features of heritage significance in the larger region derive from this development.

The establishment of the town of Springs is closely associated with the coal mining industry and the development of railway infrastructure in the ZAR. The accidental discovery of a coal seam during gold prospecting at Boksburg in 1887 was the impetus for the construction of the first railway line north of the Vaal River, the so-called *Rand Tram*. This coincided with the founding of the *Nederlandsche Zuid-Afrikaansche Spoorweg-Maatschappij* (NZASM) in June 1887 in the Netherlands. This company was established as a concession by the ZAR government to build and operate a railway line between Pretoria and the Mozambique border.

The farm *The Springs* was surveyed by James Brooks in 1883. The neighbouring farms were Geduld, Rietfontein and Brakpan. Geduld, which now forms part of Springs, was bought by President Paul Kruger from the Pretoria businessman Albert Broderick in 1886. Kruger later sold it for "a large sum" to Messrs. Goertz & Co (Praagh 1906).

In July 1888 the ZAR government authorised the NZASM to build and operate the planned light railway line between Johannesburg and Boksburg, and in January 1889 work began. The survey of the route for the railway line indicated the presence of more coal deposits at Brakpan and The Springs. Deciding on the establishment of its own colliery on The Springs, the NZASM obtained a lease in 1889 and sunk a shallow shaft at a spot where the municipal garages used to be. In November 1889 the Springs Colliery produced its first coal. However, it soon proved that the coal seams on the farm were irregular and difficult to mine. Further prospecting proved that the farm Geduld, north of The Springs, was rich in coal. The NZASM bought the coal mining rights on Geduld. The colliery on The Springs was abandoned and the underground part of the mine was extended to Geduld.

The exploitation of the coal deposits on Geduld was a success and by 1899 there was a total of 18 km of underground galleries connected to the headgear, giving access to various coal seams varying between 30m and 140 m depth below surface level.

In November 1892 the NZASM discovered an underground fire in the abandoned old Springs Mine, which was sealed off. In April 1898 it was found that this fire was still smouldering and in March the following year it had spread to the Geduld works. At the end of this month the Springs Colliery was closed down by flooding the mine and removing the equipment. The mine was finally decommissioned in 1904.

After the discovery of gold on the adjoining farms Kleinfontein, Vlakfontein and Modderfontein rapid mining development set in. On 18 March 1904 the first plots were sold at Kleinfontein and the name Benoni was adopted for the new township. The real pioneer of mining in Benoni was Sir George Farrar, chairman of the mining syndicate that owned the land. Inspired by memories of his former home at Bedford in England, he resolved to create just such a town on the northern slopes of the valley on which the Klipfontein Dam was situated. He was appointed as a one-man committee to plan the new town. In 1906 a health committee was established, which could not keep pace with the development of the new township, and consequently Benoni was created a municipality on 1 October 1907. The original municipal boundaries included Brakpan. In 1919 the municipal area was subdivided and Brakpan became a separate municipality. Benoni was established with an ideal layout with a large industrial and railway complex separated from but close to the commercial centre and the residential suburbs.

During the 1880s the farm Varkensfontein belonged to Petrus Johannes Marais (Lang Piet). He formed a company to exploit the gold possibilities and the prospector, who was reading Sir Walter Scott's novel *The fortunes of Nigel* when he struck gold in 1886, named it the Nigel Gold Mining Company. A township

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was proclaimed in 1912. Some street names were taken from the novel. Nigel was raised to municipal status in 1930.

Until 1956 huge informal settlements, amongst the largest on the Witwatersrand, existed around towns in the region. In that year the municipality launched a housing scheme for blacks at a cost of £7 million. The initial scheme provided for 8 184 houses. The new township, named Daveyton, was intended to be a model apartheid township with its own post office, police station, shops, banks, churches, schools, brewery, beerhall's, cinemas, and parks and sports grounds. All houses had electricity and water and the main streets were tarred. The township was planned in such a way that the inhabitants were ethnically grouped together (SOER 2003).

6.3 Site specific review

Although landscapes with cultural significance are not explicitly described in the NHRA, they are protected under the broad definition of the National Estate (Section 3): Section 3(2)(c) and (d) list "historical settlements and townscapes" and "landscapes and natural features of cultural significance" as part of the National Estate.

The examination of historical maps and aerial photographs help us to reconstruct how the cultural landscape has changed over time as is show how humans have used the land.

- Based on a study of old maps and aerial photographs of the larger region in general and the study area specifically, the following can be said.

One of the oldest maps of the region (Fig. 7) dating to 1900, shows the farm Holgatfontein as well as the towns of Nigel and Laversburg, but very little else. However, the 1945 version of the official aerial photograph (Fig. 8) presents more detail, showing that the area has been subdivided into different small holdings. Holding 84, indicated by the white arrow, seems to be vacant. This situation persists as can be seen on the 1966 version of the 1:50 000 topographic map (Fig. 9) and even into recent times (Fig. 10).

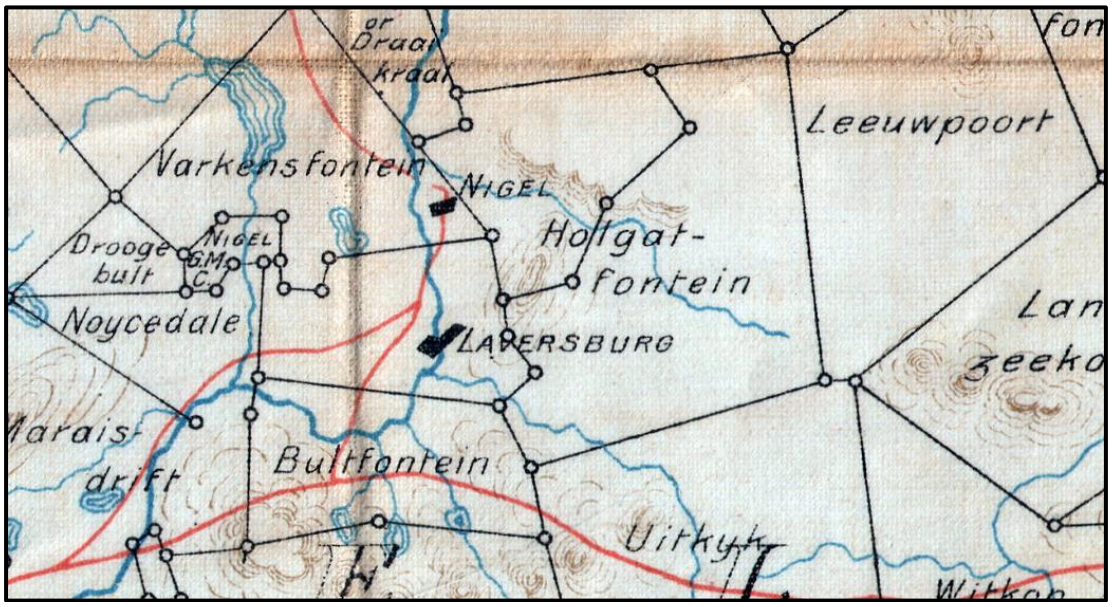

Figure 7. Field Intelligence Map, dating 1900, showing the farm Holgatfontein

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Figure 8. Study area on the 1945 version of the official aerial photograph (Photograph: 55_020_00821A)

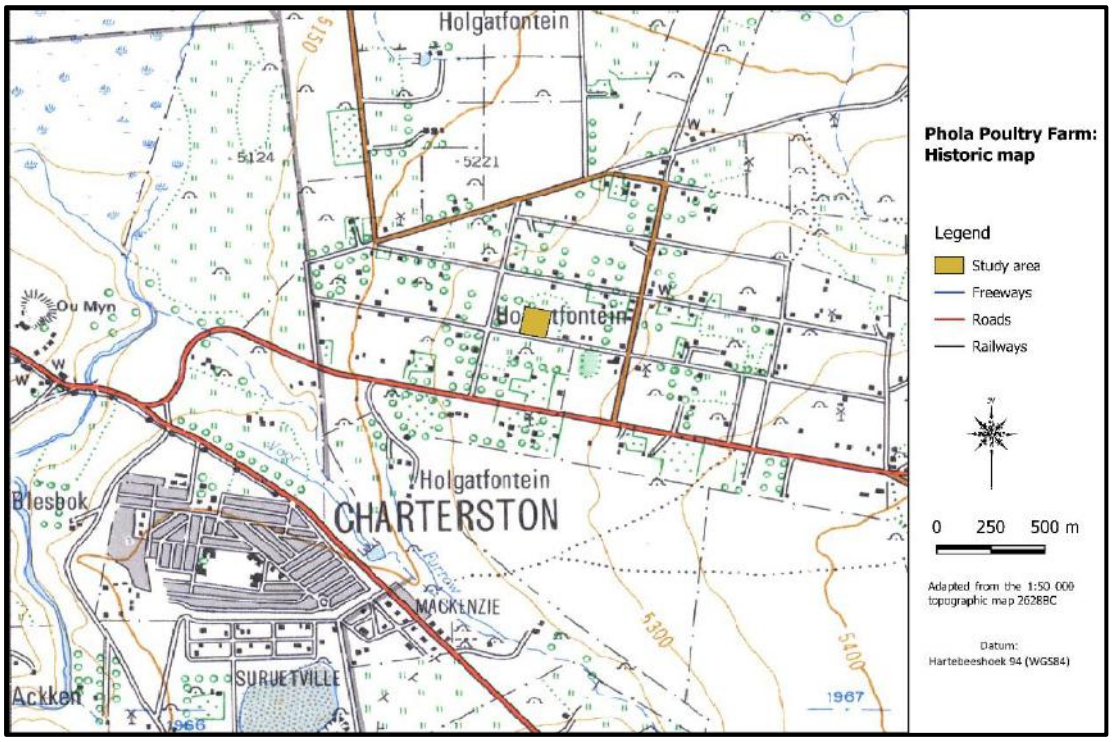

Figure 9. Study area on the 1966 version of the 1:50 000 topographic map

Figure 10. Aerial view of the study area dating to 2018
(Image: Google Earth)

7. SURVEY RESULTS

During the physical survey, the following sites, features and objects of cultural significance were identified in the study area (Fig. 11):

7.1 Stone Age

- No sites, features or objects of cultural significance dating to the Stone Age were identified in the study area

7.2 Iron Age

- No sites, features or objects of cultural significance dating to the Iron Age were identified in the study area.

7.3 Historic period

- No sites, features or objects of cultural significance dating to the historic period were identified in the study area.

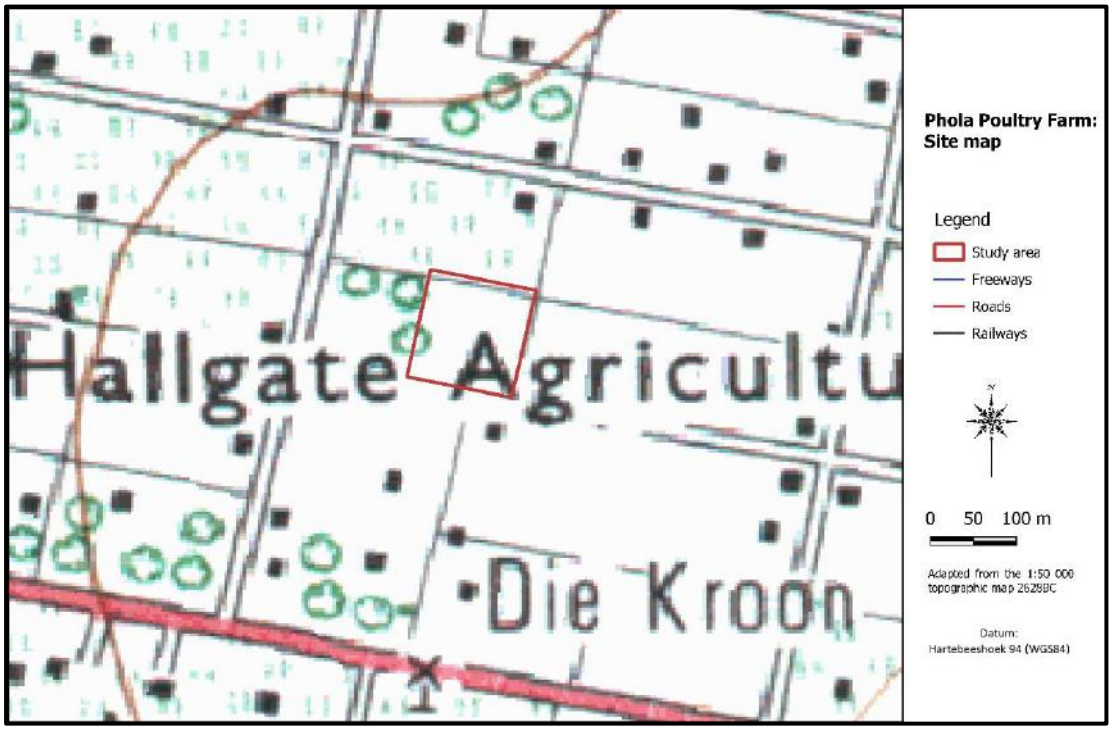

Figure 11. Location of heritage sites in the study area
(Please note that as no heritage sites were identified, nothing is indicated on the map.)

8. RESULTS: STATEMENT OF SIGNIFICANCE AND IMPACT RATINGS

8.1 Impact assessment

Heritage impacts are categorised as:

- Direct or physical impacts, implying alteration or destruction of heritage features within the project boundaries;
- Indirect impacts, e.g. restriction of access or visual intrusion concerning the broader environment;
- Cumulative impacts that are combinations of the above.

Impact analysis of cultural heritage resources under threat of the proposed development, is based on the present understanding of the development and is summarised in Table 1 below:

- As no sites, features or objects of cultural historic significance have been identified in the study area, there would be no impact as a result of the proposed development.

Table 1: Impact assessment

Heritage sites	Significance of impact	Mitigation measures
Phola Poultry Farm: Construction Phase		
Without mitigation	n/a	n/a
With mitigation	n/a	n/a
Phola Poultry Farm: Operation Phase		
Without mitigation	n/a	n/a
With mitigation	n/a	n/a

9. MANAGEMENT AND MITIGATION MEASURES

Heritage sites are fixed features in the environment, occurring within specific spatial confines. Any impact upon them is permanent and non-reversible. Those resources that cannot be avoided and that are directly impacted by the proposed development can be excavated/recorded and a management plan can be developed for future action. Those sites that are not impacted on can be written into the management plan, whence they can be avoided or cared for in the future.

Sources of risk were considered with regards to development activities defined in Section 2(viii) of the NHRA that may be triggered and are summarised in Table 3A and 3B below. These issues formed the basis of the impact assessment described. The potential risks are discussed according to the various phases of the project below.

9.1 Objectives

- Protection of archaeological, historical and any other site or land considered being of cultural value within the project boundary against vandalism, destruction and theft.
- The preservation and appropriate management of new discoveries in accordance with the NHRA, should these be discovered during construction activities.

The following shall apply:

- Known sites should be clearly marked in order that they can be avoided during construction activities.
- The contractors and workers should be notified that archaeological sites might be exposed during the construction activities.
- Should any heritage artefacts be exposed during excavation, work on the area where the artefacts were discovered, shall cease immediately and the Environmental Control Officer shall be notified as soon as possible;
- All discoveries shall be reported immediately to a heritage practitioner so that an investigation and evaluation of the finds can be made. Acting upon advice from these specialists, the Environmental Control Officer will advise the necessary actions to be taken;
- Under no circumstances shall any artefacts be removed, destroyed or interfered with by anyone on the site; and
- Contractors and workers shall be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological or palaeontological artefacts, as set out in the National Heritage Resources Act (Act No. 25 of 1999), Section 51. (1).

9.2 Control

In order to achieve this, the following should be in place:

- A person or entity, e.g. the Environmental Control Officer, should be tasked to take responsibility for the heritage sites and should be held accountable for any damage.
- Known sites should be located and isolated, e.g. by fencing them off. All construction workers should be informed that these are no-go areas, unless accompanied by the individual or persons representing the Environmental Control Officer as identified above.
- In areas where the vegetation is threatening the heritage sites, e.g. growing trees pushing walls over, it should be removed, but only after permission for the methods proposed has been granted by SAHRA. A heritage official should be part of the team executing these measures.

Table 2A: Construction Phase: Environmental Management Programme for the project

Action required	Protection of heritage sites, features and objects		
Potential Impact	The identified risk is damage or changes to resources that are generally protected in terms of Sections 27, 28, 31, 32, 34, 35, 36 and 37 of the NHRA that may occur in the proposed project area.		
Risk if impact is not mitigated	Loss or damage to sites, features or objects of cultural heritage significance		
Activity / issue	**Mitigation: Action/control**	**Responsibility**	**Timeframe**
1. Removal of Vegetation 2. Construction of required infrastructure, e.g. access roads, water pipelines	See discussion in Section 9.1 above	Environmental Control Officer	During construction only
Monitoring	See discussion in Section 9.2 above		

Table 2B: Operation Phase: Environmental Management Programme for the project

Action required	Protection of heritage sites, features and objects		
Potential Impact	It is unlikely that the negative impacts identified for pre-mitigation will occur if the recommendations are followed.		
Risk if impact is not mitigated	Loss or damage to sites, features or objects of cultural heritage significance		
Activity / issue	**Mitigation: Action/control**	**Responsibility**	**Timeframe**
1. Removal of Vegetation 2. Construction of required infrastructure, e.g. access roads, water pipelines	See discussion in Section 9.1 above	Environmental Control Officer	During construction only
Monitoring	See discussion in Section 9.2 above		

9.3 Mitigation measures

Mitigation: means to anticipate and prevent negative impacts and risks, then to minimise them, rehabilitate or repair impacts to the extent feasible.

- For the current study, as no sites, features or objects of cultural historic significance have been identified in the study area, no mitigation measures are proposed.

10. CONCLUSIONS AND RECOMMENDATIONS

It is proposed to develop a poultry farm on Portion 84 of Hallgate Agricultural Holdings in the Lesedi Local Municipality of Gauteng Province.

This report describes the methodology used, the limitations encountered, the heritage features that were identified and the recommendations and mitigation measures proposed relevant to this. The HIA consisted of a desktop study (archival sources, database survey, maps and aerial imagery) and a physical survey that included the interviewing of relevant people. It should be noted that the implementation of the mitigation measures is subject to SAHRA/PHRA's approval.

The cultural landscape qualities of the region essentially consist of two components. The first is a rural area in which the human occupation is made up of a pre-colonial (Stone Age and Iron Age) occupation and a much later colonial (farmer) component. The second component is an urban one which, in the last few decades underwent intensive urbanisation, much of which occurred during the last 50 years or less.

Identified sites

During the physical survey, no sites, features or objects of cultural significance were identified.

Impact assessment

Impact analysis of cultural heritage resources under threat of the proposed development, is based on the present understanding of the development:

- As no sites, features or objects of cultural significance are known to exist in the development area, there would be no impact as a result of the proposed development.

Heritage sites	Significance of impact	Mitigation measures
Phola Poultry Farm: Construction Phase		
Without mitigation	n/a	n/a
With mitigation	n/a	n/a
Phola Poultry Farm: Operation Phase		
Without mitigation	n/a	n/a
With mitigation	n/a	n/a

Legal requirements

The legal requirements related to heritage specifically are specified in Section 3 of this report. For this proposed project, the assessment has determined that no sites, features or objects of heritage significance occur in the study area. If heritage features are identified during construction, as stated in the management recommendation, these finds would have to be assessed by a specialist, after which a decision will be made regarding the application for relevant permits.

Reasoned opinion as to whether the proposed activity should be authorised:

- From a heritage point of view, it is recommended that the proposed development be allowed to continue on acceptance of the conditions proposed below.

Conditions for inclusion in the environmental authorisation:

- The Palaeontological Sensitivity Map (SAHRIS) indicate that the study area has a high sensitivity of fossil remains to be found and therefore a palaeontological field assessment and protocol for finds is required.
- Should archaeological sites or graves be exposed in other areas during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

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11.3 Maps and aerial photographs

1: 50 000 Topocadastral maps
Google Earth
Aerial photographs: Chief Surveyor-General

12. ADDENDUM

1. Indemnity and terms of use of this report

The findings, results, conclusions and recommendations given in this report are based on the author's best scientific and professional knowledge as well as available information. The report is based on survey and assessment techniques which are limited by time and budgetary constraints relevant to the type and level of investigation undertaken and the author reserve the right to modify aspects of the report including the recommendations if and when new information may become available from ongoing research or further work in this field or pertaining to this investigation.

Although all possible care is taken to identify all sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites could be overlooked during the study. The author of this report will not be held liable for such oversights or for costs incurred as a result of such oversights.

Although the author exercises due care and diligence in rendering services and preparing documents, he accepts no liability and the client, by receiving this document, indemnifies the author against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by the author and by the use of the information contained in this document.

This report must not be altered or added to without the prior written consent of the author. This also refers to electronic copies of this report which are supplied for the purposes of inclusion as part of other reports, including main reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must make reference to this report. If these form part of a main report relating to this investigation or report, this report must be included in its entirety as an appendix or separate section to the main report.

2. Assessing the significance of heritage resources and potential impacts

A system for site grading was established by the NHRA and further developed by the South African Heritage Resources Agency (SAHRA 2007) and has been approved by ASAPA for use in southern Africa and was utilised during this assessment.

2.1 *Significance of the identified heritage resources*

According to the NHRA, Section 2(vi) the **significance** of a heritage sites and artefacts is determined by it aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

Matrix used for assessing the significance of each identified site/feature

1. SITE EVALUATION			
1.1 Historic value			
Is it important in the community, or pattern of history			
Does it have strong or special association with the life or work of a person, group or organisation of importance in history			
Does it have significance relating to the history of slavery			
1.2 Aesthetic value			
It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group			
1.3 Scientific value			
Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage			
Is it important in demonstrating a high degree of creative or technical achievement at a particular period			
1.4 Social value			
Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons			
1.5 Rarity			
Does it possess uncommon, rare or endangered aspects of natural or cultural heritage			
1.6 Representivity			
Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects			
Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class			
Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality.			
2. Sphere of Significance	High	Medium	Low
International			
National			
Provincial			
Regional			
Local			
Specific community			
3. Field Register Rating			
1.	National/Grade 1: High significance - No alteration whatsoever without permit from SAHRA		
2.	Provincial/Grade 2: High significance - No alteration whatsoever without permit from provincial heritage authority.		
3.	Local/Grade 3A: High significance - Mitigation as part of development process not advised.		

4.	Local/Grade 3B: High significance - Could be mitigated and (part) retained as heritage register site	
5.	Generally protected A: High/medium significance - Should be mitigated before destruction	
6.	Generally protected B: Medium significance - Should be recorded before destruction	
7.	Generally protected C: Low significance - Requires no further recording before destruction	

2.2 *Significance of the anticipated impact on heritage resources*

All impacts identified during the HIA stage of the study will be classified in terms of their significance. Issues would be assessed in terms of the following criteria:

Nature of the impact
A description of what causes the effect, what will be affected and how it will be affected.

Extent
The physical **extent**, wherein it is indicated whether:
- 1 - The impact will be limited to the site;
- 2 - The impact will be limited to the local area;
- 3 - The impact will be limited to the region;
- 4 - The impact will be national; or
- 5 - The impact will be international.

Duration
Here it should be indicated whether the lifespan of the impact will be:
- 1 - Of a very short duration (0–1 years);
- 2 - Of a short duration (2-5 years);
- 3 - Medium-term (5–15 years);
- 4 - Long term (where the impact will persist possibly beyond the operational life of the activity); or
- 5 - Permanent (where the impact will persist indefinitely).

Magnitude (Intensity)
The magnitude of impact, quantified on a scale from 0-10, where a score is assigned:
- 0 - Small and will have no effect;
- 2 - Minor and will not result in an impact;
- 4 - Low and will cause a slight impact;
- 6 - Moderate and will result in processes continuing but in a modified way;
- 8 - High, (processes are altered to the extent that they temporarily cease); or
- 10 - Very high and results in complete destruction of patterns and permanent cessation of processes.

Probability
This describes the likelihood of the impact actually occurring and is estimated on a scale where:
- 1 - Very improbable (probably will not happen);
- 2 - Improbable (some possibility, but low likelihood);
- 3 - Probable (distinct possibility);
- 4 - Highly probable (most likely); or
- 5 - Definite (impact will occur regardless of any prevention measures).

Significance
The significance is determined through a synthesis of the characteristics described above (refer to the formula below) and can be assessed as low, medium or high:

S = (E+D+M) x P; where
S = Significance weighting

E = Extent
D = Duration
M = Magnitude
P = Probability

Significance of impact		
Points	Significant Weighting	Discussion
< 30 points	Low	Where this impact would not have a direct influence on the decision to develop in the area.
31-60 points	Medium	Where the impact could influence the decision to develop in the area unless it is effectively mitigated.
> 60 points	High	Where the impact must have an influence on the decision process to develop in the area.

Confidence
This should relate to the level of confidence that the specialist has in establishing the nature and degree of impacts. It relates to the level and reliability of information, the nature and degree of consultation with I&AP's and the dynamic of the broader socio-political context.

- High, where the information is comprehensive and accurate, where there has been a high degree of consultation and the socio-political context is relatively stable.
- Medium, where the information is sufficient but is based mainly on secondary sources, where there has been a limited targeted consultation and socio-political context is fluid.
- Low, where the information is poor, a high degree of contestation is evident and there is a state of socio-political flux.

Status
- The status, which is described as either positive, negative or neutral.

Reversibility
- The degree to which the impact can be reversed.

Mitigation
- The degree to which the impact can be mitigated.

Nature:		
	Without mitigation	With mitigation
Construction Phase		
Probability		
Duration		
Extent		
Magnitude/Intensity		
Significance		
Status (positive or negative)		
Operation Phase		
Probability		
Duration		
Extent		
Magnitude/Intensity		
Significance		
Status (positive or negative)		
Reversibility		
Irreplaceable loss of resources?		
Can impacts be mitigated		

3. Mitigation measures

- *Mitigation: means to anticipate and prevent negative impacts and risks, then to minimise them, rehabilitate or repair impacts to the extent feasible.*

Impacts can be managed through one or a combination of the following mitigation measures:

- Avoidance
- Investigation (archaeological)
- Rehabilitation
- Interpretation
- Memorialisation
- Enhancement (positive impacts)

For the current study, the following mitigation measures are proposed, to be implemented only if any of the identified sites or features are to be impacted on by the proposed development activities:

- (1) Avoidance/Preserve: This is viewed to be the primary form of mitigation and applies where any type of development occurs within a formally protected or significant or sensitive heritage context and is likely to have a high negative impact. This measure often includes the change / alteration of development planning and therefore impact zones in order not to impact on resources. The site should be retained *in situ* and a buffer zone should be created around it, either temporary (by means of danger tape) or permanently (wire fence or built wall). Depending on the type of site, the buffer zone can vary from
    - 10 metres for a single grave, or a built structure, to
    - 50 metres where the boundaries are less obvious, e.g. a Late Iron Age site.

- (2) Archaeological investigation/Relocation of graves: This option can be implemented with additional design and construction inputs. This is appropriate where development occurs in a context of heritage significance and where the impact is such that it can be mitigated. Mitigation is to excavate the site by archaeological techniques, document the site (map and photograph) and analyse the recovered material to acceptable standards. This can only be done by a suitably qualified archaeologist.
    - This option should be implemented when it is impossible to avoid impacting on an identified site or feature.
    - This also applies for graves older than 60 years that are to be relocated. For graves younger than 60 years a permit from SAHRA is not required. However, all other legal requirements must be adhered to.
        - Impacts can be beneficial – e.g. mitigation contribute to knowledge

- (3) Rehabilitation: When features, e.g. buildings or other structures are to be re-used. Rehabilitation is considered in heritage management terms as an intervention typically involving the adding of a new heritage layer to enable a new sustainable use.
    - The heritage resource is degraded or in the process of degradation and would benefit from rehabilitation.
    - Where rehabilitation implies appropriate conservation interventions, i.e. adaptive reuse, repair and maintenance, consolidation and minimal loss of historical fabric.
        - Conservation measures would be to record the buildings/structures as they are (at a particular point in time). The records and recordings would then become the 'artefacts' to be preserved and managed as heritage features or (movable) objects.
        - This approach automatically also leads to the enhancement of the sites or features that are re-used.

- (4) Mitigation is also possible with additional design and construction inputs. Although linked to the previous measure (rehabilitation) a secondary though 'indirect' conservation measure would be to use the existing architectural 'vocabulary' of the structure as guideline for any new designs.
    - The following principle should be considered: **heritage informs design**.
        - This approach automatically also leads to the enhancement of the sites or features that are re-used.

- (5) No further action required: This is applicable only where sites or features have been rated to be of such low significance that it does not warrant further documentation, as it is viewed to be fully documented after inclusion in this report.
    - Site monitoring during development, by an ECO or the heritage specialist are often added to this recommendation in order to ensure that no undetected heritage/remains are destroyed.

4. Relocation of graves

If the graves are younger than 60 years, an undertaker can be contracted to deal with the exhumation and reburial. This will include public participation, organising cemeteries, coffins, etc. They need permits and have their own requirements that must be adhered to.

If the graves are older than 60 years old or of undetermined age, an archaeologist must be in attendance to assist with the exhumation and documentation of the graves. This is a requirement by law.

Once it has been decided to relocate particular graves, the following steps should be taken:

- Notices of the intention to relocate the graves need to be put up at the burial site for a period of 60 days. This should contain information where communities and family members can contact the developer/archaeologist/public-relations officer/undertaker. All information pertaining to the identification of the graves needs to be documented for the application of a SAHRA permit. The notices need to be in at least 3 languages, English, and two other languages. This is a requirement by law.
- Notices of the intention needs to be placed in at least two local newspapers and have the same information as the above point. This is a requirement by law.
- Local radio stations can also be used to try contact family members. This is not required by law, but is helpful in trying to contact family members.
- During this time (60 days) a suitable cemetery need to be identified close to the development area or otherwise one specified by the family of the deceased.
- An open day for family members should be arranged after the period of 60 days so that they can gather to discuss the way forward, and to sort out any problems. The developer needs to take the families requirements into account. This is a requirement by law.
- Once the 60 days has passed and all the information from the family members have been received, a permit can be requested from SAHRA. This is a requirement by law.
- Once the permit has been received, the graves may be exhumed and relocated.
- All headstones must be relocated with the graves as well as any items found in the grave.

Information needed for the SAHRA permit application

- The permit application needs to be done by an archaeologist.
- A map of the area where the graves have been located.
- A survey report of the area prepared by an archaeologist.
- All the information on the families that have identified graves.
- If graves have not been identified and there are no headstones to indicate the grave, these are then unknown graves and should be handled as if they are older than 60 years. This information also needs to be given to SAHRA.
- A letter from the landowner giving permission to the developer to exhume and relocate the graves.
- A letter from the new cemetery confirming that the graves will be reburied there.
- Details of the farm name and number, magisterial district and GPS coordinates of the gravesite.

5. Inventory of identified cultural heritage sites

Nil

6. Curriculum vitae

Johan Abraham van Schalkwyk

Personal particulars

Date of birth:	14 April 1952
Identity number:	520414 5099 08 4
Marital status:	Married; one daughter
Nationality:	South African

Current address: home

62 Coetzer Ave, Monument Park, Pretoria, 0181
Mobile: 076 790 6777; E-mail: jvschalkwyk@mweb.co.za

Qualifications

1995 DLitt et Phil (Anthropology), University of South Africa
1985 MA (Anthropology), University of Pretoria
1981 BA (Hons), Anthropology, University of Pretoria
1979 Post Graduate Diploma in Museology, University of Pretoria
1978 BA (Hons), Archaeology, University of Pretoria
1976 BA, University of Pretoria

Non-academic qualifications

12th HSRC-School in Research Methodology - July 1990
Dept. of Education and Training Management Course - June 1992
Social Assessment Professional Development Course - 1994
Integrated Environmental Management Course, UCT - 1994

Professional experience

Private Practice
2017 - current: Professional Heritage Consultant

National Museum of Cultural History
1992 - 2017: Senior researcher: Head of Department of Research. Manage an average of seven researchers in this department and supervise them in their research projects. Did various projects relating to Anthropology and Archaeology in Limpopo Province, Mpumalanga, North West Province and Gauteng. Headed the Museum's Section for Heritage Impact Assessments.
1978 - 1991: Curator of the Anthropological Department of the Museum. Carried out extensive fieldwork in both anthropology and archaeology

Department of Archaeology, University of Pretoria
1976 - 1977: Assistant researcher responsible for excavations at various sites in Limpopo Province and Mpumalanga.

Awards and grants

1. Hanisch Book Prize for the best final year Archaeology student, University of Pretoria - 1976.
2. Special merit award, National Cultural History Museum - 1986.
3. Special merit award, National Cultural History Museum - 1991.
4. Grant by the Department of Arts, Culture, Science and Technology, to visit the various African countries to study museums, sites and cultural programmes - 1993.
5. Grant by the USA National Parks Service, to visit the United States of America to study museums, sites, tourism development, cultural programmes and impact assessment programmes - 1998.
6. Grant by the USA embassy, Pretoria, under the Bi-national Commission Exchange Support Fund, to visit cultural institutions in the USA and to attend a conference in Charleston - 2000.
7. Grant by the National Research Foundation to develop a model for community-based tourism - 2001.

8. Grant by the National Research Foundation to develop a model for community-based tourism - 2013. In association with RARI, Wits University.

Publications
Published more than 70 papers, mostly in scientifically accredited journals, but also as chapters in books.

Conference Contributions
Regularly presented papers at conferences, locally as well as internationally, on various research topics, ranging in scope from archaeology, anthropological, historical, cultural historical and tourism development.

Heritage Impact Assessments
Since 1992, I have done more than 2000 Phase 1 and Phase 2 impact assessments (archaeological, anthropological, historical and social) for various government departments and developers. Projects include environmental management frameworks, roads, pipeline-, and power line developments, dams, mining, water purification works, historical landscapes, refuse dumps and urban developments.

Appendix H:

EMPr

Poultry farm on Holding 84 Hallgate Agricultural Holdings:

Environmental Management Programme (EMPr)

20 February 2020
1901-EMPR-00

Contents

1 INTRODUCTION

1.1 Purpose of the Environmental Management Programme

This Draft Environmental Management Programme (EMPr) is prepared as part of the requirements of the Environmental Impact Assessment (EIA) Regulations (December 2014, as amended April 2017) promulgated under the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended). The purpose of this Environental Management Programme (EMPr) is to ensure "good environmental practice" by taking a holistic approach to the management and mitigation of environmental impacts during the construction and operation phase of Phola Poultry (Pty) Ltd proposed egg laying facility development. This EMPr therefore sets out the methods by which proper environmental controls are to be implemented by the chicken broilers management. The Draft EMPr is to be submitted to the Gauteng Department of Agriculture and Rural Development (GDARD) as part of the Application for Environmental Authorisation for the proposed chicken egg laying facility proposal on Holding 84 Hallgate agricultural Holdings in the Lesedi Local Municipality, Gauteng. This EMPr is considered as a document that can be updated as new information becomes available during the construction, operational and operational phases, if applicable, of the proposed development. Mitigations measure need to be implemented as addressed in this EMPr, except where they are not applicable, and additional measures should be considered when necessary. The EMPr identifies the following:

- Construction and Operation activities that will impact on the environment;
- Specifications with which the chicken layer management shall comply in order to protect the environment from the identified impacts;
- Actions that shall be taken in the event of non-compliance. This EMPr incorporates management plans for the design, construction, operation and decommissioning phases of the project, which consist of the following components:
    - Impact: The potential positive or negative impact of the development that needs to be enhanced mitigated or eliminated.
    - Objectives: The objectives necessary in order to meet the goal; these consider the findings of the specialist studies.
    - Mitigation/Management Actions: The actions needed to achieve the objectives, taking into consideration factors such as responsibility, methods, frequency, resources required and prioritisation.
    - Monitoring: The key monitoring actions required to check whether the objectives are being achieved, taking into consideration responsibility, frequency, methods and reporting.

1.2 Contents of the EMPr

This EMPr specifies the management actions necessary to ensure minimal environmental impacts, as well as procedures for monitoring these impacts associated with the proposed activity. In terms of legal compliance, this EMPr aims to satisfy appendix 4 of Government Notice Regulation 982 of 4 December 2014, presented in Table 1-1 below.

Table 1-1: Compliance with Appendix 4 of Government Notice Regulation 982 of 4 December 2014 and Section 24N of the National Environmental Management Act 107 of 1998.

Requirements according to Appendix 4 of GNR 982 of 4 December 2014	Section
(1) An EMPr must comply with section 24N of the Act and include- a) details of - (i) the EAP who prepared the EMPr; and (ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;	Section 1.3 Appendix I
b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Section 2
c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers;	Section 2, Figure 2-1, 2-2, 2-3
d) a description of the impact management objectives, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-	Section 4
(i) planning and design;	Section 4
(ii) pre-construction activities;	Section 4
(iii) construction activities;	Section 4
(iv) rehabilitation of the environment after construction and where applicable post closure;	Section 4

Requirements according to Appendix 4 of GNR 982 of 4 December 2014	Section
and	
(v) where relevant, operation activities;	Section 4
e) a description and identification of impact management outcomes required for the aspects contemplated in paragraph (d);	Section 4
f) a description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (d) and (e) will be achieved, and must, where applicable, include actions to – i. avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;	Section 4
ii. comply with any prescribed environmental management standards or practices;	Section 4
iii. comply with any applicable provisions of the Act regarding closure, where applicable; and	N/A
iv. comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;	N/A
g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 4
h) frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 4
i) an indication of the persons who will be responsible for the implementation of the impact management actions;	Section 4
j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	Section 4
k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Section 4
l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;	Section 4
m) an environmental awareness plan describing the manner in which- (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and	Section 4
n) any specific information that may be required by the competent authority.	N/A

1.3 Environmental Assessment Practitioner

Organisation	ESGiA (Pty) Ltd
Postal Adress	15 The Manor House, 11 Hall Road, Sea Point, 8005
Email	anthonyg@esgia.co
Telephone	081 399 4439
Project Team	
Name	**Qualification & Expertise**
Siphamandla Mzolo	• BSc (Honours) Geology

Anthony Goslar	• MSC Environmental Studies (WITS) , MCOM Development Finance (UCT) • More than 15 years of experience in Environmental Management • Inclusive of 10 years' experience in conducting Environmental Assessments

This Environmental Management Programme that has been compiled in fulfilment of the requirements of the Environmental Impact Assessment Regulations (2014). This EMPr describe the activities that are proposed, and prescribe the management, mitigation and monitoring measures that must be implemented to ensure that potential negative environmental or socio-economic impacts that may be associated with the development are avoided or mitigated correctly, and to ensure that positive impacts of the proposed development are promoted where possible. This document also intended to ensure that the principles of Environmental Management specified in the National Environmental Management Act are promoted during the different phases of the proposed development of a piggery.

2 PROJECT BACKGROUND

2.1 Project Activities

Phola Poultry (Pty) Ltd intends to build and operate an Egg Laying Facilities in Hallgate Agricultural Holdings (AH) on the East Rand in Gauteng. The owner of the company has been successfully rearing egg laying chickens on a smaller scale for some time. Based on this success, the proposed development site in was purchased and the owner has been self-funding the development of this farm.

Hallgate AH was once a larger farm which was divided into agricultural holdings. The holdings are typically 1-2 ha in extent and are used for residential and small to medium scale agriculture. Many residents grow crops and keep small livestock such as chickens, goats and sheep. The area has a grid road system with holdings on either side. Many of the holdings have fences and/or walls. The result is a neighbourhood effect where habitats are fragmented by the various holding land uses and civil infrastructure. The walls and fences between sites, put in place for security and to keep livestock from roaming, impede the movement of other wildlife.

The proposed development site itself is currently an agriculture holding with a small number of sheep on site (less than 10 sheep). The site has a borehole, small area under cultivation, toilet, storeroom, bathroom and dwelling.

2.2 Chicken Housing Units

layout has been proposed to maximise the productivity of the site. The development will consist of:

- 4x layer houses with a footprint of 864m2 (72m x 12m each)
- 1x layer house with a footprint of 600m2 (60m x 10m)
- 1x packaging and storeroom with a footprint of 240m2 (8m x 30m)
- 2x office, ablution and kitchen with a combined footprint of 67.5m2 (4.5m x 15m)
- An entrance with a paved area of approximately 2,000 m2
- 1x 20m2 waste storage area.

The total development footprint is approximately 3771.5 m2. The layer houses will be 5 meters apart and a building line of 5 meters will be observed from the adjacent holdings, and 20 meters from the street will be observed.
The layer house will be such that they protect layers from direct sunlight, excessive wind, rain, extreme heat or cold, wild birds and theft. Housing units will consist of concrete floors, to ensure adequate cleaning as they will be impermeable to water. Water for cleaning and drinking will be sourced from the existing onsite borehole. The application for use of the borehole water is in the process of being lodged with the Department of Water and Sanitation (DWS). The chicken layer farming activities generate waste comprised of bird excrement, spilled feed, bird feathers, mortalities and used chicken bedding (wood shavings, sawdust and peanut hulls). The applicant plans to distribute the chicken waste as fertilizer to nearby farmers, as well as sell a portion of the waste. Broiler chicken waste will be collected every cycle (6 weeks) when chicken houses are cleaned. Should there be no demand for the waste, the waste will be disposed of at a licensed facility. A waste management license will not be required as the amount of waste produced is below the recommended threshold stipulated in the National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA).

The additional infrastructure to support this will comprise the following:

- 1x Egg collection System
- 1x Feeding System
- 1x Watering system (Nipple lines connected to a bore hole or reservoir)

Feeding system
Feeding systems will be required to easily distribute feed and water to the birds. The feeding systems can be automatic or manual. The chicken feed will be stored in silos, an automated feeding system is preferred.

Ventilation system
Ventilation will be important to ensure that air quality and temperature is appropriate for the layers. The chicken houses will be well ventilated to ensure air circulation and to minimize odours.

Waste Management
Chicken waste (manure) will be collected and dried in an impervious container and stored in 50kg bags at the back of the chicken house for collection by end users. There is a high demand for this manure, it will therefore be sold for use in vegetable production facilities.

Agricultural support services are in the area such as a chicken abattoir located approximately 2 roads down from the site. There are other chicken broiler houses in close vicinity, setting precedent for this type of activity. Residents keep chickens on the small holdings for subsistence.

The area is earmarked for small to medium scale agriculture in the relevant local spatial development and economic plans. The proposed use of the site is in line with this planned agricultural activity set forth by the local government.

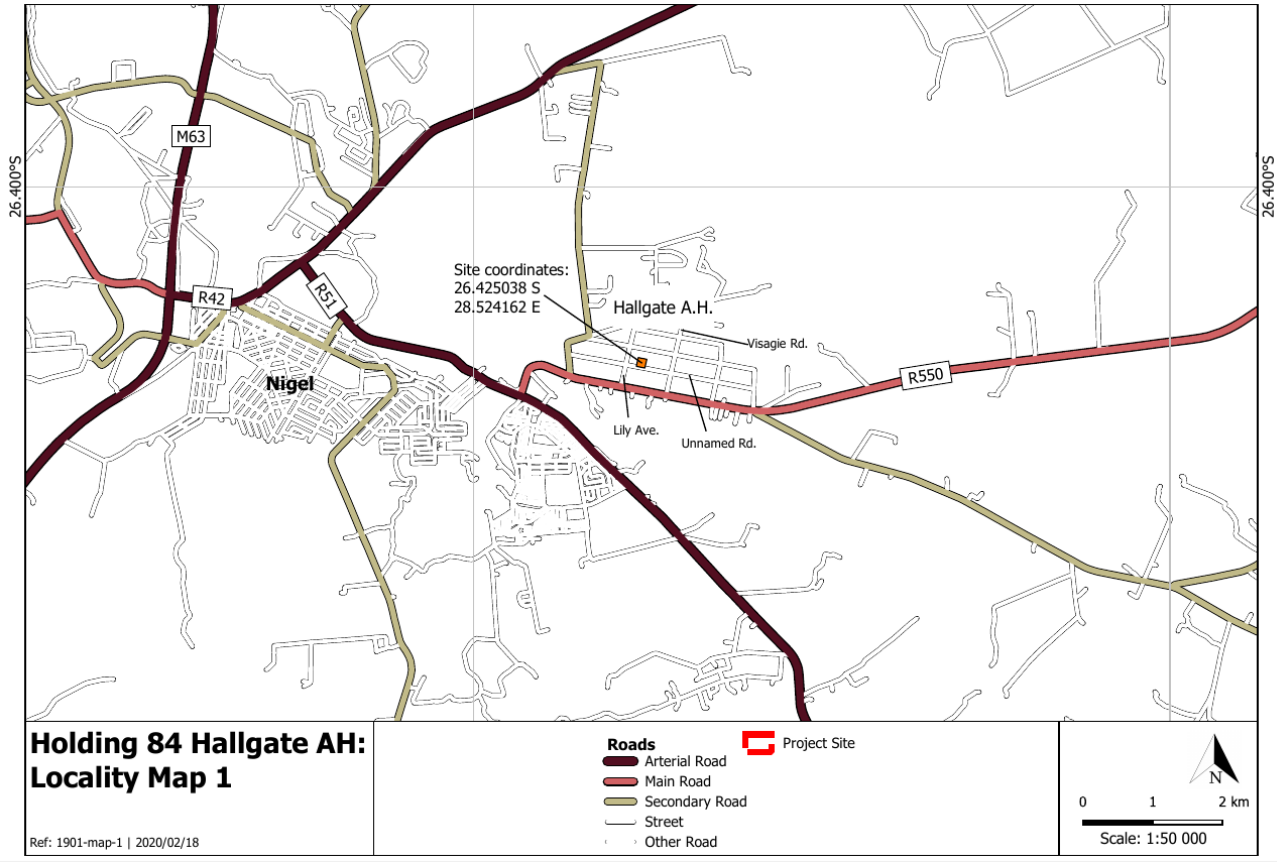

Figure 1: Location of the proposed development

2.3 Listed Activities

As part of the proposed piggery expansion, listed activities defined under the National Environmental Management Act, Act No. 107 of 1998 (NEMA, 1998), as amended, in terms of the Environmental Impact Assessment (EIA) Regulations, Government Notice (GNR) 983 of 4 December 2014. Relevant listed activities triggered by the proposed activities are described as follows:

GN. R 327, as Amended 7 April 2017 Activity 5: *The development and related operation of facilities or infrastructure for the concentration of—*

(ii) more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days; or

(iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

3 DESCRIPTION OF APPLICABLE LEGISLATION

Description of compliance with the relevant legislation, policy or guideline:	
Legislation, policy of guideline	**Description of compliance**
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	The Environmental Authorisation for the proposed development is lawfully applied for in terms of the EIA Regulations, 2014, promulgated under NEMA. The conditions on the Environmental Authorisation, if approved, will be adhered to.
National Water Act, 1998 (Act No. 36 of 1998) as amended	Pertinent legislation published under this act will be adhered to as well as a Water Use License Application.
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	Submitted the proposed project to the South African Heritage Resources Agency (SAHRA) online platform South African Heritage Resources Information System (SAHRIS)
National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004)	The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) as amended (NEMBA) including all the pertinent legislation published in terms of this act was considered in undertaking this Basic Assessment process. This included the determination and assessment of the fauna and flora prevailing in the proposed project and the handling thereof in terms of NEMBA.
National Environmental Management Waste Act, 2009 (Act No. 59 of 2008)	The Waste Management License will be undertaken in respect of the National Environmental Management: Waste Act (Regulations published in GNR 921 on the 29 November 2013 Government Gazette No 37083) as amended NEM:WA. Pieces of legislation published under this act will be adhered to.
Environmental Impact Assessment Regulations, 2014 as amended	All the triggered activities as per National Environmental Management Act (Act No. 107 of 1998) have been listed below.

4 ENVIRONMENTAL MANAGEMENT STRUCTURE

Phola Poultry Farm's management will develop an Environmental Management Structure, in line with this EMPr, that is appropriate to the size and scale of the project to develop and implement roles and responsibilities with regards to environmental management.

5 ROLES AND RESPONSIBILITIES

Key roles and responsibilities in order to meet the overall goal for environmental management of the proposed chicken broiler development are as follows:

5.1 Phola Poultry Farm Management (hereafter referred to as "Management")

Management is responsible for the overall environmental monitoring and implementation of the EMPr, and ensuring compliance thereof with the specifications of the Environmental Authorisation (EA) issued in terms of NEMA. Management should also ensure that any other permits or licences required as part of this project are obtained and complied with. Phola Poultry Farm may however, at their own costs, render the services of an external environmental consultant to oversee the implementation of the documented mitigation measures of this EMPr. It is also expected that management will appoint an Environmental Control Officer, Environmental Health and Safety Officer, and Construction Manager.

5.2 Environmental Control Officer

The Environmental Control Officer (ECO) will be the responsible person for ensuring that the provisions of the EMPr as well as the EA are complied with at all times. The ECO must fully communicate the environmental management processes associated with the project, particularly the EMPr, as well as review and ensure compliance with the conditions of the EMPr. The ECO will be responsible for issuing instructions to contractors and employees in terms of actions required with regards to environmental considerations. The ECO shall, on a regular basis, prepare and submit written reports to Management and the Competent Environmental Authority (DARDLEA) as required.

5.3 Environmental Health & Safety (EHS) Officer

It is important to note that the EHS Manager will be appointed to fulfil the roles of the Environmental Officer during the construction phase and that of the Environmental Manager during the operational phase. A generic term has therefore been assigned to this sector of roles and responsibilities. The responsibility of the EHS Manager includes overseeing the implementation of the EMPr during the construction and operational phases, monitoring environmental impacts, record-keeping and updating of the EMPr as and when necessary. The EHS Manager is also responsible for monitoring compliance with the conditions of the Environmental Authorisation that may be issued to Phola Poultry Farm.

The lead contractor and sub-contractors may have their own Environmental Officers, or designate Environmental Officer functions to certain personnel.

During construction, the EHS Manager will be responsible for the following:

- Meeting on site with the Construction Manager prior to the commencement of construction activities to confirm the construction procedure and designated activity zones.
- Daily or weekly monitoring of site activities during construction to ensure adherence to the specifications contained in the EMPr and Environmental Authorisation (should such authorisation be granted by DARDLEA), using a monitoring checklist that is to be prepared at the start of the construction phase.
- Preparation of the monitoring report based on the daily or weekly site visit.
- Reporting of any non-conformances within 48 hours of identification of such non-conformance to the relevant agents.
- Conducting an environmental inspection on completion of the construction period and 'signing off' the construction process
- with the Construction Manager.

During operation, the EHS Manager will be responsible for:

- Overseeing the implementation of the EMPr and monitoring programmes for the operation phase.
- Reviewing the findings of the monitoring and highlight concerns to management and TNPA where necessary.
- Ensuring compliance with the Environmental Authorisation conditions.
- Ensuring that the necessary environmental monitoring takes place as specified in the EMPr.
- Updating the EMPr and ensuring that records are kept of all monitoring activities and results.

During decommissioning, the EHS Manager will be responsible for:

- Overseeing the implementation of the EMPr for the decommissioning phase; and
- Conducting an environmental inspection on completion of decommissioning and 'signing off' the site rehabilitation process.

At the time of preparing this EMPr, the EHS Manager appointment is still to be made by the applicant. The appointment of the EHS Officer is dependent upon the project proceeding to the construction phase.

5.4 Construction Manager

The construction manager will be responsible for the following:

- Overall construction programme, project delivery and quality control for the construction of the facility.
- Overseeing compliance with the Health, Safety and Environmental Responsibilities specific to the project construction.
- Promoting total job safety and environmental awareness by employees, contractors and subcontractors and stress to all employees and contractors and sub-contractors the importance that the project proponent attaches to safety and the environment.

- Ensuring that each subcontractor employs an Environmental Officer (or have a designated Environmental Officer function) to monitor and report on the daily activities on-site during the construction period.
- Ensuring that safe, environmentally acceptable working methods and practices are implemented, and that sufficient plant and equipment is made available, is properly operated and maintained in order to facilitate proper access and enable any operation to be carried out safely.
- Meeting on site with the EHS Manager prior to the commencement of construction activities to confirm the construction procedure and designated activity zones.
- Ensuring that all appointed contractors and sub-contractors are aware of this EMPr and their responsibilities in relation to the programme.
- Ensuring that all appointed contractors and sub-contractors repair, at their own cost, any environmental damage as a result of a contravention of the specifications contained in the EMPr, to the satisfaction of the EHS Manager.

At the time of preparing this Draft EMPr, a construction manager has not been appointed and appointment will depend on the project receiving authorisation and proceeding to the construction phase.

6 ENVIRONMENTAL MANAGEMENT PLAN

As part of environmental management and enhancement, an identification and description of impact management objectives must be developed, inclusive of the proposed methods and effective management and mitigation measures required during the design, construction and operational phases of the proposed chicken broiler. The table below lists potential impacts and mitigation measures recommended for the proposed Phola Poultry Farm chicken layer development at the different phases.

6.1 Construction Phase

Impact Description	Environmental Objective	Management/Mitigation Measures	Monitoring Compliance & Reporting	Monitoring Frequency	Responsibility
Construction Phase					
Loss of indigenous vegetation due to the clearing for construction of the chicken layer facility and for the crop production	Avoid unnecessary loss of existing indigenous vegetation and faunal habitats.	-The clearing of vegetation must be kept to a minimum and remain within the stands earmarked for development – leave some open space area with natural vegetation intact.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Pre-construction	ESGIA, Phola Poultry Management, with advice from a Botanist / Horticulturist
		-Protected trees that may occur within the development site must be avoided – if this is not possible in limited cases, a permit to remove the individual tree is needed from the provincial forestry department;		Pre-construction	Phola Poultry Management, Construction Crew, with advice from a Botanist / Horticulturist
		-Construction must be completed as quickly as possible;			
		-Disturbed open areas must be rehabilitated immediately after construction has been completed in that area by planting appropriate indigenous tree and grass species;		Prior to and during construction	Phola Poultry Management, Construction Crew
		-During the construction phase workers must be limited to areas under construction and access to the planned open areas must be strictly controlled;		Prior to and during construction	Phola Poultry Management, Construction Crew
	Promote re-establishment of indigenous vegetation in disturbed areas.	-Rehabilitated areas must be monitored to ensure the establishment of re-vegetated areas.		During construction	Phola Poultry Management, Construction Crew, with advice from a Botanist / Horticulturist
		-Plant indigenous trees – no alien species.		During construction	Phola Poultry Management, Construction Crew, with advice from a Botanist / Horticulturist
Introduction and proliferation of alien species from clearing of areas from construction activities.	Limit / Regulate access by potential vectors of alien flora.	-Demarcate or fence in the construction site.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Prior to and during construction	Phola Poultry Management, Construction Crew
		-Carefully limit / regulate access by vehicles and materials to the construction site.		Prior to and during construction	Phola Poultry Management, Construction Crew
		-Prohibit the introduction of domestic animals such as dogs and cats.		During construction	Phola Poultry Management, Farm Management

	Maintain a tidy construction site. By law, remove and dispose of Category 1b alien species on site. All Category 2 species that remain on site will require a permit.	-Keep construction activities neat and tidy. -When complete, remove all sand piles, and landscape all uneven ground while re-establishing a good topsoil layer. -Plant only locally indigenous flora if landscaping needs to be done. -Remove Category species using mechanical methods, and minimize soil disturbance as far as possible. Alien wood could be donated to the surrounding community.		During construction During construction During construction During construction	Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew, with advice from a Botanist / Horticulturist Phola Poultry Management, Construction Crew, with advice from a Botanist / Horticulturist
Loss of mammal and herpatofauna habitat from construction activities		-The clearing of vegetation must be kept to a minimum and remain within the footprint of the development; -The construction must be completed as quickly as possible - fauna species may be killed -Disturbed areas must be rehabilitated immediately after construction has been completed in that area by planting appropriate indigenous plant species; -During the construction phase workers must be limited to areas under construction and access to the undeveloped areas must be strictly controlled; -Rehabilitated areas must be monitored to ensure the establishment of re-vegetated areas.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	During construction During construction During construction During construction During and after construction	Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew, with advice from a Botanist / Horticulturist
Loss of avian habitat from construction activities		-The spatial extent of construction activities must be minimized, and as far as possible must be restricted to the areas on which buildings, roads etc will actually be located. Particular care must be taken to minimize activities in the areas of natural vegetation that will remain on the site. -The boundaries of the development footprint areas	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Prior to construction Prior to and during	Phola Poultry Management, Construction Crew Phola Poultry Management,

		are to be clearly demarcated and it must be ensured that all activities remain within the demarcated footprint area. -Disturbance by residents of birds breeding and foraging in the area should be minimized. Provide adequate briefing for site personnel and residents. -Any bird nests that are found during the construction period must be reported to the Environmental Control Officer (ECO).		construction Prior to and during construction During construction	Construction Crew Phola Poultry Management, Construction Crew
Increased dust and erosion from clearing of vegetation, earth-moving activities, and increased vehicle traffic.	Implement effective measures to control dust and erosion.	-Limit vehicles, people and materials to the construction site. -Commence (and preferably complete) construction during winter, when the risk of erosion should be least. -Revegetate denude areas with locally indigenous flora a.s.a.p. -Implement erosion protection measures on site. Measures could include bunding around soil stockpiles, and vegetation of areas not to be developed. -Implement effective and environmentally-friendly dust control measures, such as mulching or periodic wetting.	ECO to ensure compliance and reporting thereof.	During construction During construction During construction During construction During construction	Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew
Sensory disturbance of fauna from increased vehicle and human activity, noise, dust and light.	Time construction activities to minimize sensory disturbance of fauna. Minimize noise pollution. Minimize light pollution.	-Commence (and preferably complete) construction during winter, when the risk of disturbing active (including breeding and migratory) animals, should be least. -Minimize noise to limit its impact on calling and other sensitive fauna (e.g. frogs). -Limit construction activities to day time hours. -Minimize or eliminate security and construction lighting, to reduce the disturbance of nocturnal fauna.	ECO to ensure compliance and reporting thereof.	Prior to and during construction During construction During construction During construction	Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew Phola Poultry Management, Construction Crew, ECO Construction Crew

Pollution associated with construction activities and residents (e.g., fuel spills, use of cleaning chemicals, management of		-Great care must be taken that no pollutants or other waste pollute the area or enter local water systems during the construction or operational phases. Measures to rapidly deal with spills of fuel, cleaning chemicals or any other potential pollutants must be put in place before construction commences. -Construction workers must be suitably trained to deal with any such spills. Facilities to handle pollution and waste must be provided to residents.	ECO to ensure compliance and reporting thereof.	Prior to and during construction	Phola Poultry Management, Construction Crew, ECO
Electrocution and collision hazards of avian fauna		-Normal safety measures for electrical installations as used by Eskom	ECO to ensure compliance and reporting thereof.	Prior to and during construction	Phola Poultry Management, Construction Crew, ECO

6.2 Operational Phase

Impact Description	Environmental Objective	Management/Mitigation Measures	Monitoring Compliance & Reporting	Monitoring Frequency	Responsibility
Operational Phase					
Loss of indigenous vegetation due to the clearing for the chicken layer facility and for the crop production		-The clearing of vegetation must be kept to a minimum and remain within the stands earmarked for development – leave some open space area with natural vegetation intact; -Protected trees that may occur within the development site must be avoided – if this is not possible in limited cases, a permit to remove the particular individual tree is needed from the provincial forestry department; -Rehabilitated areas must be monitored to ensure the establishment of re-vegetated areas. -Plant indigenous trees – no alien species.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Pre-construction Pre-construction Throughout operations Throughout operations	Phola Poultry Management, ECO Phola Poultry Management, , ECO Phola Poultry Management, ECO Phola Poultry Management, ECO
Introduction and proliferation of alien species from clearing of areas from construction activities		-An alien invasive management programme must be incorporated into the Environmental Management Programme; -Ongoing alien plant control must be undertaken; Areas which have been disturbed will be quickly colonised by invasive alien species. An ongoing management plan must be implemented for the clearing/eradication of alien species.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Prior to and during operations Prior to and during operations	Phola Poultry Management, ECO Phola Poultry Management, ECO

		-Monitor all sites disturbed by construction activities for colonisation by exotics or invasive plants and control these as they emerge. -Avoid planting of exotic plant species, use indigenous species.		Throughout operations Throughout operations	Phola Poultry Management, ECO Phola Poultry Management, ECO
Loss of mammal habitats		-The clearing of vegetation must be kept to a minimum and remain within the footprint of the development; -Rehabilitated areas must be monitored to ensure the establishment of re-vegetated areas.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Throughout operations Throughout operations	Phola Poultry Management Phola Poultry Management, , ECO
Odours from the laying houses disturbing neighbours		-Management of chicken droppings will be necessary including the regular cleaning of chicken droppings. -Drying of the droppings and ventilation in the laying houses is important in managing the odours.		Throughout operations Throughout operations	Phola Poultry Management Phola Poultry Management
Sensory disturbance of fauna Associated with operational activities and with increased human presence in the area Pollution associated with operational activities and residents (e.g., fuel spills, use of cleaning chemicals, management of waste products)		-The boundaries of the development footprint areas are to be clearly demarcated and it must be ensured that all activities remain within the demarcated footprint area. -Disturbance by residents of birds breeding and foraging in the area should be minimized. Provide adequate briefing for site personnel and residents. -Any bird nests that are found during the operational period must be reported to the Environmental Control Officer (ECO) and residents should always be aware of the importance of birds in their built environment.	ECO to ensure compliance and reporting thereof.	Throughout operations Throughout operations Throughout operations	Phola Poultry Management Phola Poultry Management Phola Poultry Management, ECO
Pollution associated with operational activities and residents (e.g., fuel spills, use of cleaning chemicals, management of waste products)		-Great care must be taken that no pollutants or other waste pollute the area or enter local water systems during the operational phases. Measures to rapidly deal with spills of fuel, cleaning chemicals or any other potential pollutants must be put in place before construction commences. -Workers must be suitably trained to deal with any such spills. -Facilities to handle pollution and waste must be provided to residents	ECO to ensure compliance and reporting thereof.	Pre-construction, Throughout construction & operations Throughout operations	Phola Poultry Management, ECO Phola Poultry Management, ECO
Electrocution and collision hazards of avian fauna		-Normal safety measures for electrical installations as used by Eskom		Pre-construction and during construction	Phola Poultry Management, ECO
Environmental contamination	Ensure that excrement, carcasses, feed, and other operational waste and	-Ensure that the facility is designed in accordance with international best practice norms, and with advice from an appropriate specialist, to ensure that	-ECO to develop a waste management plan and ensure	Pre-construction	ESGIA, Phola Poultry Management, with advise from agricultural experts

from chicken excrement, bedding, feed, carcasses and other operational waste	hazardous materials are appropriately and effectively contained and disposed of without detriment to the environment. Ensure that there are appropriate control measures in place for any contamination event.	there is no environmental contamination from effluent, fodder, carcasses and other waste, and to ensure that there is also effective storm water management. -Designate a secured, access restricted, signposted room for the storage of potentially hazardous substances such as herbicides, pesticides dips and medications. -Adhere to best practice chicken husbandry and waste disposal norms. -All hazardous waste should be disposed of at an appropriate licensed facility for this. -Waste recycling should be incorporated into the facility's operations as far as possible. -Educate workers about the facility's waste management and handling of hazardous substances with regular training and notices. -Establish appropriate emergency procedures for accidental contamination of the surroundings. -Rehabilitate contaminated areas a.s.a.p. in accordance with advice from appropriate contamination and environmental specialists. -Educate workers about the facility's waste emergency procedures with training and notices.	implementation and adherence thereof. -Regular site inspection to ensure that the proposed mitigation measures are being implemented. -Produce monthly reports to show compliance.	Throughout operation Throughout operation Throughout operation Throughout operation Pre-construction A.s.a.p. following contamination At least annually during operation	Phola Poultry Management, Farm Management, EHS ESGIA, Phola Poultry Management, Farm Management, with advise from agricultural experts Phola Poultry Management, Farm Management Phola Poultry Management, Farm Management Phola Poultry Management, Farm Management, EHS ESGIA, Phola Poultry Management Phola Poultry Management, Farm Management, EHS Phola Poultry Management, Farm Management, EHS

6.3 Decommissioning Phase

Impact Description	Environmental Objective	Management/Mitigation Measures	Monitoring Compliance & Reporting	Monitoring Frequency	Responsibility
Decommissioning Phase					
Introduction and proliferation of alien species from influx of vehicles, people and materials, site disturbance, and lack of alien species control		-Remove Category species using mechanical methods, and minimize soil disturbance as far as possible. -Alien wood could be donated to the surrounding community	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Throughout decommissioning Throughout decommissioning	Phola Poultry Management, ECO Phola Poultry Management, ECO
Increased dust and erosion from destruction of infrastructure, earth-moving activities, and increased vehicle traffic		-Limit vehicles, people and materials to the decommissioning site. -Commence (and preferably complete) decommissioning during winter, when the risk of erosion should be least. -Revegetate denude areas with locally indigenous flora a.s.a.p. -Implement erosion protection measures on site. -Measures could include bunding around soil stockpiles, and vegetation of areas not to be developed. -Implement effective and environmentally-friendly dust control measures, such as mulching or periodic wetting.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Throughout decommissioning During decommissioning Throughout decommissioning Throughout decommissioning Throughout decommissioning Throughout decommissioning	Phola Poultry Management Phola Poultry Management Phola Poultry Management, ECO Phola Poultry Management, ECO Phola Poultry Management, ECO Phola Poultry Management, ECO
Sensory disturbance of fauna from noise, dust and light associated with decommissioning activities		-Commence (and preferably complete) decommissioning during winter, when the risk of disturbing active (including breeding and migratory) animals, should be least. -Minimize noise to limit its impact on sensitive fauna. -Limit demolition activities to day time hours. -Minimize or eliminate security and decommissioning lighting, to reduce the disturbance of nocturnal fauna.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Throughout decommissioning Throughout decommissioning Throughout decommissioning Throughout decommissioning	Phola Poultry Management Phola Poultry Management Phola Poultry Management Phola Poultry Management

Poor / Inappropriate control of animal pests from poor waste management and hygiene, and insufficient, inappropriate and/or ineffectual pest control	Control the access and proliferation of pests as far as possible.	-Ensure that floors are sloped and slatted to facilitate drainage -Ensure that there is effective storm water drainage around the facility. -Screed concrete floors properly to seal all cracks and limit the pooling of effluent and water. -Effectively seal and maintain all pipes and reservoirs containing slurry, to prevent animals from accessing the effluent. -Ensure that the facility is sufficiently ventilated to keep floors, bedding, and fodder as dry as possible. -Check that fan louvers (if installed) work properly, and close fans completely when off. -Prevent and manage unwanted animal access to fodder. -Clean floors regularly. -Clean up excess fodder regularly from under troughs and feed bins. -Keep areas surrounding the facility free of spilled manure and litter. -Remove all trash, and sources of feed and water for pests from the outside perimeter of the facilities. -Keep weeds and grass mowed to 5cm or less immediately around the facilities, to reduce the prevalence of insects. -Electrocution devices are available to kill flies, while other mechanical devices include traps, sticky tapes or baited traps. -Control rodents through effective sanitation, rodent proofing and (as humane as possible) extermination. -Ensure that measures to control pests are tightly restricted to areas where these are problematic.	-ECO to develop a waste management plan and ensure implementation and adherence thereof. -Regular site inspection to ensure that the proposed mitigation measures are being implemented. -Produce monthly reports to show compliance.	Pre-construction All phases Construction and operation Construction and operation Pre-construction, construction and operation Throughout operation Pre-construction, construction and operation Throughout operation Throughout operation Throughout operation Throughout operation Throughout operation Throughout operation During operation	ESGIA, Phola Poultry Management, Construction Crew ESGIA, Phola Poultry Management, Farm Management Construction Crew, Farm Management Construction Crew, Farm Management ESGIA, Phola Poultry Management, Farm Management Farm Management and Team Phola Poultry Management, Farm Management and Team Farm Management and Team Farm Management and Team Farm Management and Team Farm Management and Team Farm Management and Team Farm Management and Team

		-Pest control measures should be taxon-specific. If necessary, advice should be sought from an appropriate specialist. -Rodenticides are not advised.		During operation During operation	Farm Management and Team Farm Management and Team
Disease transmission from poor waste management and hygiene, and insufficient, inappropriate and/or ineffectual pest control	Ensure that excrement, carcasses, feed, and other operational waste and hazardous materials are appropriately and effectively contained and disposed of without detriment to the environment. Ensure that there are appropriate control measures in place for any contamination event. Control the access and proliferation of pests as far as possible.	- As described above. - As described above. - As described above.	-ECO to develop a waste management plan and ensure implementation and adherence thereof. -Regular site inspection to ensure that the proposed mitigation measures are being implemented. -Produce monthly reports to show compliance.	As described above. As described above. As described above.	As described above. As described above. As described above.
Introduction and proliferation of alien species from influx of vehicles, people and materials, site disturbance, and lack of alien species control	Limit / Regulate access by potential vectors of alien flora. Maintain a tidy production facility.	-Carefully limit / regulate access by vehicles and materials to the site. -Prohibit the introduction of domestic animals such as dogs and cats. -Minimize the accumulation and dispersal of excess fodder on site. -Employ best practices regarding tilling of soil and weed management.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Throughout operation Throughout operation Throughout operation Throughout operation Throughout operation	Phola Poultry Management, Farm Management Phola Poultry Management, Farm Management Farm Management and Team Farm Management and Team

	By law, remove and dispose of Category 1b alien species on site. All Category 2 species that remain on site will require a permit.	-Plant only locally indigenous flora if landscaping needs to be done. -Remove Category species using mechanical methods, and minimize soil disturbance as far as possible. Alien wood could be donated to the surrounding community.		Throughout operation	Phola Poultry Management, Farm Management, with advice from a Botanist / Horticulturist Phola Poultry Management, Farm Management and Team, with advice from a Botanist / Horticulturist
Sensory disturbance of fauna from increased vehicle and human activity, noise, dust and light	Minimize essential lighting Minimize unavoidable noise Prevent unnecessary light and noise pollution	-Install motion-sensitive lights. -Ensure that all outdoor lights are angled downwards and/or fitted with hoods. -Use bulbs that emit warm, long wavelength (yellow-red) light, or use UV filters or glass housings on lamps to filter out UV. -Avoid using metal halide, mercury or other bulbs that emit high UV (blue-white) light that is highly and usually fatally attractive to insects. -Conduct regular maintenance of machinery, fans and other noisy equipment. -Encourage workers to minimize light and noise pollution through training and notices.	Phola Poultry Management to ensure proposed development adheres to the proposed mitigation measures of this EMPr	Construction and operation Construction and operation Throughout operation Throughout operation Throughout operation Throughout operation	Phola Poultry Management, Farm Management Phola Poultry Management, Farm Management Phola Poultry Management and Team Phola Poultry Management and Team Phola Poultry Management and Team Phola Poultry Management

7 ENVIRONMENTAL AWARENESS AND TRAINING PLAN

Phola Poultry (Pty) Ltd Management has to appoint an independent Environmental Control Officer whose duty is to also implement an effective environmental awareness plan aimed to educate workers and contractors in terms of the biodiversity on site, environmental risks associated with the proposed development and land management of the site. Training and/or awareness should be raised and effectively communicated prior to the commencement of the construction phase. Training sessions should incorporate the management plans addressed in this EMPr as well as any new information and documentation provided by the ECO, as well as that of the Environmental Health & Safety Officer. The ECO would be the most suitable person to conduct these training sessions, identifying sensitive environments as well as all the risks and impacts, such as effluence, associated with the chicken broiler and the methods in which to deal with the impacts in order to avoid environmental degradation. Training sessions can be monitored by providing an attendance register indicating the workers that received training as well as evidence of the training and/or awareness received. These sessions would also need to be carried out throughout the operational phase of the chicken broiler, at least once a year, or as new information becomes available.

Appendix I:

Other information

Anthony Goslar

Age: 41
Nationality: South African
Marital Status: Married

SUMMARY OF QUALIFICATIONS

MCom Development Finance CUM LAUDE (Graduate School of Business, University of Cape Town, 2018)

- Research paper has been submitted for evaluation. A qualitative research approach was adopted in the discipline of project finance and megaprojects seeking to understand sustainability as a strategic risk to megaprojects.
- Coursework was completed with distinction.

MSc Environmental Studies (University of Witwatersrand, 2006)

- A quantitative research approach was adopted in the discipline of remote sensing using principle component analysis and satellite imagery for dry biomass vegetation detection for application in fire prediction.
- Coursework was completed with distinction.

BA (Hons) CUM LAUDE Geography & Environmental Management (University of Johannesburg 2002)

King Edward VII High School (matriculation)

Continuing Professional Development

Early Stage Investment: Find-Grow-Make-Realise Programme (Graduate School of Business, University of Cape Town & Knife Capital / Angel Hub, 2013)

Energy Management System Implementation (Industrial Energy Efficiency Project, 2012)

SUMMARY OF WORK EXPERIENCE

ESGiA (Pty) Ltd formerly Goslar Environmental CC (Feb 2011 – present)

Founder of ESGiA and Goslar Environmental

Information systems, financial modelling and visualization

- **UCT English Language Centre –** Development of a financial projection / data analytics model and dashboard for use in tracking and forecasting business performance, and for the customer analytics. Development of learner management system using Web framework stack: Django, Postgresql, NGINX, Gunicorn

Independent consultant providing environmental services/solutions. Selected clients:

- Afrimat Silica
- Murray & Roberts Projects
- Bombela CJV (Pty) Ltd
- Molefi Properties (Pty) Ltd

Contract work as an Environmental Assessment Practitioner for **Jeffares & Green** (Apr 2011 to Mar 2012)

Altgrid (Pty) Limited, trading as WrightGrid Africa - www.wgafrica.com (Feb 2015 – 2017)

- Co-founder holding the role as technology and operations lead for a solar start-up company seeking to provide off-grid solar power platforms with a technology offering of Wi-Fi and cell phone charging
- As a co-founder, my responsibilities included business model and value proposition development, business financial modelling, seeking funding, market development, partnership contact negotiations with customers and suppliers, develop and maintain assets in the field, operations at the units
- We currently have a pilot unit in Brazzaville (Congo) being tested by an in-country partner, and have had the pilot in Kinshasa (DR Congo) for 6 months prior to this

Sea Point, Cape Town, South Africa | +27 82 928 0621 anthony@esginafrica.com

- Development of an off-grid local cache media server for the delivery of free select localized media to smart phones (called the Rainbow Box)

Murray and Roberts (Nov 2008 – Jan 2011)

Seconded to Gautrain - Bombela Civils Joint Venture (Aug 2009 – Nov 2010)

- Last position as Environmental Manager where I was responsible for management of environmental systems and regulatory matters the civils contractor on Gautrain

Last position: **Environmental Manager** for M&R MEI / Projects (Nov 2009 – Jan 2011)

- Secondment to Gautrain
- Management of environmentally related issues for MRES as an EPCM and EPC company.
- Maintenance and updating of the Environmental Management System.

Marsh (Pty) Ltd, Marsh Incorporated (Apr 2007 – Oct 2008)

Environmental **Practitioner** consulting in various environmental capacities including:

- Environmental Impact Assessments for a variety of activities relating to Greenfields developments
- Strategic Environmental Assessment
- Environment Outlook (State of the Environment Reporting)
- Sustainable Reporting

Responsible for development and management of the internal GIS Unit.
Project Management

Environmental Impact Management Services (Oct 2004 – Mar 2007)

Last position: **Senior Consultant**
Environmental Practitioner consulting in various environmental capacities including:

- Environmental Impact Assessments for a variety of activities:
- Environmental Monitoring
- Strategic Environmental Assessment
- Environmental Management Plans

GIS specialist in-house to support environmental services
Project Management

SUMMARY OF TECHNICAL SKILLS

• **Python** – Basic python for application in data analysis

• **GIS/Remote Sensing** – ArcGIS 8.3; TNTMips; IDRISI; QGIS (at varying capacities) for use in GIS mapping and satellite remote sensing analysis

• **Web Mapping and Visualizations** – HTML, CSS & JavaScript libraries (D3, Google Charts, JQuery) for use in data visualizations with an example at www.wgarica.com/market

• **Operating systems** – Debian terminal, Linux GUIs, MAC OS X, Windows

• **Other Software** – Neo4j graphing database; MS Office Suite; Gretl Econometrics

• **Project Management** - Including tenders and proposals compilation; project budgets; project schedules; process and lifecycle management.

• **Statutory process and systems:** EIA, EMPs, EMS implementation and reporting, ISO14000

Lesedi Local Municipality
1 HF Verwoerd Street
Civic Centre Building, Heidelberg
PO Box 201, Heidelberg, Gauteng, 1438
Tel: +27 16 492 0055
Fax: +27 86 604 6949
Email: leratomo@lesedi.gov.za
www.lesedilm.gov.za

LESEDI
Local Municipality

LED & Planning

REF: HLD84HALL
ENQ. LERATO MOKOENA

ZONING CERTIFICATE

(Issued in terms of the Lesedi Town Planning Scheme, 2003)

NAME OF APPLICANT: Molefe

DATE ISSUED: 2019 November 28

PROPERTY DESCRIPTION: Holding 84 Hallgate AH

This is to certify that the above property is according to the Lesedi Town Planning Scheme; 2003 subject to the following development parameters

1. ZONING: Agricultural

2. Uses:
   - The "Agricultural" Use Zone is to be read together with the following "Table B" (according to the Lesedi Town Planning Scheme; 2003)

Use Zone	Notation the Map	May Be Erected And/or Used	May Be Erected And/or Used Only with the Consent of the Local Authority	May Not Be Erected And/or Used
[1]	[2]	[3]	[4]	[5]
Agricultural		• Agricultural Uses	• Other uses including special uses	• Uses not under columns [3] and [4]

3. COVERAGE: N/A

4. DENSITY: N/A

5. HEIGHT: 3 Floors

6. FLOOR SPACE RATIO: N/A

7. BUILDING LINES AND BUILDING RESTRICTION AREAS:

Use Zone	Along Street Boundary	Along Side Boundary	Along Rear Boundary
Agricultural	10m	5m	5m

- Servitudes: N/A
- Floodlines: N/A

8. LINE OF NO ACCESS: N/A

9. PARKING REQUIREMENTS:

   To the satisfaction of the local authority

10. CONTRAVENTION OF THE SCHEME:

    Any person who contravenes, or deliberately allows the contravention of any stipulation or conditions of the Scheme, or the provisions of any notice or directive by virtue of any stipulation of the Scheme, is guilty of an offence and punishable under the Ordinance. The Local Authority could serve a notice to enable the owner to suspend the illegal use, after which legal action will be taken by the Local Authority.

Certificate Issued by,

Lerato Mokoena

L. Mokoena
GIS TECHNICIAN