Draft Basic Assessment Report

for

EAGLES PRIDE HATCHERY

VAALBOSCH BREEDERS

Prepared by:

Bucandi Environmental Solutions

Project Manager: Dr Hélen Prinsloo (D.Tech.)
(*Pr.Sci.Nat.*) Reg. No. 400108/11 (SACNASP)

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Table of contents

1. INTRODUCTION AND BACKGROUND

1.1 Background

Eagles Pride Hatchery is proposing the construction of 5 breeder houses with the capacity to hold up to 7 400 birds per house (total site capacity = 37 000) on Portion 3 of the farm Vaalbosch Vlakte 554 IN, situated in Stella District within Naledi Local Municipality area. The proposed project triggers a Basic Assessment for certain listed activities under Listing 1 and Listing 3 of NEMA (National Environmental Management Act, 1998). Bucandi Environmental Solutions (Bucandi) was requested by Eagles Pride Hatchery to conduct a Basic Assessment as part of the application for environmental authorisation.

1.2 Details of the project proponent

Company name:	Eagles Pride Hatchery
Physical address:	Portion 38 of the farm Roodeplaat 293 JR
Postal address:	Private Bag X5, Montana Park, 0159
Contact person:	Mr. Rudie Briel
Telephone number:	012 808-9930/1/2
Email address:	rudie@kuipersgroup.co.za

1.3 Details of Environmental Assessment Practitioner (EAP)

Company name:	Bucandi Environmental Solutions
Reg. No:	2009/087537/23
Physical address:	23 Burger Street Viljoenskroon 9520
Postal address:	P. O. Box 317 Viljoenskroon 9520
Project coordinator:	Dr Hélen Prinsloo
Telephone number:	076 682 4369
Email address:	helen@bucandi.co.za
Qualification:	D.Tech (Conservation Management)
Experience:	15 years
Affiliation:	SACNASP *Pri.Sci.Nat* 400108/11

Assistant: Marika Smook

Telephone number: 076 422 3484

Email address: info@bucandi.co.za

Please see Appendix G for a copy of the Curriculum Vitae for the EAP.

1.4 Details of specialists

Ecological Specialist: Dr Hélen Prinsloo

Telephone number: 076 682 4369

Email address: helen@bucandi.co.za

Qualification: D.Tech (Conservation Management)

Experience: 15 years

Affiliation: SACNASP *Pri.Sci.Nat* 400108/11

Ecological Specialist: Mr. Reinier F. Terblanche

Telephone number: 082 614 6684

Email address: reinierf.terblance@gmail.com

Qualification: M. Sc. Ecology (*cum laude*)

Experience: 26 years

Affiliation: SACNASP *Pri.Sci.Nat* 400244/05

2. LOCATION OF PROPOSED ACTIVITY

The study area is located 7.6 km north of Kameel in the Northwest Province within the Dr Ruth Segomotsi Mompati District Municipality and Naledi Local Municipality area (Appendix A). More specifically it is located on Portion 3 of the farm Vaalbosch Vlakte 554 IN, at 26º31'59.52" S; 25º00'33.4" E (Appendix A). A dirt road connecting Kameel to the N18 runs within 1 km of the site with a farm road providing access to the site. See Appendix A for the locality map and layout plans.

21-digit Surveyor General code	T0IN00000000055400003
Physical address and farm name	Portion 3 of the farm Vaalbosch Vlakte 554 IN
GPS coordinates	26º31'59.52" S; 25º00'33.4" E

3. SCOPE OF ACTIVITY

3.1 Listed activities triggered

The proposed activity triggers the following Listed Activities in terms of **Listing Notice 1 and 3 of Government Notice No. R327** published in Government Gazette No. 40772 of **7 April 2017** under the National Environmental Management Act, Act 107 of 1998:

Listing 1: (ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.
(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.
Listing 3: (ACTIVITY NO. 12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (h) (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority.

3.2 Description of activity

The activity will entail the construction of 5 environmentally controlled poultry houses (108 m x 15 m each). Each house will have the capacity for 7 400 birds. The entire site will be able to house up to 37 000 birds.
The project will entail the following:

- The clearance of 4.53 ha of indigenous vegetation, of which 3.25 ha is classified as Terrestrial Critical Biodiversity Area 2 (tCBA2). This is assessed as Activity 1 in Section 8 below.
- Earthworks on 4.53 ha to prepare for 5 poultry houses (Assessed as Activity 2 in Section 8 below.)
- Construction of 5 semi - environmentally controlled poultry houses (108 m x 15 m) with capacity for 7 400 birds per house, totalling 37 000 birds (Assessed as Activity 3 in Section 8 below).
- A silo and water tank will be erected next to each house.
- Powerlines will be connected to each house from a new Eskom point.
- Pipelines will be connected to each house from a new borehole.
- The site will be fenced off with a 2.4m high electric fence.

3.3 Relevant legislation

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act, Act No. 107 of 1998.	Department of Economic Development, Environment,	1998

Listing 1 of regulation 327 promulgated under Chapter 5 of the National Environmental Management Act (NEMA, Act 107 of 1998) in Government Gazette 40772. Listed activity 5 (ii), (iv) & 27.	Conservation and Tourism	1998
Listing 3: 12 (h) (iv)		1998
National Water Act, Act No. 36 of 1998.	Department of Water Affairs	
Conservation of Agricultural Resources Act, Act No. 43 of 1983	North West Department: Agriculture and Rural Development	1983
		2004
Air Quality Act, Act No. 39 of 2004.	Ngaka Modiri Molema District Municipality	2013
Reg. 983 published on 22 November 2013 in GN 37054		1999
Heritage Act, Act No 25 of 1999.	South African Heritage Resources Act	
		2000
Meat Safety Act, Act 40 of 2000	Department of Agriculture, Forestry and Fisheries	2008
National Environmental Management: Waste Act, Act No. 59 of 2008	Department of Economic Development, Environment, Conservation and Tourism	
Listed Activities Reg. 921 published on 29 November 2013 in GN 37083		
		1993
Occupational Health and Safety Act, Act 85 of 1993	Department of Labour	2003
Noise regulation, 2003	Department of Health and Safety	
		1987
Environmental regulations for workplaces, 1987	Department of Labour	1990
Facility regulations,1990	Department of Labour	1986
General Health and Safety Regulations, 1986	Department of Labour	2009
Electrical Installation Regulations,		

2009. Electrical Machinery Regulations, 1988. Construction Regulations, 2014	Department of Labour Department of Labour Department of Labour	1988 2014

4. NEED AND DESIRABILITY OF THE PROJECT

4.1 Need for operation of the facility

The facility will provide increased food availability; in particular poultry products. Poultry is highly desirable as a food item across all income groups in South Africa. Internationally production of poultry has increased significantly over the past few years in line with increased consumer demands for production of poultry and expectations are that consumer demand will continue to increase. Due to overcrowding of present facilities, lack of additional facilities and therefore the potential for increased biological risk, suppliers have embarked on a process of establishing new facilities in order to overcome these problems and ensure the long-term sustainability and viability of the industry. The socio-economic value of the project will indirectly have a positive impact on the immediate area as well as cater for the increasing demand for poultry in the Northwest Province and nationally. At least 50 temporary employment opportunities will be created during the development and construction phase. At least 80 additional people will be permanently employed during the operational phase of the activity. Contractors are employed during the construction phase and additional employment opportunities are therefore created.

4.2 Preferred location

A dirt road connecting Kameel to the N18 runs within 1 km of the site with a farm road providing access to the preferred site location. The preferred site located on indigenous vegetation that is currently used for game and cattle grazing. The site is largely flat (see complete site description in Section 5.1).

5. PROJECT ALTERNATIVES

5.1 Property or location alternatives

See Appendix B for site photographs and Appendix C for the site plans.

Site alternative 1 A (preferred site)

This site is located on 45 324.57 m^2 of indigenous vegetation of which 32 476.08 m^2 is classified as Terrestrial CBA 2. A dirt road connecting Kameel to the N18 runs within 1 km of the site with a farm road providing access to the preferred site location. S1 A is flat (slope =

1:25) and the costs and impacts of earthworks before construction will be minimal. A new Eskom point and boreholes will be connected to the proposed poultry houses. The site is located relatively high and stays dry year-round.

5.2 Activity alternatives

Preferred activity

Environmentally controlled poultry houses (approximately 108 m X 1 5m) will be constructed with a capacity for 7 400 birds per house. A water tank and a silo for food will be constructed next to each house with underground pipelines connecting the water tanks with the new boreholes. A 2.4m electric fence with an entry gate (with biosecurity control measures) will be constructed around the site. A biosecurity house will be erected containing an office as well as a bathroom and showers. Electricity lines will be connected to the water tanks and all the houses.

Activity alternative 2

The site lay-out will be exactly as for A1, but the chicken houses will be open and not environmentally controlled. The differences between closed houses (A1) and open houses (A2) are as follows:

	A1 – Environmentally controlled	A2 – Open
Isolation value (R)	12	1.5
Heat capacity	1 100kW	1 500kW
Chickens/m^2	14	13
Energy saving	20%	0%

No-go alternative

The site is currently used as grazing for game and cattle and will continue to be used as such if the proposed development does not go ahead.

5.3 Design or layout alternatives

Apart from the site alternatives, no design or layout alternatives are being considered.

5.4 Technology alternatives

No technology alternatives were considered for the proposed project.

5.5 Operational alternatives

No operational alternatives were considered for the proposed project.

5.6 The “no-go” activity alternative

The “no-go” alternative will entail using the land for grazing of cattle and game.

6. PUBLIC PARTICIPATION PROCESS

Application submitted: June 202
Public Participation May 2024
BAR: June 2024
A notice was placed in the Stellalander local newspaper on the 1st of May 2024, see proof in Appendix D1. Letters was sent you to all I&AP's on the 1st of May 2024, see proof in Appendix D 3. A copy of the draft BAR will be sent to all I&APs.

7. ENVIRONMENTAL ATTRIBUTES

7.1 Geographical attributes

7.1.1 Gradient of the site

The proposed site is located on a plateau with a gentle slope (1: 76) towards the west.

7.1.2 Soils

The property is located on landtype Bc16. Soils for this landtype include the following:
Rock – 1.8%
Panes - 1.8%

Soil type	Depth (mm)	% Occurrence	% Clay in A horizon	% Clay in B horizon
Mispah Ms10, Mangano Hu33	100 – 250	0.2	6 - 15	8 - 15
Annandale Cv33, Blinkklip Cv36, Dudfield Cv46	450 - 900	31.4	8 - 15	12 - 25
Shorrocks Hu36	450 - 800	23.8	10 - 15	15 - 25
Soetmelk Av36, Bleeksand Av33	600 - 900	23.8	8 - 15	10 - 25
Bainsvlei Bv36	600 - 900	4.8	8 - 15	15 - 30
Soetmelk Av36	600 - 900	4.8	15 - 25	25 - 35
Mangano Hu33	450 - 900	3.8	6 - 10	6 - 15
Klipfontein Ms11, Mispah Ms10, Loskop Ms12, Kalkbank Ms22	100 - 300	2.5	6 - 15	
Moriah Hu32, Portsmouth Hu35	450 - 700	1.0	3 - 8	4 - 10
Lindley Va41	200 - 300	0.6	8 - 15	35 - 45

The landtype is dominated by soils with low clay content in the A horizon. There are no soils with a high clay content (above 40%) in the A horizon (typically associated with proximity to water bodies and / or a shallow water table) present in this landtype.

7.1.3 Geology

Geology for this landtype consist predominantly of andesitic to basaltic lavas of the Ventersdorp Supergroup, sometimes overlain by calcrete. Swazian granite occurs in places.

7.2 Biological attributes

7.2.1 Ground cover and vegetation

The proposed site is located on indigenous vegetation in a relatively good condition. The site was cultivated in the past and secondary succession has taken place. A modified savanna is currently present at the site. Vegetation is an open savanna with large grassy patches. Indigenous trees at the site include *Vachellia karroo*, *Searsia lancea*, *Vachellia hebeclada*, *Vachellia erioloba* and *Grewia flava*. Shrub species such as *Lycium horridum*, *Hertia pallens*, *Laggera decurrens* as well as dwarf shrubs such as *Felicia muricata*, *Ziziphus zeyheriana* and *Pentzia globosa* are present at the site. Indigenous grass species at the site include *Aristida congesta*, *Melinis repens*, *Cynodon dactylon*, *Eragrostis lehmanniana*, *Tragus racemosus* and *Cenchrus ciliarus*. Indigenous forb species at the site include *Barleria macrostegia*, *Osteospermum muricatum* and *Lippia scaberrima*. The alien invasive tree species *Prosopis glandulosa* is present at the site. Alien invasive herbaceous weeds at the site include *Gomphrena celosioides*, *Schkuhria pinnata* and *Alternanthera pungens*. A permit must be applied for if any damage or removal of the individual *Vachellia erioloba* trees, at the site, cannot be avoided.

7.2.2 Biodiversity classification

The majority of the proposed site is located Terrestrial Critical Biodiversity Area 2.

7.2.3 Sensitive areas

An ecological assessment was conducted to determine the ecological sensitivity of the site (See Appendix F-7). There are no wetlands, rocky ridges or Threatened ecosystems at the site. No Threatened or Near Threatened plant- or animal species appear to be resident at the site. No other plant species of particular conservation concern appears to be present at the site with the exception of the Protected tree species *Vachellia erioloba* (Camel Thorn Tree) of which a few individuals occur at the site. A permit will be needed if any damage or removal of the individual Protected trees, at the site, cannot be avoided.

7.3 Physical attributes

7.3.1 Waste generation

Activity alternative 1 (Preferred alternative)

Construction Phase

An estimated 2 m^3 of solid waste will be produced per month during the Construction Phase. Waste is expected to be limited to packaging materials (shrink wrap, cardboard) and litter generated by the construction staff. It will also contain leftover building materials such as cement or concrete, and PVC panelling. All the leftover building materials will be removed by the building contractor. Waste will be recycled as far as possible. Non-recyclable waste will be sorted into different types and disposed of at a suitably licensed waste disposal facility.

Construction phase solid waste will be disposed of at the nearest licensed waste disposal site. Waste considered unsuitable for municipal waste disposal sites will be disposed of at a suitably licensed hazardous waste disposal facility (e.g. WasteTech).

Operational Phase

An estimated 40 m^3 of solid waste will be produced per month during the Operational Phase. Solid waste will be disposed of at the nearest licensed waste disposal. Waste considered unsuitable for municipal waste disposal sites will be disposed of at a suitably licensed hazardous waste disposal facility (e.g. WasteTech). Any general waste such as litter generated by staff will be disposed of at the nearest licensed waste disposal site.

Manure Removal
Approximately 0.5 tons of chicken manure will be produced monthly. Chickens are kept for a 55-week cycle. Manure will be removed on a regular basis and used on agricultural fields. At the end of each cycle, all the manure and litter are removed from the houses using bobcats and loaded directly on truck to be removed by the contractor. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.

Disposal of Mortalities
Approximately 310 dead chickens will be produced monthly. The carcasses are removed on a daily basis and collected by a contractor (Daan Erasmus - Lion farm).

Activity alternative 2

Construction Phase
An estimated 2 m^3 of solid waste will be produced per month during the Construction Phase. Waste is expected to be limited to packaging materials (shrink wrap, cardboard) and litter generated by the construction staff. It will also contain leftover building materials such as cement or concrete, and PVC panelling. All the leftover building materials will be removed by the building contractor. Waste will be recycled as far as possible. Non-recyclable waste will be sorted into different types and disposed of at a suitably licensed waste disposal facility.
Construction phase solid waste will be disposed of at the nearest licensed waste disposal site. Waste considered unsuitable for municipal waste disposal sites will be disposed of at a suitably licensed hazardous waste disposal facility (e.g. WasteTech).

Operational Phase
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Manure Removal
Approximately 0.5 tons of chicken manure will be produced monthly. Chickens are kept for a 55-week cycle. Manure will be removed on a regular basis and used on agricultural fields. At the end of each cycle, all the manure and litter are removed from the houses using bobcats and loaded directly on truck to be removed by the contractor. After all the manure has been

removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.

Disposal of Mortalities
Approximately 310 dead chickens will be produced monthly. The carcasses are removed on a daily basis and collected by a contractor (Daan Erasmus - Lion farm).

No-go alternative
No solid waste will be produced.

7.3.2 Liquid effluent

Activity alternative 1 (Preferred alternative)
At the end of each cycle, all the manure and litter are removed from the houses using bobcats and loaded directly on truck to be used on agricultural fields. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.

Activity alternative 2
At the end of each cycle, all the manure and litter are removed from the houses using bobcats and loaded directly on truck to be used on agricultural fields. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.

No-go alternative
No liquid effluent will be produced.

7.3.3 Atmospheric emissions

Activity alternative 1 (Preferred alternative)
Since the houses will be environmentally controlled poultry houses, the amounts of dust, ammonia and odours released into the atmosphere will be minimal.

Activity alternative 2
If this activity alternative is chosen, open houses will be used and relatively high amounts of dust, ammonia and odours will be released into the atmosphere, being of some discomfort to neighbours.

No-go alternative
No liquid effluent will be produced.

7.3.4 Noise

Activity alternative 1 (Preferred alternative)
Low levels of noise will be produced by the chickens in the houses.

Activity alternative 2
Low levels of noise will be produced by the chickens in the houses.

No-go alternative
Low levels of noise will be produced during cultivation of the fields.

7.3.5 Water use

Activity alternative 1 (Preferred alternative)
The activity will use approximately 1 296 000 litres of water per month. This will be sourced from groundwater through a new borehole.

Activity alternative 2
The activity will use approximately 216 000 litres of water per month. This will be sourced from groundwater through a new borehole.

No-go alternative
The activity will not use water.

7.3.6 Energy efficiency

Activity alternative 1 (Preferred alternative)
Because of a higher isolation (R) value (12 for semi - environmentally controlled poultry houses 1.5 for open houses) the use of fans for cooling in summer are much lower in closed houses than in open houses. During winter, closed houses also retain heat much longer and need substantially less heating than open houses. Energy efficient fans are also used. All the houses are fitted with a day light switch in order for outside lights only to be on when absolutely necessary. All lights inside the house make use of energy saving light bulbs.

Activity alternative 2
Open houses have a much lower isolation (R) value (12 for semi - closed houses versus 1.5 for open houses), but canvas “walls” are opened or closed to regulated the temperature inside the houses to a degree. During winter, open houses have a poor heat retention rate and more energy is needed for heating. All the houses are fitted with a day light switch in order for outside lights only to be on when absolutely necessary. All lights inside the house make use of energy saving light bulbs.

No-go alternative
The activity will not use electricity.

7.4 Human environment

7.4.1 Heritage and cultural attributes

There are no artefacts of cultural or heritage importance at the site. If any artefacts are discovered construction will seize and a Heritage Specialist will be contacted.

7.4.2 Socio-economic attributes

The Naledi Local Municipality is a Category B municipality situated in the western part of the Dr Ruth Segomotsi Mompati District in the North West Province. It is bordered by the Ngaka Modiri Molema District in the north, Greater Taung in the south, Mamusa in the east, and Kagisano-Molopo in the west. It is the second-largest of the five municipalities that make up the district, accounting for 16% of its geographical area. It is known as the Texas of South Africa because of the cattle breeding and agricultural activities that take place there.

Area: 7 032km²
Cities/Towns: Stella, Vryburg
Main Economic Sectors: Agriculture and hunting (27.8%)

Education (aged 20 +):
No schooling: 9.9%
Higher education: 8.5%
Matric: 30%

The proposed development will contribute to social and economic uplifted through the addition of capital value and income generation to the region, as well as job creation. The table below summarises the expected relevant contributions.

Aspect	Activity alternative 1 (preferred activity)	Activity alternative 2	No-go alternative
Capital value	R 30 000 000.00	R 30 000 000.00	R 0
Annual income generation	R 30 000 000.00	R 30 000 000.00	R 0
Employment opportunities during construction	50	50	0
Value of employment opportunities during construction	R 985 600.00	R 985 600.00	R 0
Percentage to previously disadvantaged	95%	95%	0
Permanent employment opportunities	15	15	0
Value of permanent employment for 10 years	R 1 310 400.00	R 1 310 400.00	R 0
Percentage to disadvantaged	90%	90%	0

8. POTENTIAL IMPACTS

The impact assessment in this section considered the following activities and the impact of each of the activities:
Activity 1: The clearance of 4.53 ha of indigenous vegetation.
Activity 2: Earthworks on a total of 4.53 ha to prepare for the construction of 5 poultry houses.
Activity 3: Construction of the poultry facility.
Activity 4: Operation of the poultry facility.

8.1 Full description of impacts and risks identified

Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts and the degree to which these impacts can be mitigated

8.1.1 Activity alternative 1 – Construction of six environmentally controlled poultry houses (preferred activity)

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
1-3	Air pollution on a local level.	2	1	2	1	3	Low	Negative	This impact is not reversible, but can be completely avoided by the following measures: Dust control by means of watering if necessary. Vehicles to be regularly serviced and well-tuned. Operations to be undertaken during working hours only.
1-3	Contamination of soils, surface water and groundwater due to leakages from vehicles	1	1	2	3	3	Low	Negative	This impact is not reversible, but can be completely avoided by the following measures: Machinery must be properly maintained at all times. Servicing of

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
	entering and exiting the site.								machinery must take place only in specific demarcated and protected areas. Measures must be taken for the proper disposal of oils, grease, oil filters, rags, etc.
3, 4	Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	3	3	3	2	3	Medium	Negative	This impact is not reversible, but can be completely avoided by the following measures: Proper ablution facilities must be provided i.e. chemical toilets at appropriate locations on site if necessary or existing facilities must be used. Workers must be made aware of the risk of soil water contamination. Domestic waste must be disposed of in appropriate containers, and removed to the nearest municipal waste-disposal site as part of existing waste management system.
4	Pollution of soil, surface water and groundwater due to ineffective manure disposal.	3	3	3	2	3	Medium	Negative	This impact is not reversible, but can be completely avoided by the following measures: The manure is removed on a regular basis and used on agricultural fields. Manure should

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									be handled according to Odour Management Plan (Appendix F2), Waste Management Plan (Appendix F3) and Biosecurity Plan (Appendix F4). At the end of each cycle, all the manure and litter are removed from the houses using bobcats and loaded directly on truck to be removed by the contractor. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.
4	Pollution of soil, surface water and groundwater due to ineffective disposal of mortalities	3	3	3	2	3	Medium	Negative	This impact is not reversible, but can be completely avoided by the following measures: The mortalities are removed on a daily basis and collected by a contractor.
1-4	Soil compaction and loss of fertility.	1	1	2	3	3	Low	Negative	This impact is not reversible, but can be completely avoided by the

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									following measures: Appropriate measures must be taken to reduce the risk of erosion from unprotected slopes i.e. diversion berms, ponding pools, and not exceeding angles of repose of stockpiled material. All unprotected slopes must be rehabilitated concurrent with construction.
2-4	Increased fire risk	1	1	2	3	3	Low	Negative	This impact is not reversible, but can be completely avoided by the following measures: Cooking and heating fires permitted only in designated areas with appropriate safety measures. Adequate firefighting equipment must be available, as prescribed by the relevant safety standards and legislation.
1-4	Disturbance of fauna	3	3	3	2	3	Medium	Negative	This impact is not reversible, but can be completely avoided by the following measures: Only small animals occur in this area e.g. small rodents and reptiles. The area is surrounded by similar habitat and fauna is expected to move voluntarily to surrounding

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									areas. No fauna found on the site will be killed.
1-3	Disturbance of flora	1	5	5	1	5	High	Negative	This impact is not reversible and cannot be avoided. Clearance of vegetation should be kept at a minimum and restricted to the proposed site boundary.
1	Removal of indigenous vegetation	1	5	5	1	5	High	Negative	In the event of any Protected or Declining species being recorded within the approved development site, permission for the removal of such species should be obtained from the Permitting Office of DEDECT, and the appropriate in situ and / or ex situ conservation measures should be developed and implemented with the approval of the DEDECT conservation authorities. Where feasible, protected or Declining species can be translocated to degraded or untransformed parts of the study area which provide potentially suitable habitat, but such translocations will have to be carried out in a way that ensures no ecological degradation of the host habitat occurs, and will have

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									to be evaluated by an ecologist for each species and each potential translocation area. Alternatively, protected or Declining species can be rescued and donated to appropriate conservation and research institutions such as the Walter Sisulu National Botanical Garden (Roodepoort) or the Pretoria National Botanical Garden of SANBI Where possible, development should avoid habitat identified with high ecological sensitivity. According to the AIS regulations all declared alien weeds must be effectively controlled or eradicated. A permit will be needed if any damage or removal of the individual Protected trees, at the site, cannot be avoided.
1-3	Safety on the construction site	4	5	5	3	3	High	Negative	This impact is not reversible, but can be completely avoided by the following measures: Access to the construction site to be controlled at all times.
1-4	Degradation of aesthetics	3	5	3	2	4	High	Negative	This impact is not reversible, but can be mitigated and minimised.

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									If needed, an additional line of trees will be planted to minimise visual impact.
1-4	The construction and operation of the poultry facility will provide employment opportunities to the local communities.	4	4	3	1	5	High	Positive	No mitigation suggested.

8.1.2 Activity alternative 2 – Construction of open poultry houses

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
1-3	Air pollution on a local level.	2	1	2	1	3	Low	Negative	This impact is not reversible, but can be completely avoided by the following measures: Dust control by means of watering if necessary. Vehicles to be regularly serviced and well-tuned. Operations to be undertaken during working hours only.
1-3	Contamination of soils, surface water and groundwater	1	1	2	3	3	Low	Negative	This impact is not reversible, but can be completely avoided by the following measures:

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
	due to leakages from vehicles entering and exiting the site.								Machinery must be properly maintained at all times. Servicing of machinery must take place only in specific demarcated and protected areas. Measures must be taken for the proper disposal of oils, grease, oil filters, rags, etc.
3,4	Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	3	3	3	2	3	Medium	Negative	This impact is not reversible, but can be completely avoided by the following measures: Proper ablution facilities must be provided i.e. chemical toilets at appropriate locations on site if necessary or existing facilities must be used. Workers must be made aware of the risk of soil water contamination. Domestic waste must be disposed of in appropriate containers, and removed to the Nearest municipal waste-disposal site as part of existing waste management system.
4	Pollution of soil, surface water and groundwater due to ineffective manure	3	3	3	2	3	Medium	Negative	This impact is not reversible, but can be completely avoided by the following measures: The manure is removed on a

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
	disposal.								regular basis and used on agricultural fields. Manure should be handled according to Odour Management Plan (Appendix F2), Waste Management Plan (Appendix F3) and Biosecurity Plan (Appendix F4). At the end of each cycle, all the manure and litter are removed from the houses using bobcats and loaded directly on truck to be removed by the contractor. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
4	Pollution of soil, surface water and groundwater due to ineffective disposal of mortalities.	3	3	3	2	3	Medium	Negative	This impact is not reversible, but can be completely avoided by the following measures: The mortalities are removed on a daily basis and collected by a contractor.
1-3	Soil compaction and loss of fertility.	1	1	2	3	3	Low	Negative	This impact is not reversible, but can be completely avoided by the following measures: Appropriate measures must be taken to reduce the risk of erosion from unprotected slopes i.e. diversion berms, ponding pools, and not exceeding angles of repose of stockpiled material. All unprotected slopes must be rehabilitated concurrent with construction.
2-4	Increased fire risk	1	1	2	3	3	Low	Negative	This impact is not reversible, but can be completely avoided by the following measures: Cooking and heating fires permitted only in designated areas with appropriate safety measures. Adequate firefighting equipment must be available, as prescribed by the relevant safety standards and

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									legislation.
1-4	Disturbance of fauna	3	3	3	2	3	Medium	Negative	This impact is not reversible, but can be completely avoided by the following measures: Only small animals occur in this area e.g. small rodents and reptiles. The area is surrounded by similar habitat and fauna is expected to move voluntarily to surrounding areas. No fauna found on the site will be killed.
1-3	Disturbance of flora	1	5	5	1	5	High	Negative	This impact is not reversible and cannot be avoided. Clearance of vegetation should be kept at a minimum and restricted to the proposed site boundary.
1	Removal of indigenous vegetation	1	5	5	1	5	High	Negative	In the event of any Protected or Declining species being recorded within the approved development site, permission for the removal of such species should be obtained from the Permitting Office of DEDECT, and the appropriate in situ and / or ex situ conservation measures should be developed and implemented with the approval of the DEDECT conservation authorities. Where feasible, protected or Declining species can

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									be translocated to degraded or untransformed parts of the study area which provide potentially suitable habitat, but such translocations will have to be carried out in a way that ensures no ecological degradation of the host habitat occurs, and will have to be evaluated by an ecologist for each species and each potential translocation area. Alternatively, protected or Declining species can be rescued and donated to appropriate conservation and research institutions such as the Walter Sisulu National Botanical Garden (Roodepoort) or the Pretoria National Botanical Garden of SANBI Where possible, development should avoid habitat identified with high ecological sensitivity. According to the AIS regulations all declared alien weeds must be effectively controlled or eradicated. A permit will be needed if any damage or removal of the individual Protected trees, at the

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									site, cannot be avoided.
1-3	Safety on the construction site	4	5	5	3	3	High	Negative	This impact is not reversible, but can be completely avoided by the following measures: Access to the construction site to be controlled at all times.
1-3	Degradation of aesthetics	3	5	3	2	4	High	Negative	This impact is not reversible, but can be mitigated and minimised. If needed, an additional line of trees will be planted to minimise visual impact.
1-4	The construction and operation of the poultry facility will provide employment opportunities to the local communities.	3	4	3	1	5	High	Positive	No mitigation suggested.

8.1.3 “No-go” alternative – Grazing

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
N/A	Air pollution on a local level.	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									site. No mitigation recommended.
N/A	Contamination of soils, surface water and groundwater due to leakages from vehicles entering and exiting the site.	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the site. No mitigation recommended.
N/A	Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the site. No mitigation recommended.
N/A	Pollution of soil, surface water and groundwater due to ineffective manure disposal.	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the site. No mitigation recommended.

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
N/A	Pollution of soil, surface water and groundwater due to ineffective disposal carcasses.	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the site. No mitigation recommended.
N/A	Soil compaction and loss of fertility.	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the site. No mitigation recommended.
N/A	Increased fire risk	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the site. No mitigation recommended.
N/A	Disturbance of fauna	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the site. No mitigation recommended.
N/A	Safety on the construction site	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the

*Activity	Specific Impact & Risk	Extent	Duration	Severity	Degree of Certainty	Probability	Significance prior to mitigation	Status of Impact	Reversibility/Mitigation Measures to be Implemented
									site. No mitigation recommended.
N/A	Degradation of aesthetics	2	1	2	1	3	Low	Negative	No additional activity will take place, only agriculture that already exists on the site. No mitigation recommended.

8.2 Methodology of determining impacts

- Various site visits were conducted by the EAP and information was gathered regarding the nature of the process and the baseline environment.
- Comments were gathered from Marico River Conservation Association in order to identify additional possible impacts that may have been overlooked.
- The significance of identified impacts was determined as follows:

- **Extent**

The extent of the impact refers to the spatial dimension to which an impact will be felt (i.e. site, study area, local, regional, or national scale). The criteria for rating the impact extent are described in more detail in Table 1.

Table 1: Extent of Impact

Extent

Rating	1	2	3	4	5
Description	On site or the impact will be restricted to its immediate area	Study area Or the impact will be restricted to the site or route	Local Or the impact will affect an area up to 5 km from the site and route	Regional/Provincial Or the impact will be felt on a Local, district municipal or Provincial level	National/International Or the maximum extent of any impact

- **Duration**

In order to accurately describe the impact, it is necessary to understand the duration and persistence of an impact in the environment. The criteria for rating the duration of the impact are described in more detail in Table 2.

Table 2: Duration of Impact

Duration					
Rating	1	2	3	4	5
Description	Temporary Or the impact will occur very sporadically or less than 1 year from commencement of activity	Short-term Or the impact will continue to occur for a period between 1 to 5 years from commencement of activity	Medium term Or the impact will continue to occur for a period between 5 to 10 years from commencement of activity	Long term Or the impact will continue to occur for a period longer than 10 years from commencement of activity	Permanent Or the impact will be continued until the conclusion of activity

- **Severity**

A description must be given as to whether an impact is destructive, or benign. It determines whether the intensity of the impact on the natural environment or society is permanently, significantly changes its functionality, or slightly alters it. The mitigation potential must be determined for

each impact. If limited information or expertise exists, estimates based on experience will be made. The criteria for rating the severity of the impact are described in more detail in Table 3.

Table 3: Severity of Impact

Severity					
Rating	1	2	3	4	5
Description	Temporary impact easily reversible. Insignificant change or deterioration or disturbance Or improvement of natural and social environments	Short-term impact. Low cost to mitigate Small Moderate change or deterioration or disturbance Or improvement of natural and social environments	Medium term impact, which require substantial cost to mitigate. Potential to mitigate and potential to reverse impact Significant change or deterioration or disturbance Or improvement of natural and social environments	Long term impact High cost to mitigate Possible to mitigate Very significant change or deterioration or disturbance Or improvement of natural and social environments	Permanent impact Prohibitive cost to mitigate Little or no mechanism to mitigate Irreversible Disastrous change or deterioration or disturbance or improvement of natural and social environments

- **Degree of certainty**

As with all studies it is not possible to be 100% certain of all facts and for this reason a standard “Degree of certainty” scale is used as discussed in Table 4.

Table 4: Degree of Certainty of Impact Occurrence

Degree of Certainty					
Rating	1	2	3	4	5
Description	Definite Or more than 90% sure of the fact or the likelihood of the impact occurring	Probable Or between 70% and 90% sure of the fact or the likelihood of the impact occurring	Possible Or between 40% and 70% sure of the fact or the likelihood of the impact occurring	Unsure Or less than 40% sure of the fact or the likelihood of the impact occurring.	Unknown or the consultant or specialist believes an assessment is not possible even with additional research.

- **Probability**

The criteria used for rating the likelihood of impact occurrence are described in more detail in Table 5.

Table 5: Probability of Impact Occurrence

Probability					
Rating	1	2	3	4	5
Description	Impossible Or the impact will not occur	Improbable Or the possibility of the impact occurring is very low	Probable Or there is a possibility that the impact will occur, provision must be provided	Highly probable Or it is most likely that the impact will occur at some stage, provision must be provided	Definite Or the impact will take place regardless of any prevention plans and there can only be relied on mitigation measures to contain the impact

- **Significance**

Evaluating the significance of environmental impacts is a critical component of impact analysis. The matrix uses the consequence and the probability of the different activities and associated impacts to determine the significance of the impacts. Consequence is determined by the sum total of criteria like extent, duration and severity, degree of certainty of impact as well as compliance to applicable legislation. Values of 1-5 are assigned to each of the different criteria to determine the overall consequence, which is divided by 3 to give a criterion rating.

The overall consequence and probability rating are multiplied to give a final significance rating. The values as shown in the following table are then used to rank the significance. It must be said however that in the end, a subjective judging of an impact can still be done, but the reasons for doing so must be qualified. The matrix used to determine the significance of each of the identified impact in this study is shown in Table 6.

Table 6: Impact Significance Matrix

Impact Significance Matrix					
Rating	Very Low	Low	Medium	High	Very High
	1-4	5-10	11-15	16-20	21-25+
Description	There is little or no impact at all	Impact is of a low order and therefore likely to have little real effect In the case of adverse impacts: mitigation and or remedial activity is either easily achieved or little will be required, or both In the case of beneficial impacts, alternative means for	Impact is real but not substantial in relation to other impacts, which might take effect within the bounds of those which could occur In the case of adverse impacts: mitigation and or remedial activity are both feasible and fairly easily possible	Impact is of substantial order within the bounds of impacts which could occur In the case of adverse impacts: mitigation and or remedial activity are feasible but difficult, expensive, time- consuming or some combination In the case of	Of the highest order possible within the bounds of impacts which could occur In the case of adverse impacts: there is no possible mitigation and or remedial activity which could offset the impact In the case of beneficial impacts,

		achieving this benefit are likely to be easier, cheaper, more effective, less time consuming, or some combination of these.	In the case of beneficial impacts: other means of achieving this benefit are about equal in time, cost, effort, etc.	beneficial impacts, other means of achieving this benefit are feasible but they are more difficult, expensive, time-consuming or some combination of these.	there is no real alternative to achieving this benefit.

Table 7: How to Apply the Rating Scale

Consequence
Impact Significance = (Extent + Duration + Severity + Degree of Certainty)/3] X Probability

8.3 Summary of positive and negative impacts

Specific impact or risk	Preferred activity (Activity alternative 1)	Activity alternative 2	"No-go" alternative
Air pollution on a local level.	Negative	Negative	No impact
Contamination of soils, surface water and groundwater due to leakages from vehicles entering and exiting the site.	Negative	Negative	Negative
Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	Negative	Negative	Negative
Pollution of soil, surface water and groundwater due to ineffective manure disposal.	Negative	Negative	No impact
Pollution of soil, surface water and groundwater due to ineffective disposal of mortalities.	Negative	Negative	No impact
Soil compaction and loss of fertility.	Negative	Negative	No impact
Increased fire risk	Negative	Negative	No impact
Disturbance of fauna	Negative	Negative	No impact
Disturbance of flora	Negative	Negative	No impact
Removal of indigenous vegetation	Negative	Negative	No impact
Safety on the construction site	Negative	Negative	No impact
Degradation of aesthetics	Negative	Negative	Negative
The construction and operation of the poultry facility will provide employment opportunities to the local communities.	Positive	Positive	No impact

8.4 Mitigation measures

Specific impact or risk	Mitigation measures
Air pollution on a local level.	Dust control by means of watering if necessary. Vehicles to be regularly serviced and well-tuned. Operations to be undertaken during working hours only.
Contamination of soils, surface water and groundwater due to leakages from vehicles entering and exiting the site.	Machinery must be properly maintained at all times. Servicing of machinery must take place only in specific demarcated and protected areas. Measures must be taken for the proper disposal of oils, grease, oil filters, rags, etc.
Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	Proper ablution facilities must be provided i.e. chemical toilets at appropriate locations on site if necessary or existing facilities must be used. Workers must be made aware of the risk of soil water contamination. Domestic waste must be disposed of in appropriate containers, and removed to the nearest municipal waste-disposal site as part of existing waste management system.
Pollution of soil, surface water and groundwater due to ineffective manure disposal.	The manure is removed on a regular basis and used on agricultural fields. Manure should be handled according to Odour Management Plan (Appendix F2), Waste Management Plan (Appendix F3) and Biosecurity Plan (Appendix F4). At the end of each cycle, all the manure and litter are removed from the houses using bobcats and loaded directly on truck to be removed by the contractor. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.
Pollution of soil, surface water and groundwater due to ineffective disposal of mortalities.	The mortalities are removed on a daily basis and collected by a contractor.
Soil compaction and loss of fertility.	Appropriate measures must be taken to reduce the risk of erosion from unprotected slopes i.e. diversion berms, ponding pools, and not exceeding angles of repose of stockpiled material. All unprotected slopes must be rehabilitated concurrent with construction.
Increased fire risk	Cooking and heating fires permitted only in designated areas with appropriate safety measures. Adequate firefighting equipment must be available, as prescribed by the relevant safety standards and legislation.

Disturbance of fauna	Only small animals occur in this area e.g. small rodents and reptiles. The area is surrounded by similar habitat and fauna is expected to move voluntarily to surrounding areas. No fauna found on the site will be killed.
Disturbance of flora	Clearance of vegetation should be kept at a minimum and restricted to the proposed site boundary.
Removal of indigenous vegetation	In the event of any Protected or Declining species being recorded within the approved development site, permission for the removal of such species should be obtained from the Permitting Office of DEDECT, and the appropriate in situ and / or ex situ conservation measures should be developed and implemented with the approval of the DEDECT conservation authorities. Where feasible, protected or Declining species can be translocated to degraded or untransformed parts of the study area which provide potentially suitable habitat, but such translocations will have to be carried out in a way that ensures no ecological degradation of the host habitat occurs, and will have to be evaluated by an ecologist for each species and each potential translocation area. Alternatively, protected or Declining species can be rescued and donated to appropriate conservation and research institutions such as the Walter Sisulu National Botanical Garden (Roodepoort) or the Pretoria National Botanical Garden of SANBI Where possible, development should avoid habitat identified with high ecological sensitivity. According to the AIS regulations all declared alien weeds must be effectively controlled or eradicated. A permit will be needed if any damage or removal of the individual Protected trees, at the site, cannot be avoided.
Safety on the construction site	Access to the construction site to be controlled at all times.
Degradation of aesthetics	If needed, an additional line of trees will be planted to minimise visual impact.
The construction and operation of the poultry facility will provide employment opportunities to the local communities.	No mitigation suggested.

8.5 Motivation for alternative selection

The proposed activity alternative was selected as it will have minimal impact on the environment after mitigation measures have been implemented.

8.6 Impact of activity on preferred location

The table below provides a description of the significance of each identified activity on the preferred site location throughout the life of the proposed project.

Specific risk or activity	Significance before mitigation	Significance after mitigation
Air pollution on a local level.	Low	Low
Contamination of soils, surface water and groundwater due to leakages from vehicles entering and exiting the site.	Low	Low
Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	Medium	Low
Pollution of soil, surface water and groundwater due to ineffective manure disposal.	Medium	Low
Pollution of soil, surface water and groundwater due to ineffective disposal of mortalities.	Medium	Low
Soil compaction and loss of fertility.	Low	Low
Increased fire risk	Low	Low
Disturbance of fauna	Medium	Low
Disturbance of flora	High	Medium
Removal of indigenous vegetation	High	Medium
Safety on the construction site	High	Low
Degradation of aesthetics	High	Low
The construction and operation of the poultry facility will provide employment opportunities to the local communities.	High	High

8.7 Description and assessment of each impact

1. **Impact:** Air pollution on a local level. Possibly caused by Activities 1-33.
This is not a cumulative impact.
Nature, significance and consequences:
Noise, dust and emissions due to excavation, stockpiling and transport of building material and removal of rubble may cause air pollution.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Study area	Short-term	Probable	Not reversible	No	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

2. **Impact:** Contamination of soils, surface water and groundwater due to leakages from vehicles entering and exiting the site. Possibly caused by Activities 1-3.
This is not a cumulative impact
Nature, significance and consequences:
Contamination of surface and ground water can be caused by operation and servicing of light earthmoving and transport machinery, particularly oil spills and leakage.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Site specific	Temporary	Probable	Not reversible	No	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

3. **Impact:** Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management. Possibly caused by Activities 3 and 4.
This is not a cumulative impact
Nature, significance and consequences:
Uncontrolled sewage and domestic waste disposal by workers may cause surface and ground water pollution as well as unpleasant odours and possible health risks.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Local	Medium term	Probable	Not reversible	No	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

4. **Impact:** Pollution of soil, surface water and groundwater due to ineffective manure disposal. Possibly caused by Activity 4.
This is not a cumulative impact
Nature, significance and consequences:
The chicken manure is an impact of only low adverse significance since it is a natural product of farming practice. As a resource it exerts a positive impact.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Local	Medium term	Probable	Not reversible	No	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

5. **Impact:** Pollution of soil, surface water and groundwater due to ineffective disposal of mortalities. Possibly caused by Activity 4.
This is not a cumulative impact
Nature, significance and consequences:
Disposal of chicken carcasses pose serious health, and soil and water pollution risks.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Local	Medium term	Probable	Not reversible	No	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

6. **Impact:** Soil compaction and loss of fertility. Possibly caused by Activities 1-4.
This is not a cumulative impact
Nature, significance and consequences:
Soil compaction, loss of fertility and increased erosion from unprotected slopes associated with trenches and foundations, as a result of excavation and earthmoving. This will be aggravated in the event of heavy rain.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Site specific	Temporary	Probable	Not reversible	No	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

7. **Impact:** Increased fire risk. Possibly caused by Activities 2-4.
This is not a cumulative impact

Nature, significance and consequences:
Uncontrolled cooking fires could cause veld fires. This would harm fauna and flora and pose a safety risk, particularly concerning vehicles and the adjacent land users.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Site specific	Temporary	Probable	Not reversible	No	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

8. **Impact:** Disturbance of fauna. Possibly caused by Activities 1-4.
This is not a cumulative impact
Nature, significance and consequences:
Temporary disturbance of fauna, becoming permanent as operational phase commences. This impact is unavoidable, but of low significance since there are no endangered species present.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Local	Medium term	Probable	Not reversible	No	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

9 **Impact:** Disturbance of flora. Possibly caused by Activities 1-3.
This is not a cumulative impact
Nature, significance and consequences:
Indigenous vegetation will be cleared within the proposed site boundary. This impact is unavoidable, but of low significance since there are no endangered species present.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Site	Long term	Definite	Not reversible	No	This impact is not reversible, but can be kept to a minimum by implementing mitigation measures.

10. **Impact:** Removal of indigenous vegetation. Possibly caused by Activity 1.
This is not a cumulative impact
Nature, significance and consequences:
Indigenous vegetation will be cleared within the proposed site boundary. This impact is unavoidable, but of low significance since there are no endangered species present.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Site	Long term	Definite	Not reversible	No	This impact is not reversible, but can be kept to a minimum by implementing mitigation measures.

11. **Impact:** Safety on the construction site. Possibly caused by Activities 1-3.
This is not a cumulative impact
Nature, significance and consequences:
Injuries to residents and construction workers can be cause as a result of construction activities.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Regional	Permanent	Probable	Not reversible	Yes	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

12. **Impact:** Degradation of aesthetics. Possibly caused by Activities 1-4.
This is not a cumulative impact
Nature, significance and consequences:
Visual impacts may occur during the construction and operational phase as a result of vehicle exhausts, dust, bare unprotected areas, the possibility of littering and the presence of breeder houses.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Local	Permanent	Probable	Not reversible	Yes	This impact is not reversible, but can be completely avoided by implementing mitigation measures.

13. **Impact:** Economic benefit to the local communities. Possibly caused by Activities 1-4.
This is not a cumulative impact
Nature, significance and consequences:
The construction and operation of the poultry facility will provide employment opportunities to the local communities.

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation

Extent	Duration	Probability	Reversibility	Irreplaceable loss	Degree of avoidance, management or mitigation
Regional	Long term	Probable	Not reversible	No	No avoidance or mitigation required.

8.8 Summary of specialist reports

8.8.1 Ecological assessment

The specialist Ecological Habitat Survey concluded the following:

- The site had been cultivated in the past. Secondary succession has taken place. A modified savanna is currently present at the site. Vegetation is an open savanna with large grassy patches. Indigenous trees at the site include *Vachellia karroo*, *Searsia lancea*, *Vachellia hebeclada*, *Vachellia erioloba* and *Grewia flava*. Shrub species such as *Lycium horridum*, *Hertia pallens*, *Laggera decurrens* as well as dwarf shrubs such as *Felicia muricata*, *Ziziphus zeyheriana* and *Pentzia globosa* are present at the site. Indigenous grass species at the site include *Aristida congesta*, *Melinis repens*, *Cynodon dactylon*, *Eragrostis lehmanniana*, *Tragus racemosus* and *Cenchrus ciliarus*. Indigenous forb species at the site include *Barleria macrostegia*, *Osteospermum muricatum* and *Lippia scaberrima*. The alien invasive tree species *Prosopis glandulosa* is present at the site. Alien invasive herbaceous weeds at the site include *Gomphrena celosioides*, *Schkuhria pinnata* and *Alternanthera pungens*.
- There are no wetlands or rocky ridges at the site.
- No Threatened ecosystems are present at the site.
- No Threatened or Near Threatened plant- or animal species appear to be resident at the site. No other plant species of particular conservation concern appears to be present at the site with the exception of the Protected tree species *Vachellia erioloba* (Camel Thorn Tree) of which a few individuals occur at the site. Protected Tree species are listed under the National Forests Act No. 84 of 1998. In terms of a part of section 15(1) of Act No. 84 of 1998, no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a license granted by the Minister. A permit will be needed if any damage or removal of the individual Protected trees, at the site, cannot be avoided.

- The scope for the site to be part of a corridor of particular conservation importance is small.
- There are no Threatened or Near Threatened animal- or plant species at the site. There are no threatened ecosystems at the site. The vegetation has been extensively modified in the past (hitherto cultivated area). Ecological sensitivity at the site is low.
- Following the mitigations which will be upheld for the proposed footprint of development, all the impact risks listed above are moderate or low.

9. ENVIRONMENTAL IMPACT STATEMENT

9.1 Key findings of the environmental impact assessment

It is important that all the mitigation measures identified in Section 8 and the EMPr are implemented in order to prevent environmental impacts. If the mitigation measures are implemented and monitored, the impact of the proposed activity on the environment will be minimal. See Appendix A for a layout plan containing all the proposed activities and indicating any areas that has to be avoided.

9.2 Summary of the positive and negative impacts

Specific impact or risk	Preferred activity (Activity alternative 1)	Activity alternative 2	"No-go" alternative
Air pollution on a local level.	Negative	Negative	No impact
Contamination of soils, surface water and groundwater due to leakages from vehicles entering and exiting the site.	Negative	Negative	Negative
Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	Negative	Negative	No impact
Pollution of soil, surface water and groundwater due to ineffective manure disposal.	Negative	Negative	No impact
Pollution of soil, surface water and groundwater due to ineffective disposal of mortalities.	Negative	Negative	No impact
Soil compaction and loss	Negative	Negative	No impact

of fertility.			
Increased fire risk	Negative	Negative	No impact
Disturbance of fauna	Negative	Negative	No impact
Disturbance of flora	Negative	Negative	No impact
Removal of indigenous vegetation	Negative	Negative	No impact
Safety on the construction site	Negative	Negative	No impact
Degradation of aesthetics	Negative	Negative	Negative
The construction and operation of the poultry facility will provide employment opportunities to the local communities.	Positive	Positive	No impact

10. IMPACT MANAGEMENT OBJECTIVES AND OUTCOMES

10.1 Ecological environment

- Avoid any injudicious and unnecessary destruction of natural vegetation.
- Conserve plant species of conservation significance by:
  - Preventing unnecessary disturbance or destruction of their habitats.
  - Planning developments to avoid jeopardizing any specimens or large populations of red data or protected species.
- The eradication of declared weed and invader plant populations in the study area is strongly advised. Develop and enforce a management plan and follow-up strategy to prevent the spread or establishment of new populations.
- Where necessary, implement temporary water control structures to minimize erosion and create a favourable habitat for vegetation establishment during and after rehabilitation/landscaping.
- If any protected or declining species are recorded within the approved development site, obtain permission for their removal from the Permitting Office of DEDECT. Develop and implement appropriate in situ and/or ex situ conservation measures with DEDECT conservation authorities' approval. Where feasible, translocate protected or declining species to degraded or untransformed parts of the study area with suitable habitats, ensuring no ecological degradation occurs. These translocations must be evaluated by an ecologist for each species and potential area. Alternatively, rescue and donate protected or declining species to appropriate conservation and research institutions like the Walter Sisulu National Botanical Garden (Roodepoort) or the Pretoria National Botanical Garden of SANBI.
- Avoid development in habitats identified as having high ecological sensitivity whenever possible.
- Effectively control or eradicate all declared alien weeds as per AIS regulations.

10.2 Landforms and soils

- Use drip trays when refuelling and servicing construction vehicles or equipment. Place a spill “sock” permanently within the drip tray and replace it as needed. Position drip trays under stationary construction vehicles and ensure that hazardous waste (e.g., fuel, oils) is taken to the nearest approved oil refiner or fuel recycling point for recycling.
- Utilize the existing road infrastructure as indicated in the land use map whenever possible.
- Ensure that unnecessary clearance of vegetation does not occur. Keep the footprint of disturbance outside the construction area as small as possible, and rehabilitate it as soon as possible.
- Implement regular clean-up programs at and around the site to prevent litter and maintain proper housekeeping practices.

10.3 Surface water

- Implement regular clean-up programs at and around the site to prevent litter and ensure proper housekeeping practices.
- To contain oil and fuel spills, provide drip pans or PVC lining for drip pans. Ensure spill kits are readily available on site and in every vehicle.
- Use existing roads and tracks wherever possible.
- Obtain pre-approval from the ECO and landowner for any new tracks. Plan new routes to avoid steep slopes and sensitive environments, such as watercourses.
- Estimate the increase in stormwater runoff resulting from construction activities and assess the drainage system accordingly to prevent downstream impacts on water resources, including scouring, sedimentation, erosion, and undercutting.
- Use water sparingly and regularly inspect pipes to ensure no leaks occur.
- Regularly inspect water tanks to ensure no leaks occur.
- Refer to Appendix F1 for recommendations on stormwater management.

10.4 Groundwater

- Use drip trays when refuelling and servicing construction vehicles or equipment. Permanently place a spill "sock" within the drip tray and replace it as needed.
- Position drip trays under stationary construction vehicles.
- Ensure hazardous waste, such as fuel and oils, is taken to the nearest approved oil refiner or fuel recycling point for proper recycling.

10.5 Aesthetic environment:

- Ensure that unnecessary vegetation clearance does not occur. Keep the disturbance footprint outside the construction area as small as possible, and rehabilitate it promptly.
- Conduct rehabilitation and soil management according to the guidelines provided in the EMPr.
- Implement regular clean-up programs at and around the site to prevent litter and maintain proper housekeeping practices.

- Pre-arrange site access with the landowner and allow only authorized personnel on site.
- Position and manage the construction site in an ecologically sound manner to minimize negative impacts on the surrounding environment.
- Ensure personnel comply with a speed limit of 20 km per hour within the site boundaries to reduce dust generation.
- Limit disturbances to the agreed-upon footprint, prohibiting vehicle turning, parking, access, or other disturbances (e.g., vegetation clearance, soil compaction, or excavation) outside these areas.
- Repair, replace, or compensate for any damage to public or private property, including roads, stormwater systems, fences, gates, buildings, structures, pipes, lines, utilities, and movable properties, as agreed with the affected parties.
- Arrange a discussion session with surrounding access route users regarding the maintenance of the access road.
- Maintain complaints register to log and respond to complaints by landowners, occupants, and other Interested and Affected Parties. Provide the complaints register to DEDECT annually or upon request.
- Ensure that unnecessary vegetation clearance does not occur. Keep the disturbance footprint outside the construction area as small as possible, and rehabilitate it promptly.
- Remove alien invasive plants from all disturbed and subsequently rehabilitated areas.

10.6 Noise

- Ensure vehicles and construction equipment are well-maintained to prevent excessive noise.
- Limit construction activities to between 08:00 and 17:00, Monday to Friday.
- Ensure personnel comply with a speed limit of 20 km per hour within the site boundaries to reduce noise generation.
- Contractors must adhere to provincial noise regulations, fitting construction machinery with noise mufflers and maintaining it properly.

10.7 Air quality

- Ensure personnel comply with a speed limit of 20 km per hour within the site boundaries to reduce dust generation.
- Practice dust suppression by regularly spraying water.

10.8 Health, safety and security hazards

- Properly demarcate the site and have the proposed access routes approved by the ECO and landowner before commencing construction activities.
- No open fires are allowed outside designated cooking areas.
- Site supervisors must ensure that staff remain within the demarcated construction areas and access routes at all times.
- Smoking is prohibited near fuel dispensing areas and is only allowed in designated "safe" areas.

- Adequate firefighting equipment must be available onsite at all times, and at least one person present must be trained in its use.
- Labourers and contract workers must always be accompanied by a responsible supervisor.
- Exercise strict access control to prevent unauthorized persons from entering the property.
- Fit all construction vehicles with standard reverse alarms.
- Workers must wear Personal Protective Equipment (PPE) to ensure their safety during construction.
- Workers are not allowed to receive visitors while on the property.
- Prohibit workers from keeping or using alcohol, recreational drugs, weapons, snares, or other dangerous objects onsite, and from entering the construction area under the influence of alcohol or drugs.
- Limit disturbances to the minimum agreed-upon footprint. No vehicle turning, parking, access, or other disturbances (e.g., vegetation clearance, soil compaction, or excavation) are allowed outside these areas.
- Ensure the relevant contractor keeps an up-to-date list of all relevant emergency telephone numbers and contact persons, posted at appropriate locations on the site.
- Maintain complaints register to log and respond to complaints by landowners, occupants, and other Interested and Affected Parties. Provide the complaints register to DEDECT annually or upon request.

11. ASPECTS FOR INCLUSION IN AUTHORISATION

11.1 Reasoned opinion

The final site plans (Appendix C) were created taking into account all the concerns raised by the public, specialist reports and impact assessment. If this map is followed, and if proper management and mitigation is implemented and rehabilitation is done and monitored, the impact can be kept relatively low.
It is recommended that the activity should be authorised.

11.2 Conditions that must be included in the authorisation

Mitigation and management measures as stipulated in Sections 9 and 11 should be implemented.
The rehabilitation and soil management must be done in accordance with the guidelines provided in the EMPr.
Environmental audits should be conducted every two months during the Construction Phase and every six months during the Operational Phase.
Rehabilitation monitoring should be conducted according to the EMPr.
Rehabilitation should be ongoing while operation is taking place.

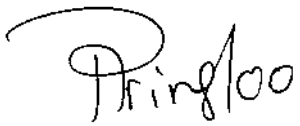
12. APPENDICES

Appendix A: Maps
Appendix B: Site photographs
Appendix C: Site plans
Appendix D: Public participation (to be included in FBAR)
Appendix E: EMPr
Appendix F: Additional information
Appendix G: CV of EAP

13. UNDERTAKING

The EAP herewith confirms

a) the correctness of the information provided in the reports ☒
b) the inclusion of comments and inputs from stakeholders and I&APs; ☒
c) the inclusion of inputs and recommendations from the specialist reports where relevant; ☒and
d) that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties are correctly reflected herein. ☒



_____
Signature
Environmental Assessment Practitioner
Bucandi Environmental Solutions

Signed at Viljoenskroon on this 20th day of June 2024.

Appendix A

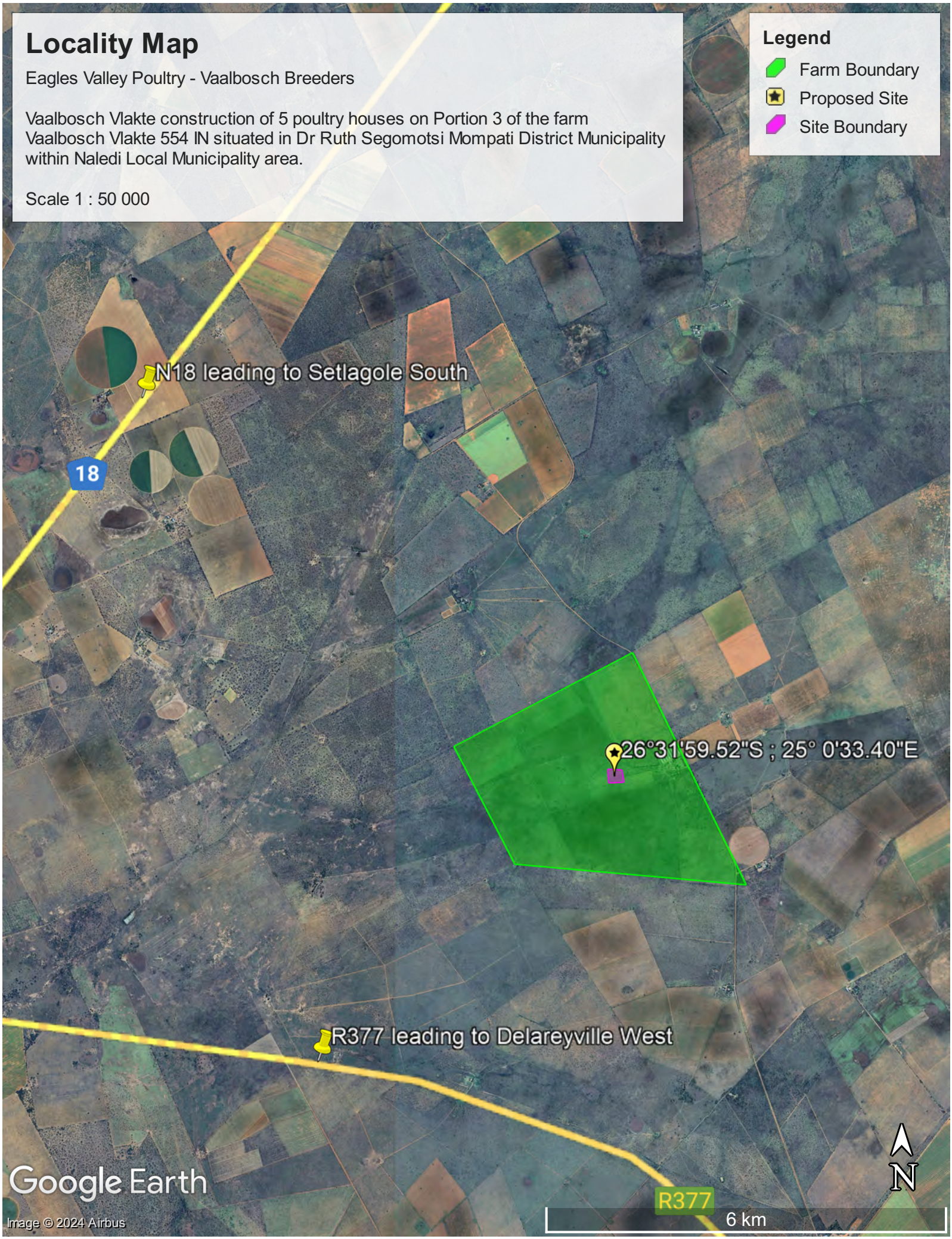
Maps

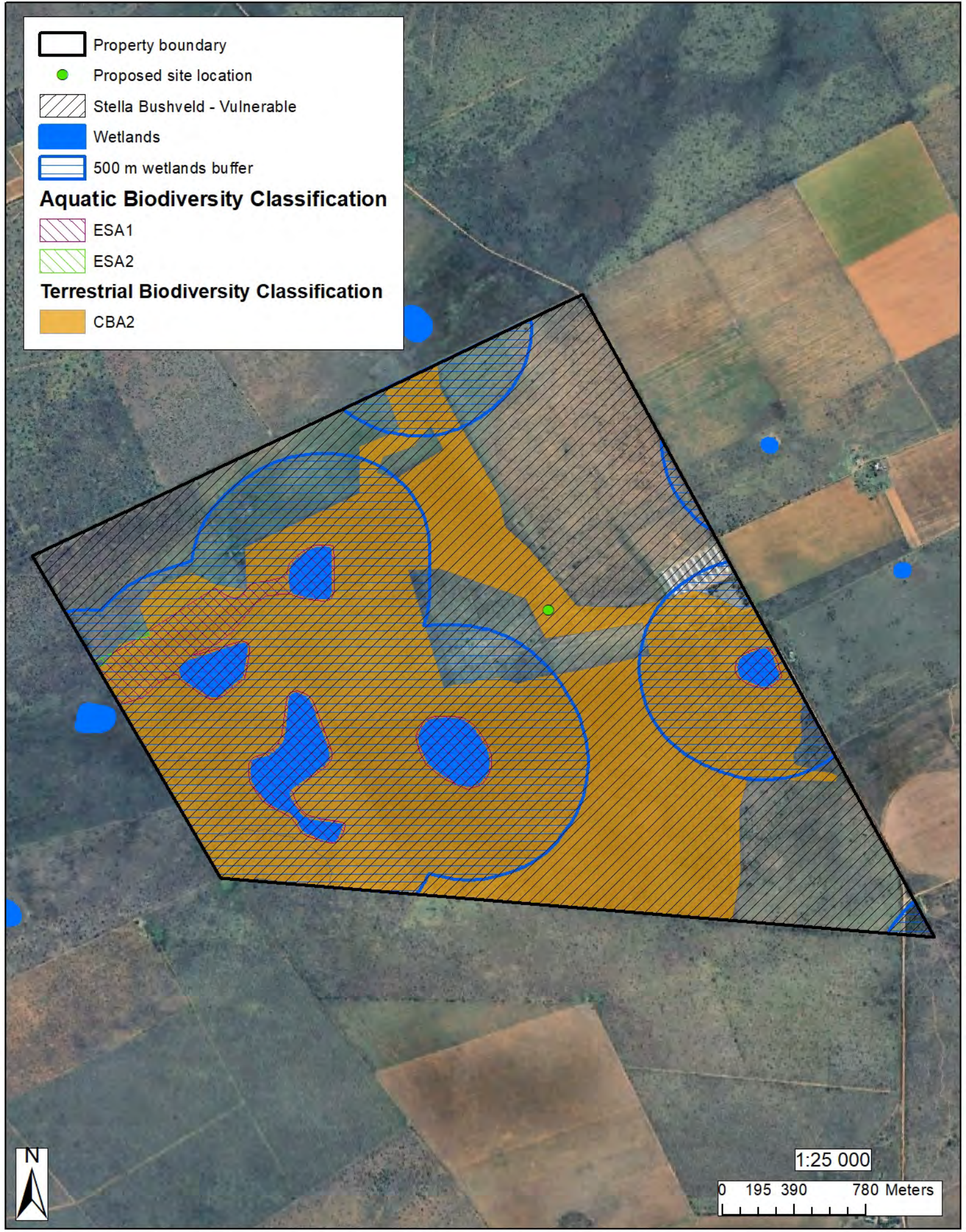
Locality Map

Eagles Valley Poultry - Vaalbosch Breeders

Vaalbosch Vlakte construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.

Scale 1 : 50 000





Ecological sensitivity map for the proposed development on Portion 3 of the farm Vaalbosch Vlakte 554 IN

June 2024
Created by:

BUCANDI
ENVIRONMENTAL SOLUTIONS

Property boundary

Proposed site boundary

Stella Bushveld - Vulnerable

Wetlands

500 m wetlands buffer

Aquatic Biodiversity Classification

ESA1

ESA2

Terrestrial Biodiversity Classification

CBA2

N

1:20 000

0 0,25 0,5 1 Kilometers

Layout plan for the proposed development on Portion 3 of the farm Vaalbosch Vlakte 554 IN

June 2024
Created by:

BUCANDI
ENVIRONMENTAL SOLUTIONS

Appendix B

Site photographs

Site photographs

North

Northeast

East

Southeast

South

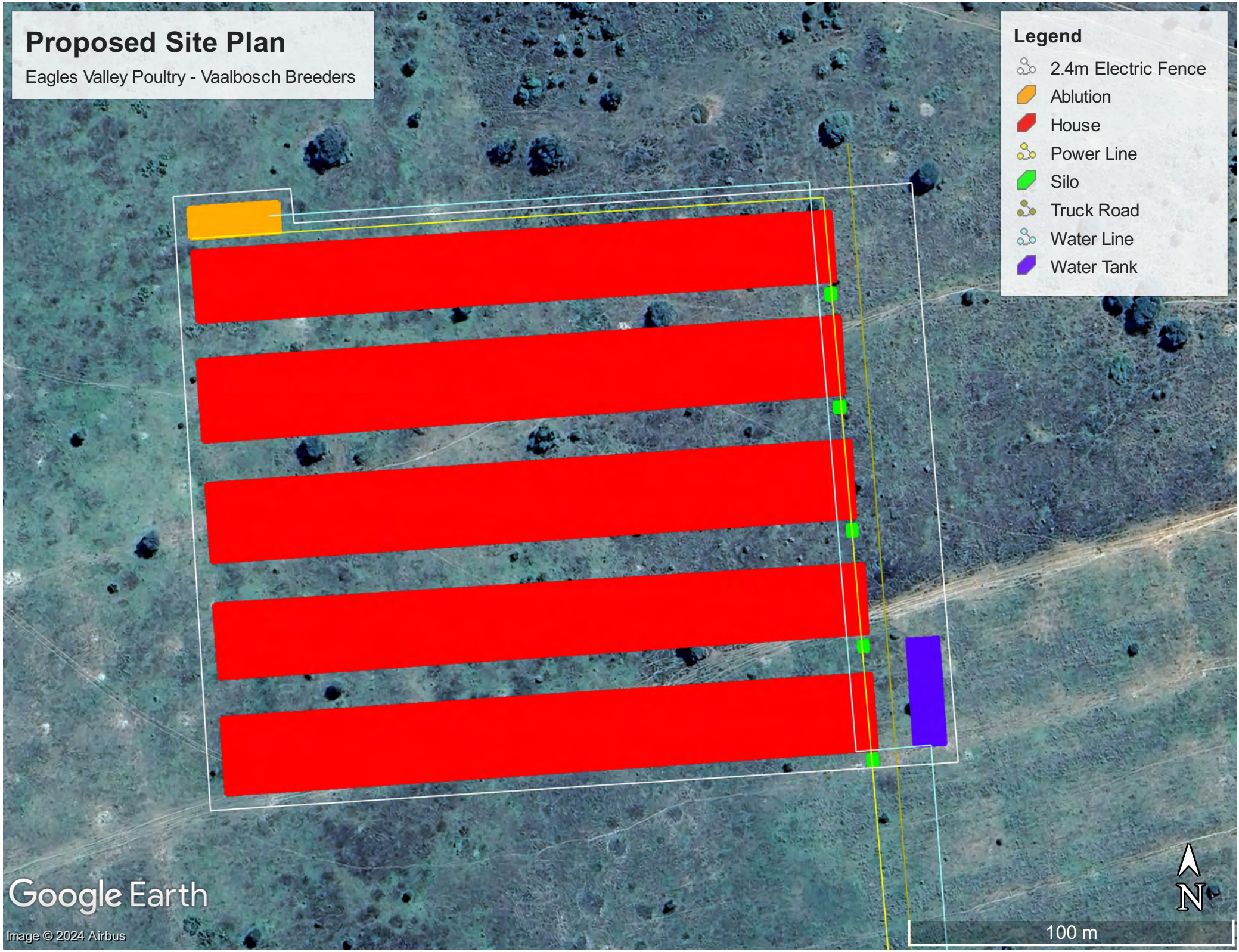
Southwest

West

Northwest

Appendix C

Site plans


Proposed Site Plan
Eagles Valley Poultry - Vaalbosch Breeders
Legend
2.4m Electric Fence
Ablution
House
Power Line
Silo
Truck Road
Water Line
Water Tank
Google Earth
Image © 2024 Airbus
N
100 m

Appendix D1

Proof of newspaper advertisement

NOTICE. ENVIRONMENTAL IMPACT ASSESSMENT PROCESS. Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 an d 3 of 2014 of Government Notice No. 327 in Government Gazette No. 38282 of 4 December 2014 as amended under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity: Listing 1. (ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area. (ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation. Listing 3.(ACTIVITY NO.12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (h) (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority; PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses. LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018- 389 5715/5431/5688. CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon,9520. Tel 076 422 3484, Fax 086 5511894,E-Mail info@bucandi.co.za. DATE OF NOTICE: 1 May 2024 in order to ensure that you are identified as an Interested or Affected Party, please submit your name,contact information and environmental interest in the matter to the consultant before 31 May 2024.

K11 1/5

STELLALANDER Classifieds

Wenke vir Geklassifiseerde Advertensies

1. Beplan en skryf u advertensie uit voordat u by die Stellalander kom.
2. Maak seker dat u duidelike en korrekte kontak besonderhede gee soos naam en/of adres en telefoon en/of selfoonnommer.
3. Die koste van 'n geklassifiseerde advertensie is R1.70 per woord + BTW.
4. Bring u advertensies vroegtydig. Sluitings-tyd is Maandae 17:00.
5. Ons verander of maak nie u taal reg nie. Verseker dus dat u reg spel. Ons plaas net wat u skryf.

Hofiegids Heading Key

0010 PERSOONLIK/ PERSONAL

SCHOOL of forklift. R550. F/ small big R1 600 week training. Jobs agency. Certificate renewal TLB R800, 1 day, Excavator, F.EL, dozer grader R900, 1 day online. Boilermaker, LHD scoop. Call 072 954 7705, 076 927 9085 V.C.
---------- 8228 17/4-8/5

VERICRIM. Police clearance report 5 hours, credit check, employment history, ID verification, bank verification, investigations. Nilene Roux 060 974 5901.
---------- 1516 17/4-1/5

Vlakfontein Pound

THERE IS 2 HORSES & 11 DONKIES AT THE POUND THAT HAS TO BE COLLECTED BY THE OWNERS BEFORE THE 10TH OF MAY 2024. IF THE ANIMALS ARE NOT COLLECTED, IT WILL BE SOLD AT A PUBLIC AUCTION. FOR ANY ENQUIRIES CONTACT GERHARD 082 220 0669.

0060 WOONSTELLE TE HUUR/ FLATS TO LET

BACHELOR flat: Rent R2900 p.m. Cupboards. 1 May/ 1 June Vryburg. Cell: 072 199 9316.
---------- 13930 1/5

Published by North West Newspapers (Pty) Ltd and printed by North West Web Printers (Pty) Ltd, 13 Coetzer Street, Rustenburg, N.W. Province.

ADVERTENSIES

Adverteerders word daarop gewys dat geen verantwoordelikheid geneem word vir geklassifiseerde advertensies wat na 17:00 op Maandae per E-pos ontvang word nie.

****

ADVERTISEMENTS

Advertisers are advised that we do not accept responsibility for E-mail classified advertisements which reach us after 17:00 on Mondays.

DISTRIBUTION AREA

Vryburg, Amalia, Bloemhof, Bray, Christiana, Delareyvile, Hartswater, Hertzogville, Hoopstad, Hotazel, Jan Kempdorp, Kameel, Kathu, Kuruman, Leeudoringstad, Louwna, Magogong, Makwassie, Migdol, Mothibistad, Ottosdal, Piet Plessis, Reivilo, Schweizer-Reneke, Stella, Taung, Tosca, Vaalharts, Van Zylsrus, Warrenton, Wolmaranstad.

VOORWAARDES VIR AANVAARDING:

Die Stellalander behou die reg voor om enige advertensiebestelling terug te hou en om enige advertensiebestelling wat aanvaar is, te kanselleer. Die Stellalander aanvaar geen aanspreeklikheid vir versuim om enige advertensie te plaas wat per telefoon of andersins ontvang is nie.

FOUTE:

Meld foute in advertensies onmiddellik aan. Die Stellalander aanvaar nie aanspreeklikheid vir meer as een foutiewe plasing van enige advertensie of vir enige koste benewens die koste van die ruimte wat deur die fout in beslag geneem word nie. Geen herdruk van advertensies sal verleen word nie as klein tipografiese foute voorkom wat nie die waarde van die advertensie verminder nie. Dit wil sê slegs wenslike foute wat tot werklike verliese lei, word in aanmerking geneem.

0130 PLOTTE & PLASE TE KOOP/ PLOTS & FARMS

PLASE te koop: Hennie Wille Estates 082 460 8376.
---------- N/C T/C (Christo)

0170 VOERTUIE TE KOOP/ VEHICLES FOR SALE

2011 Volkswagen Polo Vivo 1.4 Trendline 176000 kilos For R119-900 Adele 083 571 6348.
----------Website 1/5

2009 Hyundai SANTA Fe 2.2 CRDI 189000 kilos for R119 900 Adele 083 571 6348.
----------Website 1/5

2009 Chevrolet Aveo 1.6 kilos 109900 For R84-900 Adele 083 571 6348.
----------Website 1/5

0230 SPESIALE DIENSTE/ SPECIAL SERVICES

VISALEK: Tel: 053-927-0473, Roydenweg 24, Vryburg. Jannie of Ria. Herstel en diens van yskaste, wasmasjiene, stowe, geisers, lugversorgers. LP Gas Installasies en sertifikate.
----------11160 7/11 AC TC

LOUWRIE Smit Matte. Viniel en Houtvloere. 072 301 3720.
----------13869 17/1-26/6

WENDY House 2.4 x 2.4 = R6 500. 2.3 x 2.3 = R5 500. 3 x 3 = R7 500. 3 x 4 = R8 500. 3 x 6 = R10 500 = 4 x 6 = R16 500. We do all sizes, big or small. Whatsapp 072 472 2067, 079 135 8138.
----------5414 3/5-10/5

WARNING

ALL ADVERTISEMENTS RELATING TO:

- Loans and financing
- Hire purchase problems / Transfer of installments
- Business opportunities
- Investments
- The filling of envelopes
- Work at home
- Earn extra money
- Business propositions
- Part-time work

PROHIBITED:

Use of the following words in abovementioned advertisements are prohibited:
*No Credit Checks required
*Blacklisted clients welcome
*Free Credit etc.

MUST contain the following information in the advertisement:

Telephone number
Street address
Name of person and/or business.

These are the requirements and **NO** exceptions will be made. All advertisements are placed with the approval of the National Press Union and it is our responsibility as an advertising medium to ensure that these rules are strictly adhered to. However, it still remains the responsibility of the buyer or consumer to thoroughly investigate the trustworthiness of the advertiser with whom they are doing business.

0250 KENNISGEWINGS / NOTICES

NOTICE FORM JJJ. 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 no. T2541/1995 passed by: HENDRIK GERHARDUS BOTES JANSE VAN RENSBURG Identiteitsnr 400407 5032 00 1. Getroud buite gemeenskap van goed. In favour of: JOHANNES STEPHANUS MALAN Identiteitsnr 530128 5021 00 9 EN MARTHA SUSANNA ZACHARIA MALAN Identiteitsnr 560408 0085 00 8 Getroud in gemeenskap van goed met mekaar in respect of certain: ERF 182 JAN KEMPDORP. GELEË IN DIE MUNISIPALITEIT JAN KEMPDORP AFDELING VRYBURG, PROVINSIE NOORDKAAP. GROOT 1179 (EEN DUISEND EEN HONDERD NEGE EN SEWENTIG) Vierkante Meter which has been lost or destroyed. All interested persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deed at Bloemfontein within two weeks from the date of publication of this notice. Dated at BLOEMFONTEIN this 17th day of APRIL 2024. Applicant: MADALANE PEYPER INCORPORATED. Address: 103 KELLNER STREET, WESTDENE, BLOEMFONTEIN, 9301 E-mail address: rosa@mpinc.legal Contact number: (051) 065 0021 (CPV524)
---------- K6 1/5

NOTICE: FORM JJJ. 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 no. T4121/2004 passed by: FLASHING STAR TRADING 76 (EIENDOMS) BEPERK Nr. 2003/016989/07. In favour of: CATHARINA MARIA VERTUE Identiteitsnommer 470726 0036 088 Ongetroud. In respect of certain: ERF 1475 JAN KEMPDORP GELEË IN DIE PHOKWANE MUNISIPALITEIT, AFDELING VRYBURG, PROVINSIE NOORDKAAP; GROOT 455 (VIER HONDERD VYF EN VYFTIG) Vierkante Meter which has been lost or destroyed. All interested persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deed at Bloemfontein within two weeks from the date of publication of this notice. Dated at BLOEMFONTEIN this 17th day of APRIL 2024. Applicant: MADALANE PEYPER INCORPORATED. Address: 103 KELLNER STREET, WESTDENE, BLOEMFONTEIN, 9301 E-mail address: rosa@mpinc.legal Contact number: (051) 065 0021 (CPV524)
---------- K7 1/5

KENNISGEWING WETSKENNISGEWING. In die Boedel van Wyle:- SALOMON WILLIAM BADENHORST Identiteitsnommer 470929 5026 084 van Bernauw Plot 36 Vryburg en sy nagelate eggenote MARIA CATHARINA BADENHORST Identiteitsnommer 490406 0096 087 met wie die oorledene getroud was in gemeenskap van goed. BOEDEL NR. 4753/2023. Kennis word hiermee gegee dat die Eerste en Finale Likwidasie- en Distribusierekening in bogenoemde Boedel ter insae sal lê by die kantoor van die MEESTER VAN DIE HOOGGEREGSHOF, MAFIKENG, en by die katoor van die LANDDROS, VRYBURG, vir 'n tydperk van een-en-twintig (21) dae gereken vanaf 03 MEI 2024. FRYLINCK & WALKER. Prokureurs vir Eksekuteur. De Kockstraat 20. Posbus 26 VRYBURG 8600 E-pos: lawlinck@megadial.com
---------- K1 1/5

KENNISGEWING VAN TER INSAELEGGING VAN REKENING INGEVOLGE ARTIKEL 35(5). IN DIE BOEDEL VAN WYLE BRAHAM CAREL STRAUSS (IDENTITEITSNOMMER 850731 5128 088) VAN PLAAS BOSCHPLAATZ, SCHWEIZER-RENEKE, WAT OP 12 MEI 2022 OORLEDE IS. MEESTERSNOMMER 4584/2022. Geliewe kennis te neem dat die eerste en finale likwidasie- en distribusierekening ter insae lê by die Meester van die Hooggeregshof te Mafikeng en die Landdroskantoor te Schweizer-Reneke vir 'n tydperk van 21 (een en twintig) dae gereken vanaf 3 Mei 2024. JAPIE VAN ZYL PROKUREURS. Posbus 960, Bothastraat 3 SCHWEIZER-RENEKE, 2780 TEL: 053 963 2008 FAKS: 053 963 2009 Epos: yudians@japievzylprok.co.za
---------- K2 1/5

NOTICE: NALEDI LOCAL MUNICIPALITY. PROPOSED REZONING AND RELAXATION OF BUILDING LINE ON THE REMAINING EXTENT OF ERF 367, VRYBURG TOWNSHIP, ADMINISTRATIVE DISTRICT: VRYBURG. Notice is hereby given in terms of Section 62 of the bylaws of the Naledi Local Municipality, 2015 of SPLUMA, Act 16 of 2013 (Spatial Planning and Land Use Management Act) that the registered owners of the Remaining Extent of Erf 367 being Benjamin Wright (4407165063085) and Charmaine Elizabeth Wright (6606180044081) intend to apply for the rezoning and relaxation of building line on the Remaining Extent of Erf 367. The erf is currently zoned as "Residential Zone 1" and will be rezoned to "Residential 2" for three (3) dwelling units. The erf is situate at No. 167 Livingstone Street, Vryburg. Full details of the abovementioned application will be available for inspection in the office of the Town Planner, 19A Market Street, Vryburg or P.O. Box 35, Vryburg, 8600 during normal office hours. Any objections shall be lodged simultaneously with the Municipality and the Applicant within a period of 30 days from the date of this notice. Name of Applicant: TMK. P.O. Box 1869, Mossel Bay, 6500, info@tmkland.co.za Objections in writing, if any, must be lodged not later than 31 May 2024. Date of Notice: 2 May 2024.

KENNISGEWING: NALEDI PLAASLIKE MUNISIPALITEIT. VOORGESTELDE HERSONERING EN VERSLAPPING VAN BOULYN VAN DIE RESTANT VAN ERF 367, VRYBURG DORP, ADMINISTRATIEWE DISTRIK: VRYBURG. Kennis word hiermee gegee ingevolge Artikel 62 van die bepalings van die verordeninge van die Naledi Plaaslike Munisipaliteit, 2015 van die SPLUMA, Wet 16 van 2013 (Ruimtelike Beplanning en Grondgebruiksbestuur Wet) dat die geregistreerde eienaars te wete Benjamin Wright (4407165063085) and Charmaine Elizabeth Wright (6606180044081) van die Restant van Erf 367 van voornemens is om die erf te hersoneer en aansoek te doen vir boulyn verslapping. Die erf is tans gesoneer as "Residensieel 1" en word gehersoneer na "Residensieel 2" vir die doeleindes van drie (3) wooneenhede. Die erf is geleë by Livingstonestraat No. 167, Vryburg. Besonderhede van bogenoemde aansoek lê ter insae in die kantoor van die Stadsbeplanner, Markstraat 19A, Vryburg of Posbus 35, Vryburg, 8600, gedurende normale kantoorure. Enige besware moet gelyktydig by die Munisipaliteit en die Applikant ingedien word, nie later as 30 dae na die datum van die verskyning van die kennisgewing nie. Naam van Applikant: TMK, Posbus 1869, Mosselbaai, 6500, info@tmkland.co.za Skriftelike besware, indien enige, moet ingedien word nie later as 31 Mei 2024 nie. Datum van Kennisgewing: 2 Mei 2024.
---------- K4 1/5

KENNISGEWING. KENNISGEWING VAN TER INSAELEGGING VAN REKENING INGEVOLGE ARTIKEL 35(5). IN DIE BOEDEL VAN WYLE LAVENIA ALICE PRETORIUS (IDENTITEITSNOMMER 310913 0042 084) VAN HUIS SILWERJARE, SCHWEIZER-RENEKE, WAT OP 29 JULIE 2021 OORLEDE IS. MEESTERSNOMMER 2144/2022. Geliewe kennis te neem dat die eerste en finale likwidasie- en distribusierekening ter insae lê by die Meester van die Hooggeregshof te Mafikeng en die Landdroskantoor te Schweizer-Reneke vir 'n tydperk van 21 (een en twintig) dae gereken vanaf 3 Mei 2024. JAPIE VAN ZYL PROKUREURS, Posbus 960, Bothastraat 3, SCHWEIZER-RENEKE, 2780, TEL: 053-963 2008, FAKS: 053-963 2009, Epos: yudians@japievzylprok.co.za.
---------- K3 1/5

NOTICE. LOST OR DESTROYED DEED. Notice is hereby given in terms or Regulation 68 of the Deeds Registries Act, 1937, of the intention to apply for the issue of a certified copy of Deed of transfer number T3235/2004, passed by North West Agricultural Bank, in favour of Provincial Government North West Province, in respect of certain Erf 1275 Mothibistat Unit 1, Situated in the Ga-Segonyana Local Municipality, Registration Division H.M. Province of the Northern Cape which has been lost or destroyed. All interested persons having objections to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deeds at VRYBURG, Government Building, 26 De Kock Street, Vryburg, 8600, within two weeks from the date of the publication of the notice. DATE AT GEORGE ON 14 March 2024. DU TOIT ATTORNEYS, 96 Meade St., George. Tel: 044-004 0120. Email: admin@dutoitattorneys.co.za.
---------- K5 1/5

0250 KENNISGEWINGS / NOTICES

NOTICE. FORM JJJ. 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 Number T2365/2015 passed by Richard Hugh Connan in favour of KHUMANI HOUSING DEVELOPMENT COMPANY PROPRIETARY LIMITED (Registration Number 2007/000964/07) in respect of certain Erf 5868 KATHU situated in the Gamagara Local Municipality, Administrative District Kuruman, Province Northern Cape which has been lost or destroyed. All interested persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deeds at Vryburg within two weeks from the date of the publication of this notice. Dated at KATHU this 22nd day of APRIL 2024. (SGD) Applicant: LOUW & DA SILVA ATTORNEYS. Address: PROGRESSUS BUILDING, RIETBOK STREET, KATHU. Tel: 053-723 3258. Fax: 053-723 1311. Email: ria@louwdasilva.co.za.
---------- K8 1/5

NOTICE. Form JJJ. LOST OR DESTROYED DEED. Notice in terms of Regulation 68 of the Regulations made under the deeds Registries Act 47 of 1937. Notice is hereby given in terms of the provisions of Regulation 68 of the Regulations made under the Deeds Registries Act of 1937 that it is the intention to apply for the issue of a certified copy of: Title Deed No: T0IO00030000000400000. Dated, Passed by CENTRAL TRANSITIONAL DISTRICT COUNCIL, In favour of NGAKA MODIRI MOLEMA DISTRICT MUNICIPALITY, In respect of ERF 4 STAND 4 GEYSDORP, REGISTRATION DIVISION J.R., NORTH WEST PROVINCE, MEASURING 2587 (TWO THOUSAND FIVE HUNDRED AND FIFTY SEVEN) Square meters. Which has been lost or destroyed. All persons having objection to the issue of such copy are hereby required to lodge the same in writing with the registrar of Deeds at Pretoria within two (2) weeks after the date of the publication of this notice. Gutta Attorneys, Email: mohamed@guttalegal.com. Contact Mohamed Iqbal Gutta on 079 494 2227 / 063 361 7146. Dated at MAFIKENG on 29 APRIL 2024.
---------- K9 1/5

NOTICE. 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 T432/2013 passed by JOHANNES GERHARDUS BRITS, IDENTITY NUMBER 710204 5269 088, UNMARRIED in favour of LUCAS JOHANNES RAUTENBACH, IDENTITY NUMBER 470513 5002 087, AND ETHEL IRENE RAUTENBACH, IDENTITY NUMBER 471219 0016 085, MARRIED IN COMMUNITY OF PROPERTY TO EACH OTHER in respect of certain PORTION 26, PORTION OF PORTION 18, OF THE FARM BERNAUW 674, SITUATED IN THE NALEDI LOCAL MUNICIPALITY, REGISTRATION DIVISION IN, NORTH-WEST PROVINCE, which has been lost or destroyed. All interested persons having objection to the issue of such copy are hereby required to lodge the same in writing with the Registrar of Deeds Vryburg at the GOVERNMENT BUILDING, 26 DE KOCK STREET, VRYBURG, 8601 within two weeks from the date of the publication of this notice. Dated at this 1ST day of MAY 2024. Du Plessis Viviers Inc., 136 Market Street, Vryburg, cbaatjes@dupviv.co.za. Tel. 053-927 1045.
---------- K10 1/5

NOTICE. ENVIRONMENTAL IMPACT ASSESSMENT PROCESS. Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 an d 3 of 2014 of Government Notice No. 327 in Government Gazette No. 38282 of 4 December 2014 as amended under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity: Listing 1. (ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area. (ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation. Listing 3.(ACTIVITY NO.12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (h) (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority; PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses. LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018- 389 5719/5431/5688. CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon,9520. Tel 076 422 3484, Fax 086 5511894,E-Mail info@bucandi.co.za. DATE OF NOTICE: 1 May 2024 in order to ensure that you are identified as an Interested or Affected Party, please submit your name,contact information and environmental interest in the matter to the consultant before 31 May 2024.
---------- K11 1/5

Appendix D2

Proof of site notices

Site notices


BASIC ENVIRONMENTAL IMPACT ASSESSMENT
ENVIRONMENTAL IMPACT ASSESSMENT PROCESS
Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 & 3 of 2014 of Government Notice No. R327 in Government Gazette No. 38282 of 4 December 2014 as amended April 2017 under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity:
Listing 1: (ACTIVITY NO. 5) The development and related operation of facilities or infrastructure for the concentration of (i) more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.
(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation
Listing 3: (ACTIVITY NO. 12) The clearance of an area of 300 square metres or more of indigenous
vegetation except where such clearance of indigenous vegetation is required for maintenance
purposes undertaken in accordance with a maintenance management plan. (b) (iv) Critical biodiversity areas as identified
in systematic biodiversity plans adopted by the competent authority;
PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 6 poultry houses
LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Ol Rule Segment Moorreit District Municipality within
Naledi Local Municipality area.
OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism. Telephone number:
018 388 5713/5431/3688.
CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Wolmaransstad, 2630 Tel 078 422 5464 Fax 086 551 1694, E-
MAIL: info@bucandi.co.za
DATE OF NOTICE: 1 May 2024 In order to ensure that you are identified as an Interested or Affected Party, please submit your
name, contact information and environmental interest in the matter to the consultant before 30 May 2024.
BUCANDI
HIRE

Appendix D3

Proof of letters to I&AP

Dear Douglas le Roux 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
I trust that you will find everything in order. Please don't hesitate to contact me if you have any questions.
The following is the legal notice that was placed in the local newspaper (Stellalander).

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 & 3 of 2014 of Government Notice No. R327 in Government Gazette No. 38282 of 4 December 2014 as amended April 2017 under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity:

Listing 1. (ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.

Listing 3. (ACTIVITY NO. 12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (h) (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority;

PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses.
LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.
OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018 389 5719/5431/5688.
CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon, 9520. Tel 076 422 3484, Fax 086 551 1894, E-Mail info@bucandi.co.za
DATE OF NOTICE: 1 May 2024 in order to ensure that you are identified as an Interested or Affected Party, please submit your name, contact information and environmental interest in the matter to the consultant before 31 May 2024.

Best regards

Hélen Prinsloo
Ecologist and owner

Phone Helen: 076 682-4369
Phone Anton: 076 422 3484
Fax: 086 551-1894
E-mail: helen@bucandi.co.za
E-mail: info@bucandi.co.za

Reg. nr. 2009/087537/23

P.O. Box 317
Viljoenskroon
9520

Dear Brumelda Du Plessis 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
I trust that you will find everything in order. Please don't hesitate to contact me if you have any questions.
The following is the legal notice that was placed in the local newspaper (Stellalander).

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 & 3 of 2014 of Government Notice No. R327 in Government Gazette No. 38282 of 4 December 2014 as amended April 2017 under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity:

Listing 1. (ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.

Listing 3. (ACTIVITY NO. 12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (h) (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority;

PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses.
LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.
OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018 389 5719/5431/5688.
CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon, 9520. Tel 076 422 3484, Fax 086 551 1894, E-Mail info@bucandi.co.za
DATE OF NOTICE: 1 May 2024 in order to ensure that you are identified as an Interested or Affected Party, please submit your name, contact information and environmental interest in the matter to the consultant before 31 May 2024.

Best regards

Hélen Prinsloo
Ecologist and owner

Phone Helen: 076 682-4369
Phone Anton: 076 422 3484
Fax: 086 551-1894
E-mail: helen@bucandi.co.za
E-mail: info@bucandi.co.za

Reg. nr. 2009/087537/23

P.O. Box 317
Viljoenskroon
9520

Dear Lillian Siwelane 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
I trust that you will find everything in order. Please don't hesitate to contact me if you have any questions.
The following is the legal notice that was placed in the local newspaper (Stellalander).

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 & 3 of 2014 of Government Notice No. R327 in Government Gazette No. 38282 of 4 December 2014 as amended April 2017 under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity:

Listing 1. (ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.

Listing 3. (ACTIVITY NO. 12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (h) (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority;

PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses.

LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.

OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018 389 5719/5431/5688.

CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon, 9520. Tel 076 422 3484, Fax 086 551 1894, E-Mail info@bucandi.co.za

DATE OF NOTICE: 1 May 2024 in order to ensure that you are identified as an Interested or Affected Party, please submit your name, contact information and environmental interest in the matter to the consultant before 31 May 2024.

Best regards

Hélen Prinsloo
Ecologist and owner

Phone Helen: 076 682-4369
Phone Anton: 076 422 3484
Fax: 086 551-1894
E-mail: helen@bucandi.co.za
E-mail: info@bucandi.co.za

Reg. nr. 2009/087537/23

P.O. Box 317
Viljoenskroon
9520

From:	Marika Smook
To:	"Talanept9974@gmail.com"
Subject:	EPH Vaalbosch Breeders - Information
Date:	Letter Monday, 1 May 202411:13:00
Attachments:	Naledi Local Municipality.pdf

Good Day

Please see attached letter for your attention regarding the **EPH Vaalbosch Breeders** project.

-

Any Questions or Queries, Please Contact **Marika Smook** on **(076) 422 3484** or send an email to **info@bucandi.co.za**

Kind Regards/Vriendelike Groete

Marika Smook
Bucandi Environmental Solutions
076 422 3484

From:	Marika Smook
To:	"duplessisb@drrsmdm.gov.za"
Subject:	EPH Vaalbosch Breeders - Information Letter
Date:	Monday, 1 May 2024 11:12:00
Attachments:	Dr Ruth Segomotsi Mompati District Municipality.pdf

Good Day

Please see attached letter for your attention regarding the **EPH Vaalbosch Breeders** project.

Any Questions or Queries, Please Contact **Marika Smook** on **(076) 422 3484** or send an email to **info@bucandi.co.za**

Kind Regards/Vriendelike Groete

Marika Smook
Bucandi Environmental Solutions
076 422 3484

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

From:	Marika Smook
To:	"morcaboerdery@gmail.com"
Subject:	EPH Vaalbosch Breeders - Information
Date:	Letter Monday, 1 May 2024 11:12:00
Attachments:	Jaco Scholtz.pdf

Good Day

Please see attached letter for your attention regarding the **EPH Vaalbosch Breeders** project.

Any Questions or Queries, Please Contact **Marika Smook** on **(076) 422 3484** or send an email to **info@bucandi.co.za**

Kind Regards/Vriendelike Groete

Marika Smook
Bucandi Environmental Solutions
076 422 3484

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

From:	Marika Smook
To:	"dwleroux@webmail.co.za"
Subject:	EPH Vaalbosch Breeders - Information
Date:	Letter Monday, 1 May 2024 11:11:00
Attachments:	Douglas le Roux.pdf

Good Day

Please see attached letter for your attention regarding the **EPH Vaalbosch Breeders** project.

Any Questions or Queries, Please Contact **Marika Smook** on **(076) 422 3484** or send an email to **info@bucandi.co.za**

Kind Regards/Vriendelike Groete

Marika Smook
Bucandi Environmental Solutions
076 422 3484

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

From:	Marika Smook
To:	"asniemann@lantic.net"
Subject:	FW: EPH Vaalbosch Breeders - Information Letter
Date:	Monday, 1 May 2024 11:11:00
Attachments:	Stefan Niemann.pdf

Good Day

Please see attached letter for your attention regarding the **EPH Vaalbosch Breeders** project.

Any Questions or Queries, Please Contact **Marika Smook** on **(076) 422 3484** or send an email to **info@bucandi.co.za**

Kind Regards/Vriendelike Groete

Marika Smook
Bucandi Environmental Solutions
076 422 3484

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

From:	Marika Smook
To:	"joppie@doornbult.co.za"
Subject:	EPH Vaalbosch Breeders - Information Letter
Date:	Monday, 1 May 202411:10:00
Attachments:	Joppie Pretorius.pdf

Good Day

Please see attached letter for your attention regarding the **EPH Vaalbosch Breeders** project.

Any Questions or Queries, Please Contact **Marika Smook** on **(076) 422 3484** or send an email to **info@bucandi.co.za**

Kind Regards/Vriendelike Groete

Marika Smook
Bucandi Environmental Solutions
076 422 3484

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

From:	Marika Smook
To:	"Siwelanel@dws.gov.za"
Subject:	EPH Vaalbosch Breeders - Information
Date:	Letter Monday, 1 May 2024 11:13:00
Attachments:	DWS.pdf

Good Day

Please see attached letter for your attention regarding the **EPH Vaalbosch Breeders** project.

Any Questions or Queries, Please Contact **Marika Smook** on **(076) 422 3484** or send an email to **info@bucandi.co.za**

Kind Regards/Vriendelike Groete

Marika Smook
Bucandi Environmental Solutions
076 422 3484

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

Dear Frikkie Scholtz 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
I trust that you will find everything in order. Please don't hesitate to contact me if you have any questions.
The following is the legal notice that was placed in the local newspaper (Stellalander).

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 & 3 of 2014 of Government Notice No. R327 in Government Gazette No. 38282 of 4 December 2014 as amended April 2017 under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity:

Listing 1. (ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.

Listing 3. (ACTIVITY NO. 12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (h) (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority;

PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses.
LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.
OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018 389 5719/5431/5688.
CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon, 9520. Tel 076 422 3484, Fax 086 551 1894, E-Mail info@bucandi.co.za
DATE OF NOTICE: 1 May 2024 in order to ensure that you are identified as an Interested or Affected Party, please submit your name, contact information and environmental interest in the matter to the consultant before 31 May 2024.

Best regards

Hélen Prinsloo
Ecologist and owner

Phone Helen: 076 682-4369
Phone Anton: 076 422 3484
Fax: 086 551-1894
E-mail: helen@bucandi.co.za
E-mail: info@bucandi.co.za

Reg. nr. 2009/087537/23

P.O. Box 317
Viljoenskroon
9520

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

Dear Jaco Scholtz 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
I trust that you will find everything in order. Please don't hesitate to contact me if you have any questions.
The following is the legal notice that was placed in the local newspaper (Stellalander).

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PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses.

LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.

OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018 389 5719/5431/5688.

CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon, 9520. Tel 076 422 3484, Fax 086 551 1894, E-Mail info@bucandi.co.za

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Best regards

Hélen Prinsloo
Ecologist and owner

Phone Helen: 076 682-4369
Phone Anton: 076 422 3484
Fax: 086 551-1894
E-mail: helen@bucandi.co.za
E-mail: info@bucandi.co.za

Reg. nr. 2009/087537/23

P.O. Box 317
Viljoenskroon
9520

Dear Joppie Pretorius 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
I trust that you will find everything in order. Please don't hesitate to contact me if you have any questions.
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PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses.

LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.

OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018 389 5719/5431/5688.

CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon, 9520. Tel 076 422 3484, Fax 086 551 1894, E-Mail info@bucandi.co.za

DATE OF NOTICE: 1 May 2024 in order to ensure that you are identified as an Interested or Affected Party, please submit your name, contact information and environmental interest in the matter to the consultant before 31 May 2024.

Best regards

Hélen Prinsloo
Ecologist and owner

Phone Helen: 076 682-4369
Phone Anton: 076 422 3484
Fax: 086 551-1894
E-mail: helen@bucandi.co.za
E-mail: info@bucandi.co.za

Reg. nr. 2009/087537/23

P.O. Box 317
Viljoenskroon
9520

Dear Mpho Talane 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
I trust that you will find everything in order. Please don't hesitate to contact me if you have any questions.
The following is the legal notice that was placed in the local newspaper (Stellalander).

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 & 3 of 2014 of Government Notice No. R327 in Government Gazette No. 38282 of 4 December 2014 as amended April 2017 under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity:

Listing 1. (ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.

(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.

Listing 3. (ACTIVITY NO. 12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (h) (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority;

PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses.
LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.
OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018 389 5719/5431/5688.
CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon, 9520. Tel 076 422 3484, Fax 086 551 1894, E-Mail info@bucandi.co.za
DATE OF NOTICE: 1 May 2024 in order to ensure that you are identified as an Interested or Affected Party, please submit your name, contact information and environmental interest in the matter to the consultant before 31 May 2024.

Best regards

Hélen Prinsloo
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Phone Helen: 076 682-4369
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E-mail: info@bucandi.co.za

Reg. nr. 2009/087537/23

P.O. Box 317
Viljoenskroon
9520

Dear Mothibedi Lechwene 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
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E-mail: info@bucandi.co.za

Reg. nr. 2009/087537/23

P.O. Box 317
Viljoenskroon
9520

Dear Stefan Niemann 1 May 2024

Eagles Pride Hatchery is planning the construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. According to the National Environmental Management Act (Act 107 of 1998) I am hereby, as the EAP, providing you with official notice of the intended project. Please note that you have thirty (30) days to table any concerns or questions regarding the project in writing to me.
I trust that you will find everything in order. Please don't hesitate to contact me if you have any questions.
The following is the legal notice that was placed in the local newspaper (Stellalander).

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Notice is given in terms of the Environmental Impact Assessment Regulations Listing Notice 1 & 3 of 2014 of Government Notice No. R327 in Government Gazette No. 38282 of 4 December 2014 as amended April 2017 under the National Environmental Management Act, Act 107 of 1998 of intent to carry out the following activity:

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(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.

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PROJECT TITLE AND DISCRIPTION: Vaalbosch Vlakte construction of 5 poultry houses.
LOCATION: Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.
OFFICIAL: North West Department of Economic Development, Environment, Conservation and Tourism, Telephone number 018 389 5719/5431/5688.
CONSULTANT: Bucandi Environmental Solutions, PO Box 317, Viljoenskroon, 9520. Tel 076 422 3484, Fax 086 551 1894, E-Mail info@bucandi.co.za
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P.O. Box 317
Viljoenskroon
9520

Appendix D4

Comments and responses report

Comments and responses report

1. Interested and Affected Parties

Name	Telephone number	Address	Interest
Joppie Pretorius	083 395 6978	joppie@doornbult.co.za	*DN
Stefan Niemann	082 524 9158	asniemann@lantic.net	*DN
Douglas le Roux	083 235 5996	dwleroux@webmail.co.za	*DN
Frikkie Scholtz	082 554 8384	No email	*DN
Jaco Scholtz	084 603 0502	morcaboerdery@gmail.com	*DN
Dr Ruth Segomotsi Mompati District Municipality Brumelda Du Plessis	053 928 4700	P.O Box 21, Vryburg, 8600 duplessisb@drrsmdm.gov.za	District Municipality
Naledi Local Municipality Mpho Talane	053 928 2355	Talanept9974@gmail.com	Local Municipality
Naledi Ward 1 Cllr Mothibedi Lechwene	079 107 9477		Ward Councillor
DWS – Ms Lillian Siwelane	083 488 1211	Siwelanel@dws.gov.za	DWS

*DN = Direct Neighbour

2. On 1 May 2024 an advertisement was placed in the Stellalander and notice boards were placed at the site and next to the main road providing access to the site. Notices were sent out to all the I&APs and Organs of State on 1 May 2024. A copy of the DBAR was circulated for comment.

Appendix E

Environmental Management Programme

Environmental Management Programme

for

EAGLES PRIDE HATCHERY
VAALBOSCH BREEDERS

Prepared by:

Bucandi Environmental Solutions

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

Project Manager: Dr Hélen Prinsloo (D.Tech.)
(*Pr.Sci.Nat.*) Reg. No. 400108/11 (SACNASP)

June 2024

Table of contents

1. DETAILS OF THE EAP

a) Contact details of EAP

Name of The Practitioner: Dr.Hélen Prinsloo

Tel No.: 076 682 4369

Fax No. : 086 551 1894

e-mail address: helen@bucandi.co.za

b) Expertise of the EAP

The qualifications of the EAP
D. Tech (Nature Conservation)

Summary of the EAP's past experience.
15 years' experience with environmental impact assessments, 3 years in the USA, 12 years in South Africa.

Please see CV attached as Appendix G-4 of the Basic Assessment Report.

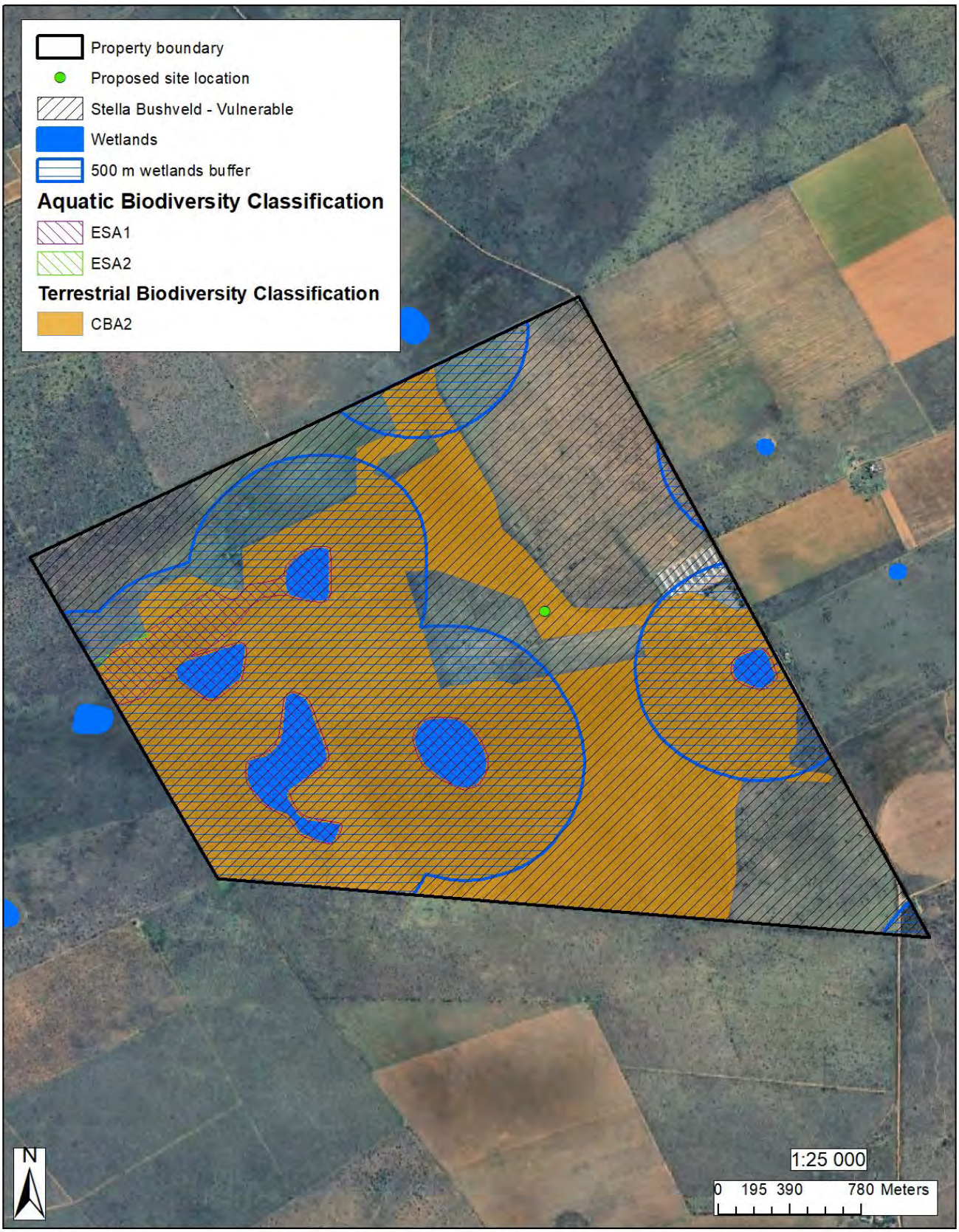
2. DETAILED DESCRIPTION OF ASPECTS

Poultry Houses:

Eagles Pride Hatchery is proposing the construction of 5 breeder houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. The proposed project triggers a Basic Assessment for certain listed activities under Listing 1& 3 of NEMA (National Environmental Management Act, 1998) as explained below.

Listing Notice 1	
(ACTIVITY NO. 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 and (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area.	The clearance of 4.53 ha of indigenous vegetation, of which 3.25 ha is classified as Terrestrial Critical Biodiversity Area 2 (tCBA2).
(ACTIVITY NO. 27) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.	The clearance of 11.94 ha of indigenous vegetation, which is classified as Aquatic Ecological Support Area (ESA) 1 (all overlapping with Terrestrial ESA 1).
Listing 3	
(ACTIVITY NO. 12) The clearance of an area of 300 square meters or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan (h) (iv) Critical biodiversity areas identified in systematic biodiversity plans adopted by the competent authority	The clearance of 4.53 ha of indigenous vegetation

3. ECOLOGICAL SENSITIVITY MAP OF PREFERRED SITE



Ecological sensitivity map for the proposed development on Portion 3 of the farm Vaalbosch Vlakte 554 IN

June 2024
Created by:

BUCANDI
ENVIRONMENTAL SOLUTIONS

4. IMPACTS AND MITIGATION MEASURES

a) Impacts identified for preferred alternative

Activity	Impact summary	Significance		Proposed mitigation
		Before mitigation	After mitigation	
Clearance of indigenous vegetation & agricultural land	Air pollution on a local level.	Low	Low	Dust control by means of watering if necessary. Vehicles to be regularly serviced and well-tuned. Operations to be undertaken during working hours only.
	Contamination of soils, surface water and groundwater due to leakages from vehicles entering and exiting the site.	Low	Low	Machinery must be properly maintained at all times. Servicing of machinery must take place only in specific demarcated and protected areas. Measures must be taken for the proper disposal of oils, grease, oil filters, rags, etc.
	Soil compaction and loss of fertility.	Low	Low	Appropriate measures must be taken to reduce the risk of erosion from unprotected slopes i.e., diversion berms, ponding pools, and not exceeding angles of repose of stockpiled material. All unprotected slopes must be rehabilitated concurrent with construction.
	Disturbance of fauna	Medium	Low	Only small animals occur in this area e.g. small rodents and reptiles. The area is surrounded by similar habitat and fauna is expected to move voluntarily to surrounding areas. No fauna found on the site will be killed.
	Disturbance of flora	High	Medium	Clearance of vegetation should be kept at a minimum and restricted to the proposed site boundary.
	Removal of indigenous vegetation	High	Medium	In the event of any Protected or Declining species being recorded within the approved development site, permission for the removal of such species should be obtained from the Permitting Office of

Activity	Impact summary	Significance		Proposed mitigation
		Before mitigation	After mitigation	
				DEDECT, and the appropriate in situ and / or ex situ conservation measures should be developed and implemented with the approval of the DEDECT conservation authorities. Where feasible, protected or Declining species can be translocated to degraded or untransformed parts of the study area which provide potentially suitable habitat, but such translocations will have to be carried out in a way that ensures no ecological degradation of the host habitat occurs, and will have to be evaluated by an ecologist for each species and each potential translocation area. Alternatively, protected or Declining species can be rescued and donated to appropriate conservation and research institutions such as the Walter Sisulu National Botanical Garden (Roodepoort) or the Pretoria National Botanical Garden of SANBI. Where possible, development should avoid habitat identified with high ecological sensitivity. According to the AIS regulations all declared alien weeds must be effectively controlled or eradicated.
	Safety on the construction site	High	Low	Access to the construction site to be controlled at all times.
	Degradation of aesthetics	High	Low	If needed, an additional line of trees will be planted to minimise visual impact.
	Providing employment opportunities to the local	High	High	No mitigation proposed.

Activity	Impact summary	Significance		Proposed mitigation
		Before mitigation	After mitigation	
	community			
Construction of poultry facility	Air pollution on a local level.	Low	Low	Dust control by means of watering if necessary. Vehicles to be regularly serviced and well-tuned. Operations to be undertaken during working hours only.
	Contamination of soils, surface water and groundwater due to leakages from vehicles entering and exiting the site.	Low	Low	Machinery must be properly maintained at all times. Servicing of machinery must take place only in specific demarcated and protected areas. Measures must be taken for the proper disposal of oils, grease, oil filters, rags, etc.
	Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	Medium	Low	Proper ablution facilities must be provided i.e. chemical toilets at appropriate locations on site if necessary or existing facilities must be used. Workers must be made aware of the risk of soil water contamination. Domestic waste must be disposed of in appropriate containers, and removed to the nearest municipal waste-disposal site as part of existing waste management system.
	Soil compaction and loss of fertility.	Low	Low	Appropriate measures must be taken to reduce the risk of erosion from unprotected slopes i.e., diversion berms, ponding pools, and not exceeding angles of repose of stockpiled material. All unprotected slopes must be rehabilitated concurrent with construction.
	Increased fire risk	Low	Low	Cooking and heating fires permitted only in designated areas with appropriate safety measures. Adequate firefighting equipment must be available, as prescribed by

Activity	Impact summary	Significance		Proposed mitigation
		Before mitigation	After mitigation	
				the relevant safety standards and legislation.
	Disturbance of fauna	Medium	Low	Only small animals occur in this area e.g. small rodents and reptiles. The area is surrounded by similar habitat and fauna is expected to move voluntarily to surrounding areas. No fauna found on the site will be killed.
	Disturbance of flora	High	Medium	Clearance of vegetation should be kept at a minimum and restricted to the proposed site boundary.
	Safety on the construction site	High	Low	Access to the construction site to be controlled at all times.
	Degradation of aesthetics	High	Low	If needed, an additional line of trees will be planted to minimise visual impact.
	Providing employment opportunities to the local community	High	High	No mitigation proposed.
Operation of poultry facility	Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	Medium	Low	Proper ablution facilities must be provided i.e. chemical toilets at appropriate locations on site if necessary or existing facilities must be used. Workers must be made aware of the risk of soil water contamination. Domestic waste must be disposed of in appropriate containers, and removed to the nearest municipal waste-disposal site as part of existing waste management system.
	Pollution of soil, surface water and groundwater due to ineffective manure disposal.	Medium	Low	The manure is removed on a regular basis and sold to a contractor. Manure should be handled according to Odour Management Plan (Appendix F2), Waste Management Plan (Appendix F3) and Biosecurity Plan (Appendix F4). At the end of each cycle, all

Activity	Impact summary	Significance		Proposed mitigation
		Before mitigation	After mitigation	
				the manure and litter are removed from the houses using bobcats and loaded directly on truck to be removed by the contractor. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.
	Pollution of soil, surface water and groundwater due to ineffective disposal carcasses.	Medium	Low	The carcasses are removed on a daily basis and collected by a contractor.
	Soil compaction and loss of fertility.	Low	Low	Appropriate measures must be taken to reduce the risk of erosion from unprotected slopes i.e., diversion berms, ponding pools, and not exceeding angles of repose of stockpiled material. All unprotected slopes must be rehabilitated concurrent with construction.
	Increased fire risk	Low	Low	Cooking and heating fires permitted only in designated areas with appropriate safety measures. Adequate firefighting equipment must be available, as prescribed by the relevant safety standards and legislation.
	Disturbance of fauna	Medium	Low	Only small animals occur in this area e.g. small rodents and reptiles. The area is surrounded by similar habitat and fauna is expected to move voluntarily to surrounding areas. No fauna found on the site will be killed.
	Degradation of aesthetics	High	Low	If needed, an additional line of

Activity	Impact summary	Significance		Proposed mitigation
		Before mitigation	After mitigation	
				trees will be planted to minimise visual impact.
	Providing employment opportunities to the local community	High	High	No mitigation proposed.

b) Timeframes and management of mitigation

The table below lists the activities identified, mitigation measures proposed, the person responsible for the management actions, timing of actions and objectives to be reached.

Activities	Environmental Objectives	Auditable Management and Mitigation Measures	√	Person Responsible	Timing	Requirement for "sign-off" report
Planning and Design Phase						
No environmental activity will take place during this phase.						
Construction Phase						
1. Clearance of indigenous vegetation 2. Utilisation of agricultural land 3. Earthworks 4. Construction of breeder facility	Maintaining air quality and minimising disturbance caused by noise, dust and emissions.	Dust control by means of watering if necessary.		Werner Loets	Ongoing	Confirm compliance and justify emissions
		Vehicles to be regularly serviced and well-tuned.			Ongoing	
		Operations to be undertaken during working hours only.			Ongoing	
	Protecting the quality of surface and ground water.	Machinery should be properly maintained at all times.		Werner Loets	Ongoing	Initialise water monitoring to take place at least quarterly.
		Servicing of machinery should take place only in specific demarcated and protected areas.			Ongoing	
		Measures should be taken for the proper disposal of oils, grease, oil filters, rags, etc.			Ongoing	
	Controlling sewage and domestic waste disposal by workers.	Proper ablution facilities should be provided i.e. chemical toilets at appropriate locations on site if necessary; else existing facilities must be used.		Werner Loets	Before onset of construction	Confirm compliance and monitor site to ensure that domestic waste and construction rubble has been removed.
		Workers should be made aware of the risk of soil water contamination.			Before onset of construction	
		Domestic waste should be disposed of in appropriate containers, and removed to the nearest municipal waste-disposal site.			Weekly	

Activities	Environmental Objectives	Auditable Management and Mitigation Measures	√	Person Responsible	Timing	Requirement for "sign-off" report
	Preventing fires.	Cooking and heating fires permitted only in designated areas with appropriate safety measures.		Werner Loets	Ongoing	Initialise and monitor a fire prevention and response plan.
		Adequate fire fighting equipment should be available, as prescribed by the relevant safety standards and legislation.			Ongoing	
	Minimising soil compaction, loss of fertility and erosion.	Appropriate measures should be taken to reduce the risk of erosion from unprotected slopes i.e. diversion berms, ponding pools, and not exceeding angles of repose of stockpiled material.		Werner Loets	Ongoing	Confirm compliance.
		All unprotected slopes should be rehabilitated concurrent with construction.			Ongoing	
	Controlling the temporary disturbance of fauna.	The area is surrounded by similar habitat and fauna is expected to move voluntarily to surrounding areas.		Werner Loets	Ongoing	Confirm compliance.
		No fauna found on the site will be killed.			Ongoing	
	Minimising the disturbance of flora.	Clearance of vegetation should be kept at a minimum and restricted to the proposed site boundary.		Werner Loets	During site preparation	Confirm compliance.
	Controlling and minimising the removal of indigenous vegetation.	In the event of any Protected or Declining species being recorded within the approved development site, permission for the removal of such species should be obtained from the Permitting Office of DEDECT, and the appropriate in situ and / or ex situ conservation measures should be developed and implemented with the approval of the DEDECT conservation authorities. Where feasible, protected or Declining species can be translocated to degraded or untransformed parts of the study area which provide potentially suitable habitat, but such translocations will have to be carried out in a way that ensures no ecological degradation of the host habitat occurs, and will have to be evaluated by an ecologist for each species and each potential translocation area. Alternatively, protected or Declining				

Activities	Environmental Objectives	Auditable Management and Mitigation Measures	√	Person Responsible	Timing	Requirement for "sign-off" report
		species can be rescued and donated to appropriate conservation and research institutions such as the Walter Sisulu National Botanical Garden (Roodepoort) or the Pretoria National Botanical Garden of SANBI.				
		Where possible, development should avoid habitat identified with high ecological sensitivity.				
		According to the AIS regulations all declared alien weeds must be effectively controlled or eradicated.				
	Ensuring the safety of workers and the public.	Access to the construction site to be controlled at all times.		Werner Loets	Ongoing	Erection of safety fence and controlled entry points to the site.
	Minimising visual and audible impacts that may occur as a result of vehicle exhausts, dust and noise from machinery.	If needed, an additional line of trees will be planted to minimise visual impact.		Werner Loets	Before onset of construction	Establishment of a tree line.
Operational Phase						
1. Operation of breeder facility	Managing the disposal of sewage, waste and litter.	Sewage from flush-toilets flows to a french drain.		Werner Loets	Ongoing	Confirm compliance with good practice.
		Household waste is removed to the nearest authorised municipal landfill site.			Weekly	
		Litter is controlled by good practice.			Ongoing	
	Disposal of chicken manure	All of the manure is removed after each cycle and is collected by a contractor.		Werner Loets	After each cycle	Confirm compliance after each cycle.
	Preventing wash water from contaminating surface and ground water.	Houses are washed after each cycle only after the removal of manure and carcasses.		Werner Loets	After each cycle	Water quality to be tested quarterly.
		The houses are washed using a high pressure (16bar) sprayer, minimising the amount of water used.			After each cycle	
		Equipment is not washed with water, but rather using a foam sanitizer (F29) which is applied as dry foam and allowed to evaporate.			After each cycle	

Activities	Environmental Objectives	Auditable Management and Mitigation Measures	√	Person Responsible	Timing	Requirement for "sign-off" report
	Disposal of carcasses.	The carcasses are removed on a daily basis and is and collected by a contractor.		Werner Loets	Daily	Confirm compliance.
	Minimising air pollution.	Manure in houses should be treated regularly to prevent excessive odours and flies. Fly control should include measures for control of adults as well as larvae.		Werner Loets	Ongoing	Confirm compliance.
Decommissioning and Closure Phase						
This phase is not foreseen for this project.						

c) Monitoring and reporting

All activities identified and proposed mitigation measures should be monitored according to the following programme:

- Regular monitoring of all the environmental management measures and components must be carried out by the holder of the ROD in order to ensure that the provisions of this programme are adhered to.
- On-going and regular reporting of the progress of implementation of this programme will be done by the ECO.
- An ECO should be appointed to conduct external environmental audits every two month as long as construction is taking place and every six months once construction has been completed.

Roles and responsibilities for the execution of monitoring programmes
It is the responsibility of the holder of the ROD to appoint and ECO before any construction takes place. The ECO will then be responsible for environmental training of the contractors and employees, as well as the external environmental auditing according to the timeframe stipulated above.

Environmental Monitoring
Environmental Monitoring is the continuous evaluation of the status and condition of environmental elements. Its purpose is to detect change that takes place in the environment over time and involves the measuring and recording of physical, social and economic variables associated with development impacts. The purpose of the monitoring programme is not only to ensure conformance with the EMP through the contract/work instruction specifications but also to monitor environmental issues and impacts that have not been accounted for in the EMP that are, or could result in significant environmental impacts for which corrective action is required. Monitoring shall form part of the contract or work instruction.

Internal performance audits
It is recommended that the site manager undertake regular performance audits in accordance with the approved EMPr in which each environmental management specification will be rated in terms of the following criteria:

- Full Compliance (no action required)
- Satisfactory Performance (Some remedial/preventative actions required)
- Unsatisfactory performance (Remedial actions required)

The performance monitoring report must incorporate all compliance issues as well as corrective actions taken, permits, licenses and all contract documentation's conditions. These reports must be made available to the appointed Environmental Control Officer (ECO).

External Compliance Audits
An independent qualified ECO must be appointed to monitor the site and operations for compliance in accordance with the approved EMPr. The external compliance audits must be conducted on a two monthly basis during construction and a six monthly basis during operation.
The ultimate aim is that each environmental management specification be checked by means of a system in which a score may be allocated for:

- Full compliance
- Satisfactory performance
- Unsatisfactory performance
- No action

d) Environmental Awareness Plan

Environmental awareness training

Environmental awareness should be done as part of the induction training completed by all personnel working on the site. To ensure the training is always updated, placards containing information about environmental aspects will regularly be updated and distributed. If the ECO in his own discretion or the discretion of the site manager decide to update any environmental awareness training, he/ she will be able to do so at their own discretion.

It is recommended that the environmental awareness training be presented at least every 6 months to ensure the update of environmental goals in relation to current activities is communicated to the personnel.

The ability of the team to contain any environmental incidents is dependent on the management efficiency of the manager on site, and his ability to train and ensure his employees are knowledgeable about environmental impacts.

The contractors and applicant must ensure that adequate environmental training takes place. All employees shall have been given an induction presentation on environmental awareness. Where possible, the presentation needs to be conducted in the language of the employees. The environmental training should, as a minimum, include the following:

- Explanation of the importance of complying with the EMP;
- The construction must take place in ecological sound manner, taking due cognisance of the sensitive ecological areas in close vicinity of the site (i.e. drainage channel/streams).
- The need to protect and preserve the historical and archaeological heritage of the site.
- The importance of conformance with all environmental policies and procedures;
- The significant environmental impacts, actual or potential, as a result of their activities;
- The environmental benefits of improved personal performance;

Dealing with risks and accidents

The solution to the risks involved with prospecting operations is to have all the appropriate information and planning in place before the incident occurs. This is important to ensure the correct procedures and reporting structures are followed, and the appropriate remediation steps are followed. The approved EMP shall be available on site. This EMP contains all the management plans necessary to prevent or mitigate pollution or degradation of the environment. An Incident Register and a Complaints Register should be kept on site and completed in the case of any environmentally detrimental incident happening or complaints are received. These registers should be kept and included in the internal and external reports.

Appendix F1

Storm water management plan

Recommendations for Storm Water Management

for

EAGLES PRIDE HATCHERY
VAALBOSCH BREEDERS

Prepared by:

Bucandi Environmental Solutions

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

Project Manager: Dr Hélen Prinsloo (D.Tech.)
(*Pr.Sci.Nat.*) Reg. No. 400108/11 (SACNASP)

June 2024

1. DETAILED DESCRIPTION OF PROPOSED PROJECT

Eagles Pride Hatchery is proposing the construction of 5 breeder houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. The proposed project triggers a Basic Assessment for certain listed activities under Listing 1& 3 of NEMA (National Environmental Management Act, 1998) as explained below. Approved Engineer and Design drawings have not been finalised for the proposed development. These drawings will stipulate the location and of drainage ditches and any other storm water related infrastructure. This report is therefore limited to making recommendation regarding the management and mitigation measures to be incorporated in stormwater control in order to prevent pollution of surface water.

2. OBJECTIVES OF STORM WATER CONTROL

a) To reduce the potential impact on surface water run-off.
b) To ensure that the surface water run-off quality does not impact on the area and receiving environment.
c) To reduce erosion and contamination of surface water by effective storm water control.

3. STORM WATER CONTROL MANAGEMENT MEASURES

a) Before any construction takes place the proposed area for the development should be pegged out. All construction activities should take place within these areas in order to reduce the footprint of the proposed activity and therefore the potential impact on surface water run-off.
b) Storm water related infrastructure should be inspected on a regular basis in order to ensure that the structures are functional and do not cause soil erosion.
c) Effective storm water measures should be implemented to minimise soil erosion, such as:

- The storm water drainage system must be maintained (free-draining) and not contaminated by other waste sources. Storm water must be kept separate from the sewage or any other effluent system.
- Storm water must be diverted away from bird holding areas, chemical storage areas and wastewater treatment areas.
- Erosion prevention structures or vegetation should be placed at concentration points to reduce water velocity within the drainage system.

Appendix F2

Odour management plan

Recommendations for Odour Management

for

EAGLES PRIDE HATCHERY
VAALBOSCH BREEDERS

Prepared by:

Bucandi Environmental Solutions

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

Project Manager: Dr Hélen Prinsloo (D.Tech.)
(*Pr.Sci.Nat.*) Reg. No. 400108/11 (SACNASP)

June 2024

1. DETAILED DESCRIPTION OF PROPOSED PROJECT

Eagles Pride Hatchery is proposing the construction of 30 breeder houses, 6 sites with 5 houses on each site with the capacity to hold up to 7 200 birds per house on Portion 10, 18, 21, 23, 32 & Remaining Extent of Portion 28 of Farm Wagenboomskop 415 JP, situated in Swartruggens District within Kgetlengrivier Local Municipality area. The proposed project triggers a Basic Assessment for certain listed activities under Listing 1 of NEMA (National Environmental Management Act, 1998). Bucandi Environmental Solutions (Bucandi) was requested by Eagles Pride Hatchery to conduct a Basic Assessment as part of the application for environmental authorisation.

2. OBJECTIVES OF ODOUR CONTROL.

a) To prevent or minimize ambient air pollution as a result of odour emissions.

3. ODOUR CONTROL MANAGEMENT MEASURES

a) The houses are closed and environmentally controlled to reduce the amount of ammonia, dust and unpleasant odour released into the environment.

b) Houses are washed after each cycle after the removal of manure and carcasses. The houses are washed using a high pressure (16bar) sprayer, minimising the amount of water used. Equipment is not washed with water, but rather using a foam sanitizer (F29) which is applied as dry foam and allowed to evaporate.

c) Any mortalities are to be removed on a daily basis and collected by a contractor.

d) The manure will be removed on a regular basis and collected by a contractor.

4. IMPACT SPECIFIC MITIGATION MEASURES RELATED TO ODOUR CONTROL

Specific impact or risk	Mitigation measures
Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	Proper ablution facilities must be provided i.e. chemical toilets at appropriate locations on site if necessary or existing facilities must be used. Workers must be made aware of the risk of soil water contamination. Domestic waste must be disposed of in appropriate containers, and removed to the nearest municipal waste-disposal site as part of existing waste management system.
Pollution of soil, surface water and groundwater due to ineffective manure disposal.	Manure will be removed at the end of each cycle and collected immediately by a contractor. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.

Pollution of soil, surface water and groundwater due to ineffective disposal carcasses.	The carcasses are removed on a daily basis and collected by a contractor.

Appendix F3

Waste management plan

Waste Management Plan

for

EAGLES PRIDE HATCHERY
VAALBOSCH BREEDERS

Prepared by:

Bucandi Environmental Solutions

Project Manager: Dr Hélen Prinsloo (D.Tech.)
(*Pr.Sci.Nat.*) Reg. No. 400108/11 (SACNASP)

June 2024

1. DETAILED DESCRIPTION OF PROPOSED PROJECT

Eagles Pride Hatchery is proposing the construction of 5 breeder houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.

The proposed project triggers a Basic Assessment for certain listed activities under Listing 1& 3 of NEMA (National Environmental Management Act, 1998) as explained below.Objectives of waste management

Construction phase

a) To prevent or minimise the contamination of the natural environment by pollutants from waste generated onsite.
b) To prevent or minimise the contamination of the natural environment by pollutants from general and hazardous waste generated onsite.

Operational phase

a) To prevent or minimise the impact of pathogens associated with condemned material.
b) To prevent or minimise the contamination of the natural environment by wastewater generated throughout the process.
c) To prevent or minimise the contamination of the natural environment by pollutants from hazardous production waste generated onsite.
d) To prevent or minimise the contamination of the natural environment by pollutants from waste generated onsite.

2. MEASURES TO BE IMPLEMENTED FOR WASTE CONTROL

Construction phase

a) Waste will be recycled as far as possible.
b) Non-recyclable waste will be sorted into different types and disposed of at a suitably licensed waste disposal facility.
c) Waste considered unsuitable for municipal waste disposal sites will be disposed of at a suitably licensed hazardous waste disposal facility (e.g. WasteTech).

Operational phase

a) Waste will be recycled as far as possible.
b) Non-recyclable waste will be sorted into different types and disposed of at a suitably licensed waste disposal facility.
c) Waste considered unsuitable for municipal waste disposal sites will be disposed of at a suitably licensed hazardous waste disposal facility (e.g. WasteTech).
d) Manure will be removed on a regular basis and collected by a contractor.
e) Carcasses will be removed daily and collected by a contractor.

3. IMPACT SPECIFIC MITIGATION MEASURES RELATED TO WASTE MANAGEMENT

Specific impact or risk	Mitigation measures
Contamination of soils, surface water and groundwater due to	Machinery must be properly maintained at all times. Servicing of machinery must take place only in specific demarcated and protected areas.

leakages from vehicles entering and exiting the site.	Measures must be taken for the proper disposal of oils, grease, oil filters, rags, etc.
Pollution of soil, surface water and groundwater due to ineffective management of sewage and general waste management.	Proper ablution facilities must be provided i.e. chemical toilets at appropriate locations on site if necessary or existing facilities must be used. Workers must be made aware of the risk of soil water contamination. Domestic waste must be disposed of in appropriate containers, and removed to the nearest municipal waste-disposal site as part of existing waste management system.
Pollution of soil, surface water and groundwater due to ineffective manure disposal.	Manure will be removed at the end of each cycle and collected by a contractor. After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.
Pollution of soil, surface water and groundwater due to ineffective disposal carcasses.	The carcasses are removed on a daily basis and collected by a contractor.

Appendix F4

Bio-security plan

Bio-security recommendations

for

EAGLES PRIDE HATCHERY
VAALBOSCH BREEDERS

Prepared by:

Bucandi Environmental Solutions

BUCANDI
ENVIRONMENTAL SOLUTIONS
Environmental concerns? Consider it solved!

Project Manager: Dr Hélen Prinsloo (D.Tech.)
(*Pr.Sci.Nat.*) Reg. No. 400108/11 (SACNASP)

June 2024

1. DETAILED DESCRIPTION OF PROPOSED PROJECT

Eagles Pride Hatchery is proposing the construction of 5 breeder houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area. The proposed project triggers a Basic Assessment for certain listed activities under Listing 1& 3 of NEMA (National Environmental Management Act, 1998) as explained below.

2. OBJECTIVES OF BIO-SECURITY CONTROL

a) To prevent diseases not occurring on the farm from entering the farm and those occurring on the farm from spreading to other farms, e.g. diseases such as avian influenza and Newcastle disease, etc.
b) To reduce the risk of zoonotic diseases such as salmonella becoming established and to limit the occurrence and spread of diseases.
c) To help protect neighbours, public health and the rural areas.
d) To improve overall flock health, cut costs of disease treatment and reduce losses, which could improve the profitability of the farm.

3. MEASURES TO BE IMPLEMENTED FOR BIO-SECURITY CONTROL

Biosecurity measure will be implemented according to the guidelines given by the South African Poultry Association. These included, but are not limited to the following:

a. Cleaning and disinfecting

- Visitors, and employees must wash hands before entering and leaving the farm. Acceptable methods include waterless gels, disinfecting hand wipes, or soap and water.
- Clean work clothes should be worn to prevent the spread of disease. Proper clothing requirements are coveralls, hairnet, gloves, and plastic boots. The disposable clothing should be disposed of on the farm before the individual leaves the premises.
- Employees and visitors will be required to shower upon entering the farm and change into the clothing provided as described above.
- Employees and visitors will be required to shower upon exiting the farm and change back into their own clothing. Work clothes will be left on the farm and cleaned daily.
- Workers living on the farm premises will have designated clothing to be worn while on the poultry farm. If a person leaves the premises they should change clothes, including footwear, before leaving.
- Hands will be disinfected before leaving the dressing area and before entering each house.
- Boots will be dipped in the footbaths provide at all the entrances, exits, buildings and poultry houses.
- All equipment used inside the poultry houses will be cleaned and disinfected prior to entering and after exiting the houses. This includes equipment used for clean out and new flock set up.
- Equipment will not be shared between farms, unless thoroughly cleaned and disinfected.

b. Isolation

- Vehicles will be parked in a designated parking area away from poultry houses.
- The perimeter fence will be kept in good repair.
- No open bodies of water will be used as a source for poultry drinking water or for cooling.

c. Vehicle and foot traffic control

- Nobody will be allowed to enter the facility unless biosecurity rules are followed.
- All visitors will sign a visitor log book and indicate recent bird exposure.

- Only visitors with a specific purpose for being on the premises will be allowed to enter the facility.
- A biosecurity sign stating “no entrance” will be posted on all entrances to poultry housing areas.
- Tires of all the vehicles will be disinfected upon entering and exiting the farm.
- Footbaths with disinfectant will be placed at the entrance of each house and should be used before entering and after leaving the poultry house. Each footbath should be a minimum of 3 cm deep with the proper dilution of disinfectant.
- Hands will be disinfected before entering and after leaving the poultry house.
- Doors to each house will be kept locked to decrease unauthorized entry.

d. Pest control

- Rodents will be controlled with bait stations.
- Doors to poultry houses will always be locked.
- Wild birds will not be allowed to nest on or around the poultry houses and bird deterrents will be used to discourage wild birds from perching near the houses.
- Areas around houses will be kept clean from litter and grass will be short and well-maintained.
- An area of at least 30 m around the houses and building will be landscaped and mowed.
- Storm water ditches will be well maintained and cleared from any obstructions daily to allow for water to leave the area and not puddle.
- Any activity of pets, wild animals, wild birds and other farm animals around the houses will be prevented as far as possible.
- Any feed spills will be cleaned up promptly to minimize a food source for wild animals and birds.

e. Disposal of mortalities and litter

- Mortalities will be removed from the poultry houses on a daily basis and stored in a freezer. It will be collected by a contractor on a daily basis.
- Litter is removed from the houses at the end of each cycle and immediately removed from the facility.
- After all the manure has been removed, the houses are treated with a foam disinfectant to kill any remaining bacteria. After that process the floors are sprayed with water using pressure washers. The resulting wash water does not present a contamination risk as the houses are sterilised before being sprayed with water.

f. General

- Employees are not allowed to keep birds of any type at their place of residence.
- All employees have to restrict their contact with birds and people who are associated with birds.
- Employees and visitors are not allowed on site for 72 hours after visiting other poultry operations.
- Sick birds will be immediately reported to the site manager.

g. Warning signs of some infectious diseases.

Signs of disease to look for are:

- Weight loss or reduced weight gain in comparison to the rest of the flock.
- Sneezing, coughing, gasping for air, nasal discharge.
- Greenish watery diarrhoea.
- Listlessness, muscular tremors, drooping wings.
- Twisting of head or neck.

- Complete paralysis.
    - Swelling around eyes and neck.
    - Lameness and tumours.
    - Sudden deaths or an unusual number of birds dying.

Disease breakouts should be reported immediately to the State Veterinarian's Office on 012 319 7488 and instructions should be strictly followed.

Appendix F4

Contractors Agreements.

Appendix F6

Screening Tool Report

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number: Eagles Valley Poultry

Project name: Vaalbosch Vlakte construction of 5 poultry houses.

Project title: Vaalbosch Vlakte construction of 5 poultry houses on Portion 3 of the farm Vaalbosch Vlakte 554 IN situated in Dr Ruth Segomotsi Mompati District Municipality within Naledi Local Municipality area.

Date screening report generated: 03/06/2024 11:27:59

Applicant: Gerald Gous

Compiler: Bucandi Environmental Solutions

Compiler signature: .....

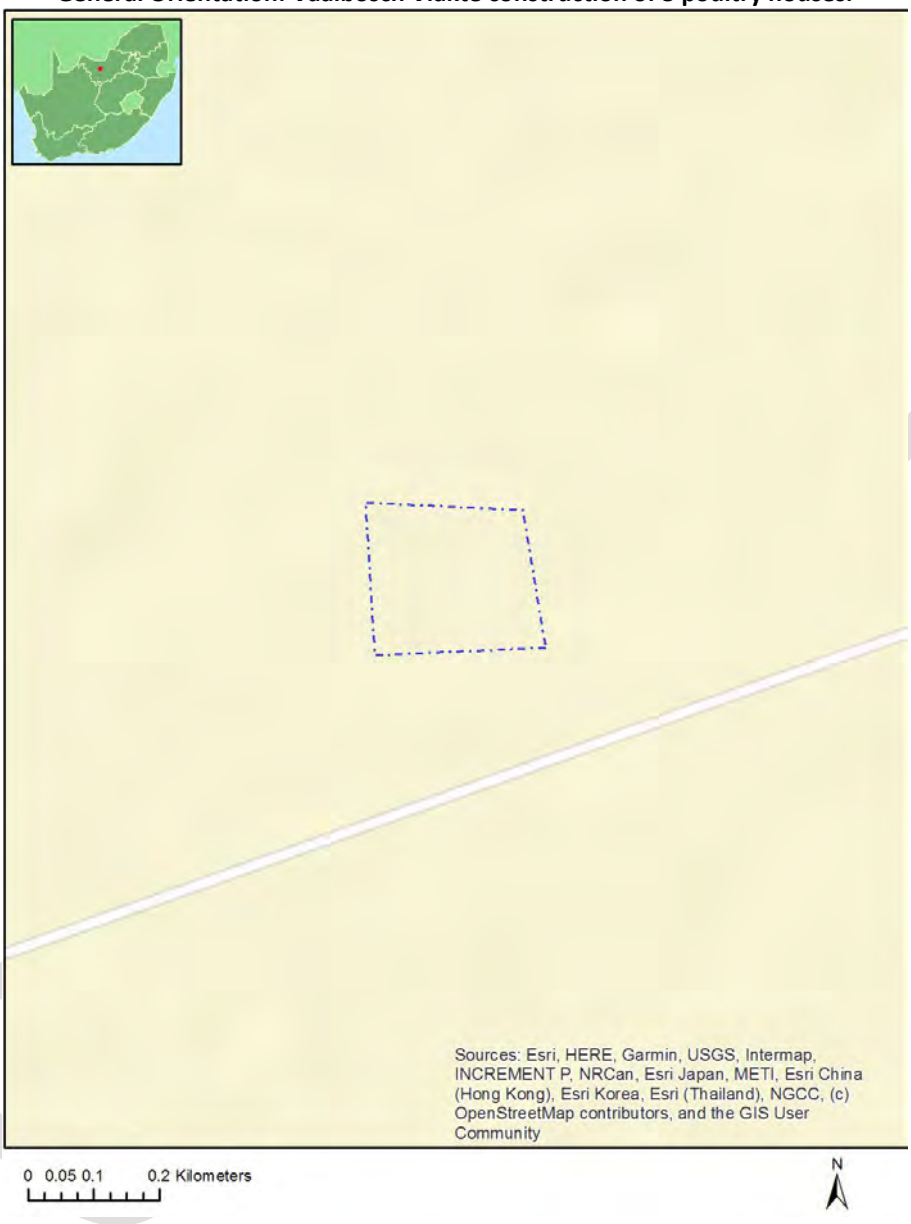
Application Category: Agriculture_Forestry_Fisheries|Animal Production

Table of Contents

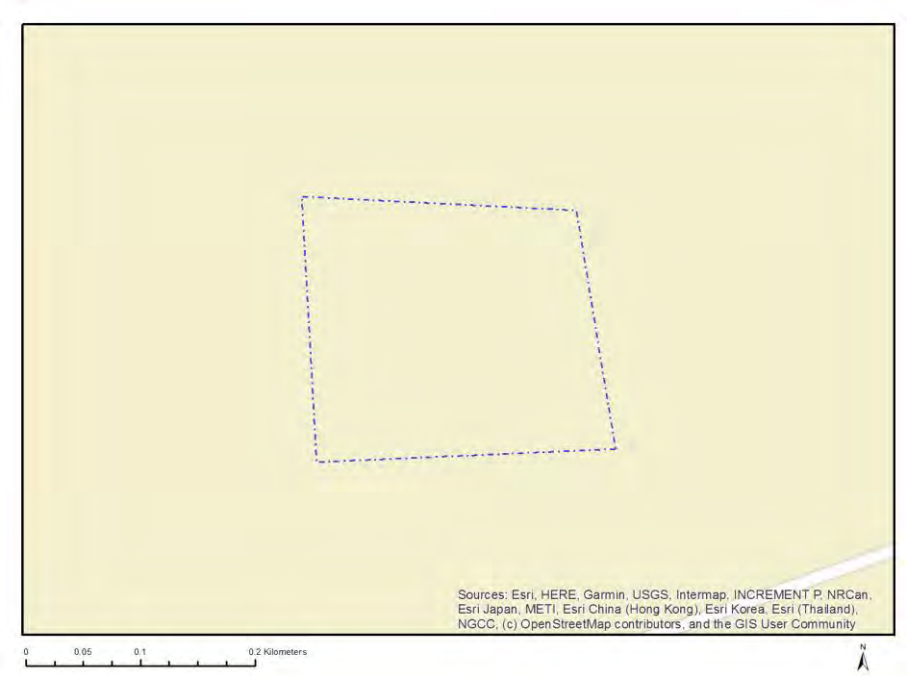
Proposed Project Location

Orientation map 1: General location

General Orientation: Vaalbosch Vlakte construction of 5 poultry houses.



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	VAALBOSCH VLAKTE	554	0	26°33'56.3S	24°59'48.84E	Farm
2	VAALBOSCH VLAKTE	554	3	26°32'3.77S	25°0'24.85E	Farm Portion

Development footprint[1] vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/1/500	Solar PV	Approved	28

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Agriculture_Forestry_Fisheries|Animal Production**.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-Northern corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

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

Specialist assessments identified

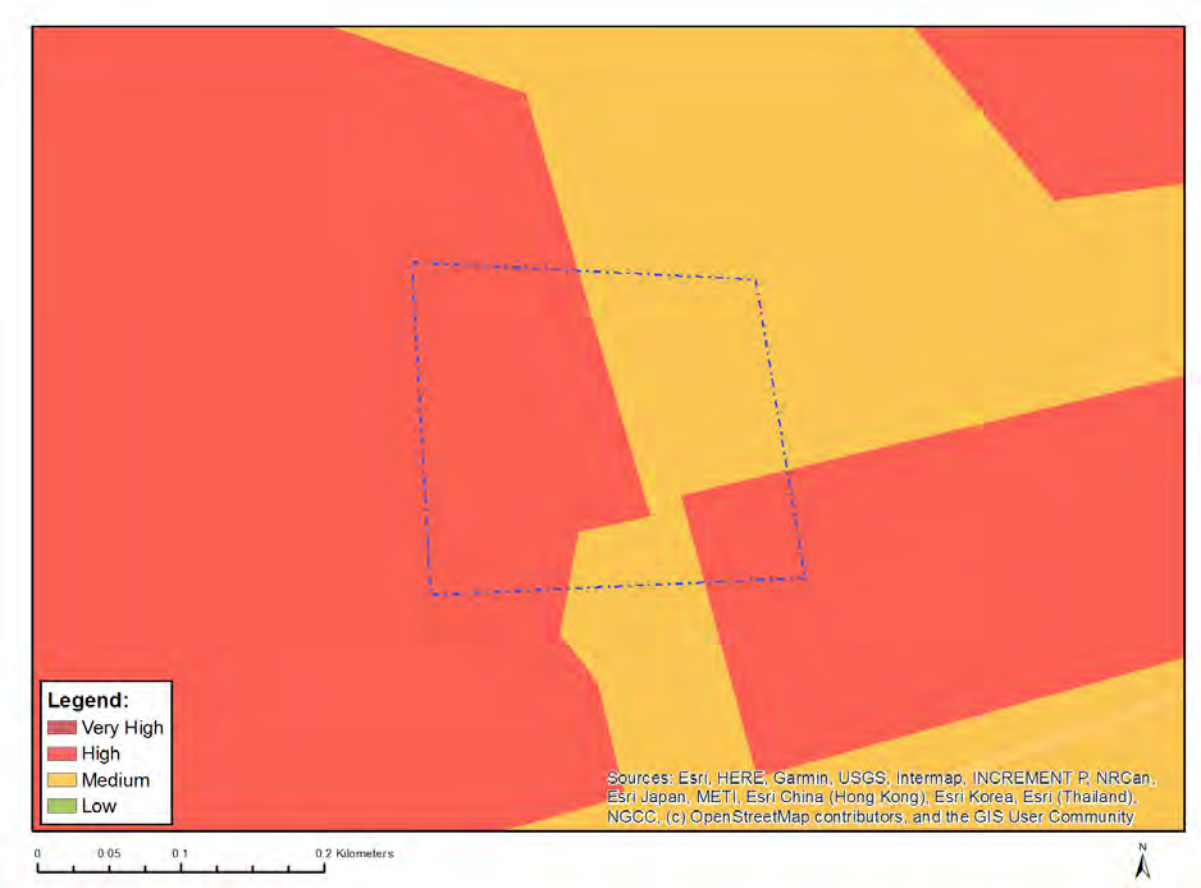
Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

No	Specialist assessment	Assessment Protocol
1	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Hydrology Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
7	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
8	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
9	Ambient Air Quality Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
10	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
11	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY

Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Subject to confirmation

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

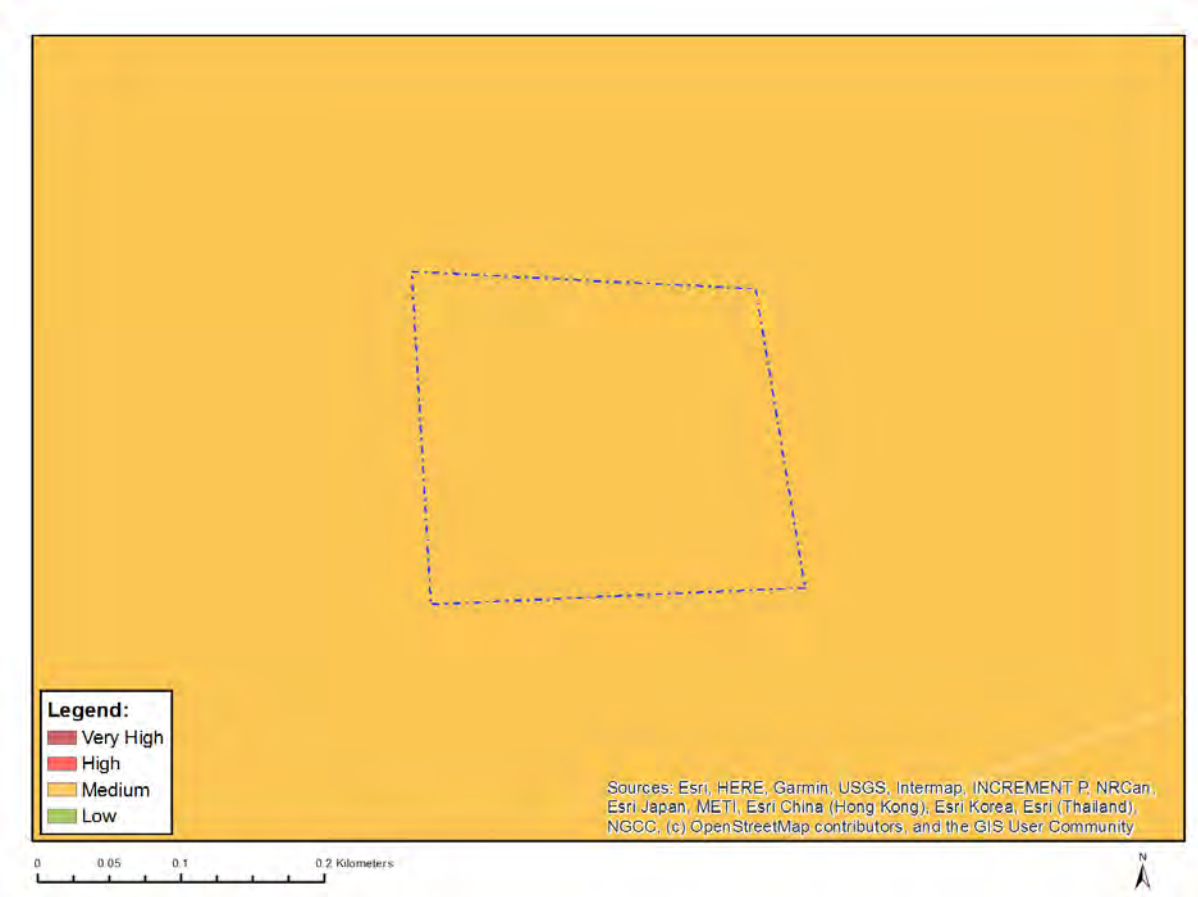
MAP OF RELATIVE DEFENCE THEME SENSITIVITY

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

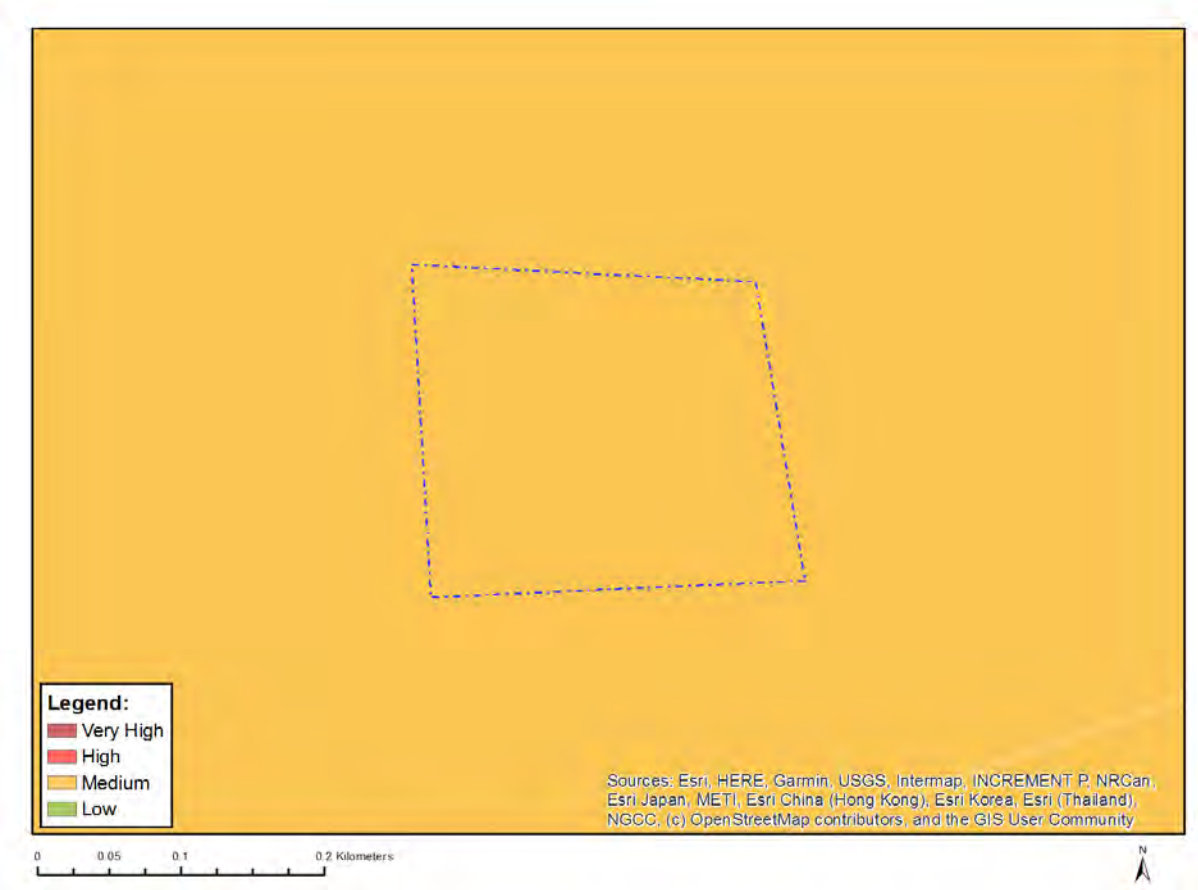


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity
Medium	Features with a Medium paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



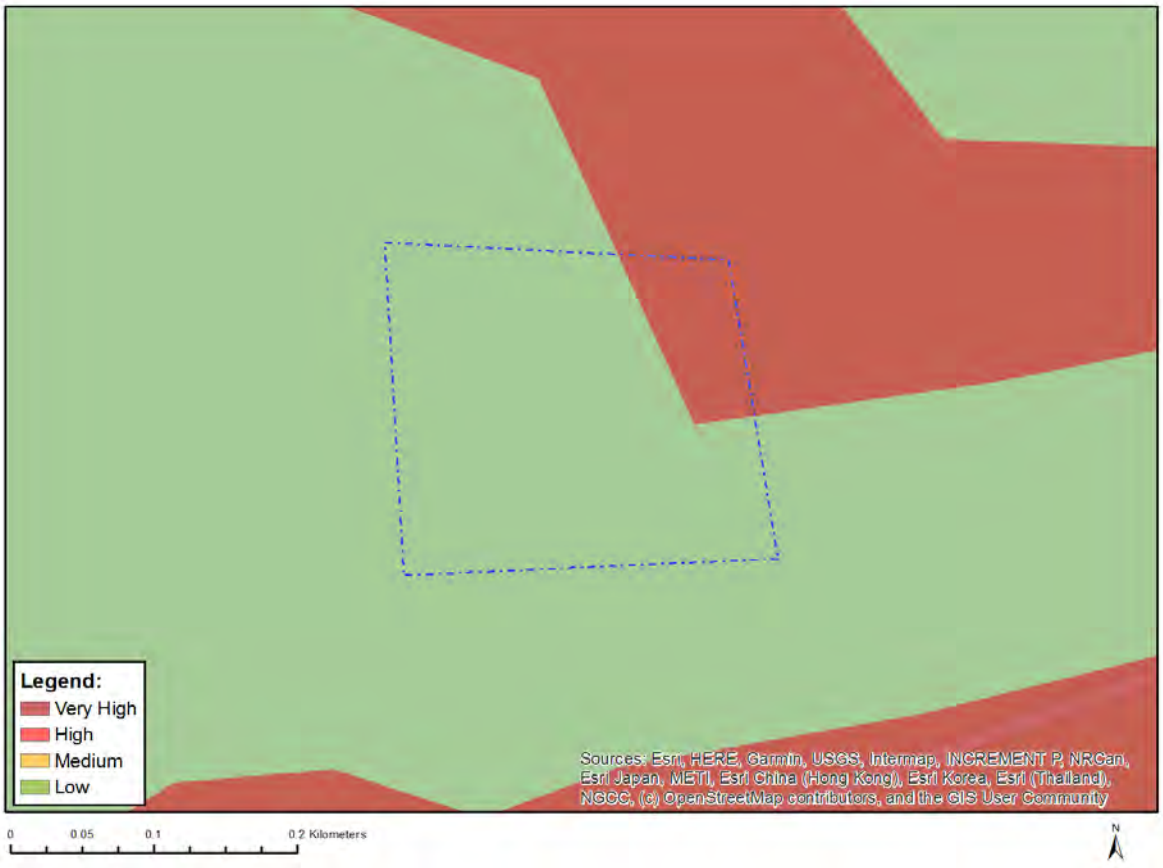
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Sensitive species 1276

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	CBA 2

Appendix F7

Specialist studies

ECOLOGICAL FAUNA AND FLORA HABITAT SURVEY

Proposed development, approximately 14 km east-north-east of Stella, North West Province

The widespread indigenous dwarf shrub *Felicia muricata* at the site.

Photo: Reinier F. Terblanche.

JUNE 2024

Compiled by:

Reinier F Terblanche

(M.Sc Ecology, *Cum Laude*; Pr.Sci.Nat, Reg. No. 400244/05)

ANTHENE ECOLOGICAL CC

TABLE OF CONTENTS

I) SPECIALIST EXPERTISE

SYNOPTIC CV: REINIER. F. TERBLANCHE

Reinier is an ecologist and in particular a habitat specialist with an exceptional combination of botanical and zoological expertise which he keeps fostering, updating and improving. He is busy with a PhD for which he registered at the Department of Conservation Ecology at the University of Stellenbosch. The PhD research focuses on the landscape ecology of selected terrestrial and wetland butterflies in South Africa. Reinier's experience includes being a lecturer in ecology and zoology at the North West University, Potchefstroom Campus (1998-2008). Reinier collaborates with a number of institutes, organizations and universities on animal, plant and habitat research.

Qualifications:

Qualification	Main subject matter	University
M.Sc *Cum Laude*, **1998:** Botany: Ecology	Quantitative study of invertebrate assemblages and plant assemblages of rangelands in grasslands.	North-West University, Potchefstroom
B.Sc Honns *Cum Laude*, **1992** Botany: Taxonomy	Distinctions in all subjects: Plant Anatomy, Taxonomy, Modern Systematics, System Modelling, Plant Ecology, Taxonomy Project, Statistics Attendance Course.	North-West University, Potchefstroom
B.Sc Botany, Zoology	Main subjects: Botany, Zoology.	North-West University, Potchefstroom
Higher Education Diploma, 1990	Numerous subjects aimed at holistic training of teachers.	North-West University, Potchefstroom

In research Reinier specializes in conservation biology, threatened butterfly species, vegetation dynamics and ant assemblages at terrestrial and wetland butterfly habitats as well as enhancing quantitative studies on butterflies of Africa. He has published extensively in the fields of taxonomy, biogeography and ecology in popular journals, peer-reviewed scientific journals and as co-author and co-editor of books (see 10 examples beneath).

Reinier practices as an ecological consultant and has been registered as a Professional Natural Scientist by SACNASP since 2005: Reg. No. 400244/05. His experience in consultation includes: Flora and fauna habitat surveys, Threatened species assessments, Riparian vegetation index surveys, Compilation of Ecological Management Plans, Biodiversity Action Plans and Status quo of biodiversity for Environmental Management Frameworks, Wetland Assessments, Management of Rare Wetland Species.

Recent activities/ awards: Best Poster Award at Oppenheimer De Beers Group Research Conference 2015, Johannesburg. One of the co-authors of Guidelines for Standardised Global Butterfly Monitoring, 2015, Group on Earth Observations Biodiversity Observation Network, Leipzig, Germany (UNEP-WCMC), GEO BON Technical Series 1. Awarded the prestigious Torben Larsen Memorial Tankard in October 2017; one is awarded annually to the person responsible for the most outstanding written account on Afrotropical Lepidoptera. Lectured as Conservationist-in-Residence in the Wildlife Conservation Programme of the African Leadership University, Kigali, Rwanda, 9-23 February 2019. Reinier won a photographic competition which resulted his photograph of the Critically Endangered *Erikssonia edgei* (Waterberg Copper) being on the front cover of the Synthesis Report of the National Biodiversity Assessment (2018) prepared by SANBI.

EXPERIENCE

Lecturer: Zoology 1998-2008	**Main subject matter and level**	**Organization**
Lectured subjects	- 3rd year level Ecology, Plantparasitology - 2nd year level Ethology - *Master's degree* Evolutionary Ethology, Systematics in Practice, Morphology and Taxonomy of Insect Pests, Wetlands.	North-West University, Potchefstroom and University of South Africa
Co-promoter	PhD: Edge, D.A. 2005. Ecological factors that influence the survival of the Brenton Blue butterfly	North-West University, Potchefstroom
Study leader/ assistant study leader	Six MSc students, One BSc Honn student: Various quantitative biodiversity studies (terrestrial and aquatic).	North-West University, Potchefstroom
Teacher 1994-1998	Biology and Science, Secondary School	Afrikaans Hoër Seunskool, Pretoria
Owned Anthene Ecological CC 2008 – present	- Flora and Fauna habitat surveys - Highly specialized ecological surveys - Riparian vegetation index surveys - Ecological Management Plans - Biodiversity Action Plans - Biodiversity section of Environmental Management Frameworks - Wetland assessments	Private Closed Corporation that has been subcontracted by many companies
Herbarium assistant 1988-1991	- Part-time assistant at the A.P. Goossens herbarium, Botany Department, North-West University, 1988, 1989, 1990 and 1991 (as a student).	North-West University, Potchefstroom

10 EXAMPLES OF PUBLICATIONS OF WHICH R.F. TERBLANCHE IS AUTHOR/ CO-AUTHOR
(Three books, two chapters in books and five articles are listed here as examples)

1. HENNING, G.A., **TERBLANCHE, R.F.** & BALL, J.B. (eds) **2009.** *South African Red Data Book: butterflies*. *SANBI Biodiversity Series* 13. South African National Biodiversity Institute, Pretoria. 158p. ISBN 978-1-919976-51-8
2. MECENERO, S., BALL, J.B., EDGE, D.A., HAMER, M.L., HENNING, G.A., KRÜGER, M, PRINGLE, E.L., **TERBLANCHE, R.F.** & WILLIAMS, M.C. (eds). 2013. *Conservation Assessment of Butterflies of South Africa, Lesotho and Swaziland: Red List and atlas.* Saftronics (Pty) Ltd., Johannesburg & Animal Demography Unit, Cape Town.
3. VAN SWAAY, C., REGAN, E., LING, M., BOZHINOVSKA, E., FERNANDEZ, M., MARINI-FILHO, O.J., HUERTAS, B., PHON, C.-K., KŐRÖSI, A., MEERMAN, J., PE'ER, G., UEHARA-PRADO, M., SÁFIÁN, S., SAM, L., SHUEY, J., TARON, D., **TERBLANCHE, R.F**. & UNDERHILL, L. 2015. Guidelines for Standardised Global Butterfly Monitoring. Group on Earth Observations Biodiversity Observation Network, Leipzig, Germany. GEO BON Technical Series 1.
4. **TERBLANCHE, R.F.** & HENNING, G.A. **2009.** *A framework for conservation management of South African butterflies in practice.* In: Henning, G.A., Terblanche, R.F. & Ball, J.B. (eds). *South African Red Data Book: Butterflies. SANBI Biodiversity Series 13.* South African National Biodiversity Institute, Pretoria. p. 68 – 71.
5. EDGE, D.A., **TERBLANCHE, R.F**., HENNING, G.A., MECENERO, S. & NAVARRO, R.A. 2013. Butterfly conservation in southern Africa: Analysis of the Red List and threats. In: Mecenero, S., Ball, J.B., Edge, D.A., Hamer, M.L., Henning, G.A., Krüger, M., Pringle, E.L., Terblanche, R.F. & Williams, M.C. (eds). *Conservation Assessment of Butterflies of South Africa, Lesotho and Swaziland: Red List and Atlas.* pp. 13-33. Saftronics (Pty) Ltd., Johannesburg & Animal Demography Unit, Cape Town.
6. **TERBLANCHE, R.F.**, SMITH, G.F. & THEUNISSEN, J.D. **1993.** Did Scott typify names in *Haworthia* (Asphodelaceae: Alooideae)? *Taxon* **42**(1): 91–95. (International Journal of Plant Taxonomy).
7. **TERBLANCHE, R.F.**, MORGENTHAL, T.L. & CILLIERS, S.S. **2003.** The vegetation of three localities of the threatened butterfly species *Chrysoritis aureus* (Lepidoptera: Lycaenidae). *Koedoe* **46**(1): 73-90.
8. EDGE, D.A., CILLIERS, S.S. & **TERBLANCHE, R.F. 2008**. Vegetation associated with the occurrence of the Brenton blue butterfly. *South African Journal of Science* **104**: 505 - 510.
9. GARDINER, A.J. & **TERBLANCHE, R.F. 2010.** Taxonomy, biology, biogeography, evolution and conservation of the genus *Erikssonia* Trimen (Lepidoptera: Lycaenidae) *African Entomology* **18**(1): 171-191.
10. **TERBLANCHE, R.F.** 2016. *Acraea trimeni* Aurivillius, [1899], *Acraea stenobea* Wallengren, 1860 and *Acraea neobule* Doubleday, [1847] on host-plant *Adenia repanda* (Burch.) Engl. at Tswalu Kalahari Reserve, South Africa. *Metamorphosis* 27: 92-102.

* A detailed CV with more complete publication list is available.

II) SPECIALIST DECLARATION

I, Reinier F. Terblanche, 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.

Name of Specialist: Reinier F. Terblanche

Signature of the specialist
Date: 18 June 2024

1 INTRODUCTION

An ecological habitat survey is required for a proposed development approximately 14 km eas-north-east of Stella, North West Province South Africa (elsewhere referred to as the site). The survey focused on the possibility that threatened fauna or flora known to occur in North West Province are likely to occur within the proposed development. Species of known high conservation priority that do not qualify for threatened status also received attention in the survey.

1.1 Objectives of the habitat study

- Surveys to investigate key elements of habitats on the site, relevant to the conservation of fauna and flora.
- Recording of any sightings and/or evidence of existing fauna and flora.
- The selective and careful collecting of voucher specimens of invertebrates where deemed necessary.
- An evaluation of the conservation importance and significance of the site with special emphasis on the current status of threatened species.
- Recording of possible host plants or foodplants of fauna such as butterflies.
- Literature investigation of possible species that might occur on site.
- Integration of the literature investigation and field observations to identify potential ecological impacts that could occur as a result of the development.
- Integration of literature investigation and field observations to make recommendations to reduce or minimise impacts, should the development be approved.

2 STUDY AREA

The study area is approximately 14 km east-north-east of Stella, North West Province South Africa (elsewhere referred to as the site). Savanna at the site represented by the Stella Bushveld (SVk 2) vegetation type (Mucina & Rutherford, 2006). An outline of the Stella Bushveld vegetation type follows.

SVk 2 Stella Bushveld

Distribution: Stella Bushveld is located in the North-West Province of South Africa in an area north of Vryburg around Stella westwards to Louwna to about 20 km west of Delareyville. Altitude 1250 – 1400 m (Mucina & Rutherford, 2006).

Vegetation and landscape features: Plains to sometimes slightly undulating plains with open tree and shrub layers and trees *Acacia erioloba* and *Acacia tortilis* and shrubs *Acacia hebeclada*, *Dichrostachys cinerea*, *Grewia flava* and *Tarchonanthus camphoratus* (Mucina & Rutherford, 2006).

Geology and soils: Andesitic lavas of the Allanridge Formation of the Ventersdorp Supergroup, sometimes covered with silcrete or calcrete of the Kalahari Group, on flat hilly plains. Sandy soils 0.1-0.9 m deep, various soil forms. Land types Bc and Ae, with a little Ah (Mucina & Rutherford, 2006).

Climate: Summer rainfall with very dry winters, mean annual precipitation (MAP) about 400 – 480 mm. Frost frequent in winter (Mucina & Rutherford, 2006).

Important taxa. Tall tree: *Acacia erioloba*. Small trees: *Acacia tortilis* subsp. *heteracantha*, *Acacia caffra*, *Acacia karroo*, *Rhus lancea*. Tall shrubs: *Dichrostachys cinerea*, *Grewia flava*, *Tarchonanthus camphoratus*, *Asparagus laricinus*, *Diospyros lycioides* subsp. *lycioides*, *Diospyros pallens*, *Ehretia rigida* subsp. *rigida*. Low shrubs: *Acacia hebeclada* subsp. *hebeclada*, *Chrysocoma ciliata*, *Helichrysum zeyheri*, *Pentzia viridis*, *Solanum supinum*. Succulent shrub: *Hertia pallens*. Woody climber: *Asparagus africanus*. Herbaceous climber: *Rhyncosia confusa*. Graminoids: *Cenchrus ciliarus*, *Cymbopogon pospischilii*, *Eragrostis rigidior*, *Panicum coloratum*, *Themeda triandra*, *Aristida congesta*, *Cynodon dactylon*,

Eragrostis lehmanniana, *Eragrostis obtusa*, *Eragrostis superba*, *Pogonarthria squarrosa*, *Sporobolus fimbriatus*, *Tragus racemosus*. Herbs: *Barleria macrostegia*, *Dicoma capensis*, *Hibiscus pusillus*, *Indigofera alternans*, *Indigofera daleoides*, *Lippia scaberrima*, *Osteospermum muricatum*, *Tripteris aghillana*. Geophytic herb: *Babiana hypogea* (Mucina & Rutherford, 2006).

Note: All the plant species listed above for the vegetation type do not occur at the site.

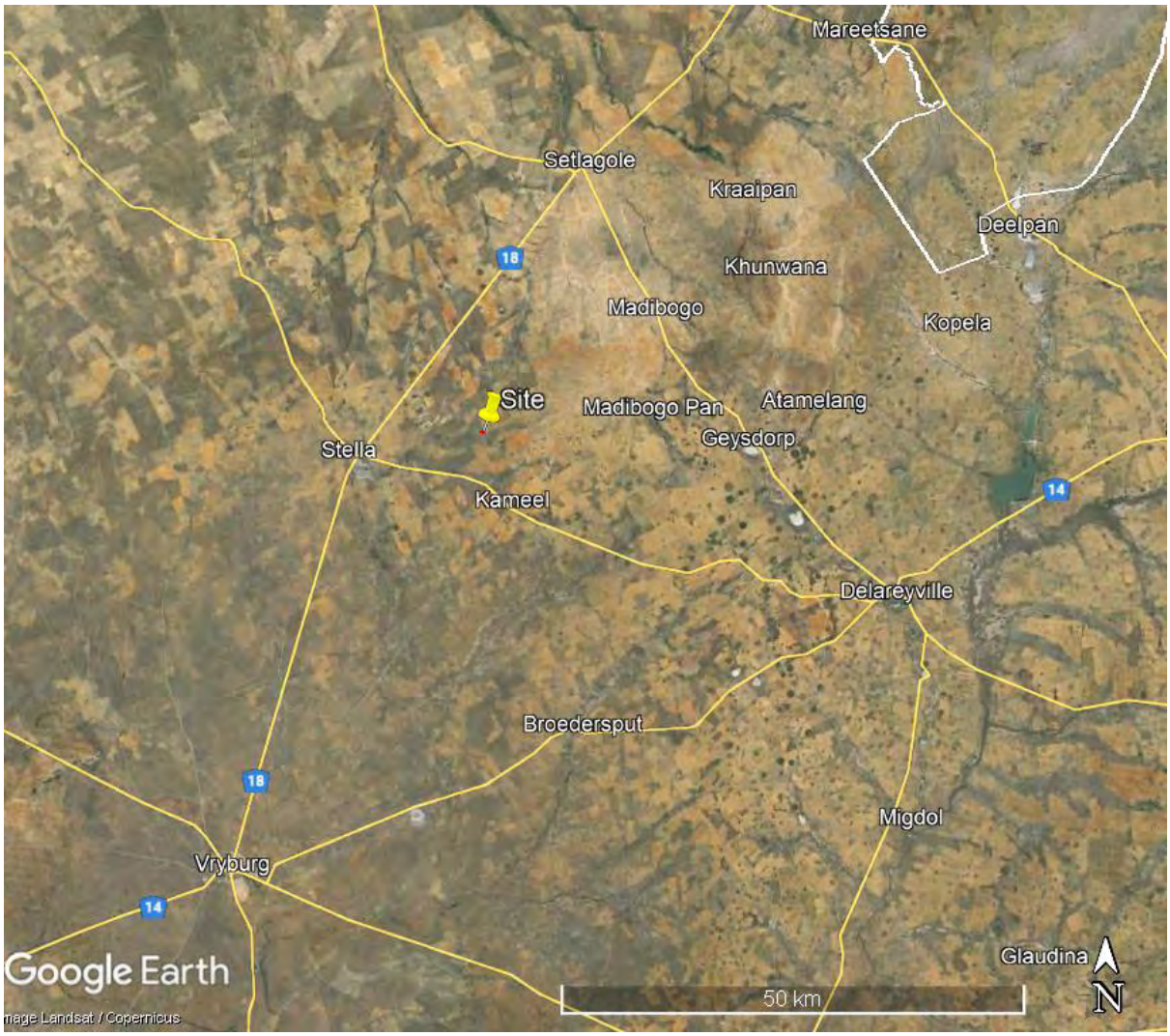


Figure 1 Map with an indication of the location of the site (yellow marker).

Map information were analysed and depicted on Google images with the aid of Google Earth Pro (US Dept. of State Geographer, MapLink/ Tele Atlas, Google, 2024).

3 METHODS

A desktop study comprised not only an initial phase, but also it was used throughout the study to accommodate and integrate all the data that become available during the field observations.

R.F. Terblanche visited the site during May 2024 to note key elements of habitats on the site, relevant to the conservation of fauna and flora. The main purpose of the site visits was ultimately to serve as a habitat survey that concentrated on the possible presence or not of threatened species and other species of high conservation priority.

The following sections highlight the materials and methods applicable to different aspects or signs that were observed.

3.1 Habitat characteristics and vegetation

The habitat was investigated by noting habitat structure (rockiness, slope, plant structure/ physiognymy) as well as floristic composition. Voucher specimens of plant species were only taken where the taxonomy was in doubt and where the plant specimens were of significant relevance for invertebrate conservation. In this case no plant specimens were needed to be collected as voucher specimens or to be send to a herbarium for identification. A wealth of guides and detailed works of plant identifications, ecology and conservation is fortunately available and very useful. Field guides, biogeographic works, species lists, diagnostic outlines, conservation statuses and detail on specific plant groups were sourced from Boon (2010), Court (2010), Germishuizen (2003), Germishuizen, Meyer & Steenkamp (2006), Goldblatt (1986), Goldblatt & Manning (1998), Jacobsen (1983), Manning (2003), Manning (2009), McMurtry, Grobler, Grobler & Burns (2008), Pooley (1998), Retief & Herman (1997), Smit (2008), Van Ginkel, Glen, Gordon-Gray, Cilliers, Muasya & Van Deventer (2011), Van Jaarsveld (2006), Van Oudtshoorn (1999), Van Wyk (2000), Van Wyk & Smith (2001), Van Wyk & Smith (2003), Van Wyk & Malan (1998) and Van Wyk & Van Wyk (1997). Lists of species, species names and the conservation status of species were mainly sourced from Raimondo, von Staden, Victor, Helme, Turner, Kamundi & Manyama (2009) and updated versions of red lists and species from the Threatened Species Programme of SANBI and the Red List of South African Plants (sanbi.org.za).

3.2 Mammals

Mammals were noted as sight records by day. For the identification of species and observation of diagnostic characteristics Smithers (1986), Skinner & Chimimba (2005), Cillié, Oberprieler and Joubert (2004) and Apps (2000) are consulted. Sites have been walked, covering as many habitats as possible. Signs of the presence of mammal species, such as calls of animals, animal tracks (spoor), burrows, runways, nests and faeces were recorded. Walker (1996), Stuart & Stuart (2000) and Liebenberg (1990) were consulted for additional information and for the identification of spoor and signs. Trapping was not done since it proved not necessary in the case of this study. Habitat characteristics were also surveyed to note potential occurrences of mammals. Many mammals can be identified from field sightings but, with a few exceptions, bats, rodents and shrews can only be reliably identified in the hand, and then some species need examination of skulls, or even chromosomes (Apps, 2000).

3.3 Birds

Birds were noted as sight records, mainly with the aid of binoculars (10x30). Nearby bird calls of which the observer was sure of the identity were also recorded. For practical skills of noting diagnostic characteristics, the identification of species and observation techniques Ryan (2001) is followed. For information on identification, biogeography and ecology Barnes (2000), Hockey, Dean & Ryan, P.G. (2005), Cillié, Oberprieler & Joubert (2004), Tarboton & Erasmus (1998) and Chittenden, Davies & Weiersbye (2016) were consulted. Ringing of birds fell beyond the scope of this survey and was not deemed necessary. Sites have been walked, covering as many habitats as possible. Signs of the presence of bird species such as spoor and nests have additionally been recorded. Habitat characteristics were surveyed to note potential occurrences of birds.

3.4 Reptiles

Reptiles were noted as sight records in the field. Binoculars (10x30) can also be used for identifying reptiles of which some are wary. For practical skills of noting diagnostic characteristics, the identification of species and observation techniques, Branch (1998), Marais (2004), Alexander & Marais (2007) and Cillié, Oberprieler and Joubert (2004) were followed. Sites were walked, covering as many habitats as possible. Smaller reptiles are

sometimes collected for identification, but this practice was not necessary in the case of this study. Habitat characteristics are surveyed to note potential occurrences of reptiles.

3.5 Amphibians

Frogs and toads are noted as sight records in the field or by their calls. For practical skills of noting diagnostic characteristics, the identification of species and observation techniques Carruthers (2001), Du Preez (1996), Conradie, Du Preez, Smith & Weldon (2006) and the recent complete guide by Du Preez & Carruthers (2009) are consulted. CD's with frog calls by Carruthers (2001) and Du Preez & Carruthers (2009) are used to identify species by their calls when applicable. Sites are walked, covering as many habitats as possible. Smaller frogs are often collected by pitfall traps put out for epigeal invertebrates (on the soil), but this practice falls beyond the scope of this survey. Habitat characteristics are also surveyed to note potential occurrences of amphibians.

3.6 Butterflies

Butterflies were noted as sight records or voucher specimens. Voucher specimens are mostly taken of those species of which the taxa warrant collecting due to taxonomic difficulties or in the cases where species can look similar in the veldt. Many butterflies use only one species or a limited number of plant species as host plants for their larvae. Myrmecophilous (ant-loving) butterflies such as the *Aloeides*, *Chrysoritis*, *Erikssonia, Lepidochrysops* and *Orachrysops* species (Lepidoptera: Lycaenidae), which live in association with a specific ant species, require a unique ecosystem for their survival (Deutschländer & Bredenkamp, 1999; Terblanche, Morgenthal & Cilliers, 2003; Edge, Cilliers & Terblanche, 2008; Gardiner & Terblanche, 2010). Known food plants of butterflies were therefore also recorded. After the visits to the site and the identification of the butterflies found there, a list was also compiled of butterflies that will most probably be found in the area in all the other seasons because of suitable habitat. The emphasis is on a habitat survey.

3.7 Fruit chafer beetles

Different habitat types in the areas were explored for any sensitive or special fruit chafer species. Selection of methods to find fruit chafers depends on the different types of habitat present and the species that may be present. Fruit bait traps would probably not be successful for capturing *Ichnestoma* species in a grassland patch (Holm & Marais 1992). Possible chafer

beetles of high conservation priority were noted as sight records accompanied by the collecting of voucher specimens with grass nets or containers where deemed necessary.

3.8 Rock scorpions

Relatively homogenous habitat / vegetation areas were identified and explored to identify any sensitive or special species. Selected stones that were lifted to search for Arachnids were put back very carefully resulting in the least disturbance possible. All the above actions were accompanied by the least disturbance possible.

3.9 Limitations

For each site visited, it should be emphasized that surveys can by no means result in an exhaustive list of the plants and animals present on the site, because of the time constraint. Surveys were conducted during May 2024 which include a sub-optimal time of the year to find signs of animals such as invertebrates, signs of habitat sensitive plant species and vertebrate animal species high conservation priority. Weather conditions during the surveys were favourable for recording fauna and flora. The focus of the survey remains a habitat survey that concentrates on the possibility that species of particular conservation priority occur on the site or not. It is unlikely that any more visits would reveal information that would change the outcome of this assessment both in terms of ecosystems of special conservation concern or suitable habitats of species of particular conservation concern. Visits that were conducted therefore appear to be sufficient to address the objectives of this study.

4 RESULTS

Table 4.1 Outline of main landscape and habitat characteristics of the site.

HABITAT FEATURE	DESCRIPTION
Topography	The site is on very gentle slopes (flat terrain).
Rockiness	Rocky ridges are absent at the site.
Presence of wetlands	Wetlands and riparian zones are absent at the site.
Vegetation	The site has been cultivated in the past. Secondary succession has taken place. A modified savanna is currently present at the site. Vegetation is an open savanna with large grassy patches. Indigenous trees at the site include *Vachellia karroo*, *Searsia lancea*, *Vachellia hebeclada*, *Vachellia erioloba* and *Grewia flava*. Shrub species such as *Lycium horridum*, *Hertia pallens*, *Laggera decurrens* as well as dwarf shrubs such as *Felicia muricata*, *Ziziphus zeyheriana* and *Pentzia globosa* are present at the site. Indigenous grass species at the site include *Aristida congesta*, *Melinis repens*, *Cynodon dactylon*, *Eragrostis lehmanniana, Tragus racemosus* and *Cenchrus ciliarus.* Indigenous forb species at the site include *Barleria macrostegia, Osteospermum muricatum* and *Lippia scaberrima.* The alien invasive tree species *Prosopis glandulosa* is present at the site. Alien invasive herbaceous weeds at the site include *Gomphrena celosioides*, *Schkuhria pinnata* and *Alternanthera pungens.*
Signs of disturbances	The site had been cultivated in the past. Pioneer plant species are conspicuous at the site.
Connectivity	There is little scope for the site to be part of a corridor of particular conservation importance.

Photo 1 View of part of the site.
Photo: R.F. Terblanche.

Photo 2 View of part of the site.
Photo: R.F. Terblanche

Photo 3 *Vachellia karroo* (Sweet Thorn) at the site.
Photo: R.F. Terblanche.

Photo 4 Foliage and pods of *Vachellia hebeclada* (Candlepod Thorn) at the site.
Photo: R.F. Terblanche

Photo 5 Foliage and pods of *Vachellia erioloba* (Camel Thorn) at the site.
Photo: R.F. Terblanche.

Photo 6 The alien invasive tree *Prosopis glandulosa* (Mesquite) at the site.
Photo: R.F. Terblanche

Photo 7 The widespread indigenous dwarf shrub *Felicia muricata* at the site.
Photo: R.F. Terblanche.

Photo 8 The indigenous herbaceous shrub *Laggera decurrens* at the site.
Photo: R.F. Terblanche

4.2 ASSESSMENT OF PLANT SPECIES OF PARTICULAR CONSERVATION PRIORITY

4.2.1 Plant species of particular conservation concern according to the red list of plants

Table 4.2 Threatened plant species of the North West Province which are listed in the **Critically Endangered** category. The list here follows the most recent updated red list of South African plant species (Raimondo *et al*. 2009). No = Plant species is unlikely to be a resident at the site; Yes = Plant species is a resident at the site.

Species	**Status:** Global status or national status indicated	**Resident at the site**
Brachystelma canum	Critically Endangered	No
Brachystelma gracillimum	Critically Endangered	No

Table 4.3 Threatened plant species of the North West Province which are listed in the **Endangered** category. The list here follows the most recent updated red list of South African plant species (Raimondo *et al*. 2009). No = Plant species is unlikely to be a resident at the site; Yes = Plant species is a resident at the site.

Species	**Status:** Global status or national status indicated	**Resident at the site**
Aloe peglerae	Endangered	No
Brachystelma discoideum	Endangered	No

Table 4.4 Threatened plant species of the North West Province which are listed in the **Vulnerable** category. The list here follows the most recent updated red list of South African plant species (Raimondo *et al*. 2009). No = Plant species is unlikely to be a resident at the site; Yes = Plant species is a resident at the site.

Species	**Status:** Global status or national status indicated	**Resident at the site**
Brachycorythis conica subsp. ***transvaalensis***	Vulnerable	No
Brachystelma incanum	Vulnerable	No
Ceropegia decidua subsp. ***pretoriensis***	Vulnerable	No
Ceropegia stentiae	Vulnerable	No
Ledebouria atrobrunnea	Vulnerable	No
Marsilea farinosa	Vulnerable	No
Melolobium subspicatum	Vulnerable	No
Prunus africana	Vulnerable	No
Rennera stellata	Vulnerable	No
Searsia maricoan	Vulnerable	No

Table 4.5 Near Threatened plant species of the North West Province. The list here follows the most recent updated red list of South African plant species (Raimondo *et al*. 2009). No = Plant species is unlikely to be a resident at the site; Yes = Plant species is a resident at the site.

Species	**Status:** Global status or national status indicated	**Resident at the site**
Adromischus umbraticola subsp**. *umbraticola***	Near Threatened	No
Ceropegia turricula	Near Threatened	No
Cineraria austrotransvaalensis	Near Threatened	No
Cleome conrathii	Near Threatened	No
Delosperma leendertziae	Near Threatened	No
Drimia sanguinea	Near Threatened	No
Elaeodendron transvaalense	Near Threatened	No
Kniphofia typhoides	Near Threatened	No
Lithops leslei subsp. ***leslei***	Near Threatened	No
Nerine gracilis	Near Threatened	No
Sporobolus oxyphyllus	Near Threatened	No
Stenostelma umbelluliferum	Near Threatened	No

Table 4.6 Plant species of the North West Province which are not threatened and not near threatened but which are of particular conservation concern and listed in the **Critically Rare** category (Raimondo *et al.* 2009). The list here follows the most recent red list of South African plant species (Raimondo *et al*. 2009). No = Plant species is unlikely to be a resident at the site; Yes = Plant species is a resident at the site.

Species	**Conservation status**	**Resident at the site**
Gladiolus filiformis	Critically Rare	No

Table 4.7 Plant species of the North West Province which are not threatened and not near threatened but of which are of particular conservation concern and listed in the **Rare** category (Raimondo *et al*. 2009). The list here follows the most recent red list of South African plant species (Raimondo *et al*. 2009). No = Plant species is unlikely to be a resident at the site; Yes = Plant species is a resident at the site.

Species	**Status:** Global status or national status indicated	**Resident at the site**
Brachystelma dimorphum susbp. ***gratum***	Rare	No
Ceropegia insignis	Rare	No
Frithia pulchra	Rare	No
Gnaphalium nelsonii	Rare	No
Habenaria culveri	Rare	No

Table 4.8 Plant species of the North West Province which are not threatened and not near threatened but which are of particular conservation concern and listed in the **Declining** category (Raimondo *et al.* 2009). The list here follows the most recent red list of South African plant species (Raimondo *et al*. 2009). No = Plant species is unlikely to be a resident at the site; Yes = Plant species is a resident at the site.

Species	**Status:** Global status or national status indicated	**Resident at the site**
Boophone disticha	Declining	No
Crinum bulbispermum	Declining	No
Crinum macowanii	Declining	No
Drimia altissima	Declining	No
Eucomis autumnalis	Declining	No
Gunnera perpensa	Declining	No
Hypoxis hemerocallidea	Declining	No
Ilex mitis	Declining	No
Pelargonium sidoides	Declining	No

4.2.2 Plant species of particular conservation concern: protected species

Table 4.9 Tree species of the North West Province which are listed as **Protected Species** under the National Forests Act No. 84 of 1998, Section 15(1)**.** No = Plant species is not a resident on the site; Yes = Plant species is a resident at the site.

Species	**Conservation status**	**Resident at the site**
Boscia albitrunca (Sheppard's tree)	Protected	No
Combretum imberbe (Leadwood)	Protected	No
Sclerocarya birrea (Marula)	Protected	No
Securidaca longepedunculata (Violet Tree)	Protected	No
Vachellia erioloba (Camel Thorn Tree)	**Protected**	**Yes**

4.3 ASSESSMENT OF VERTEBRATE SPECIES OF PARTICULAR HIGH CONSERVATION PRIORITY

4.3.1 Mammals of particular high conservation priority

Table 4.10 Threatened mammal species of the North West Province. Literature sources: Friedman & Daly, (2004), Skinner & Chimimba (2005), Wilson & Reeder (2005). With mammal species which normally needs a large range their residential status does not implicate that they are exclusively dependent on the site or use the site as important shelter or for reproduction. No = Not recorded at site/ Unlikely to be resident at the site. Yes: Recorded at the site/ Likely to be resident at the site.

Species	Threatened Status	Recorded at site during survey	Likely to be found based on habitat assessment
Chrysospalax villosus Rough-haired golden mole	Vulnerable	No	No
Cloeotis percivali Short-eared Trident Bat	Vulnerable/ Near-threatened	No	No
Diceros bicornis Black rhinoceros	Critically Endangered	No	No
Lycaon pictus African wild dog	Endangered	No	No
Loxodonta africana African elephant	Vulnerable	No	No
Mystromys albicaudatus White-tailed mouse	Endangered	No	No
Neamblysomus julianae Juliana's Golden Mole	Critically Endangered	No	No
Panthera leo Lion	Vulnerable	No	No
Rhinolophus blasii Blasi's Horseshoe Bat	Vulnerable	No	No
Smutsia temminckii Ground Pangolin	Vulnerable	No	No

Table 4.11 Near threatened mammal species known to occur in the North West Province. Literature sources: Skinner & Chimimba (2005). No = Not recorded at site/ unlikely to be resident at the site. Yes: Recorded at the site/ Likely to be resident at the site.

Species	Threatened Status	Recorded at site during survey	Likely to be found based on habitat assessment
Ceratotherium simum White Rhinoceros	Near threatened	No	No

Table 4.12 Data deficient (or uncertain) mammal species of the North West Province. Literature sources: Skinner & Chimimba (2005). No = Not recorded at site/ unlikely to be resident at the site. Yes: Recorded at the site/ Likely to be resident at the site.

Species	Threatened Status	Recorded at site during survey	Likely be a resident at the site
Myosorex varius Forest shrew	Uncertain	No	No

4.3.2 Birds of particular high conservation priority

Table 4.13 Threatened bird species of the North West Province. Literature sources Barnes (2000), Hockey, Dean & Ryan, P.G. (2005) and Chittenden (2007). No = Not recorded at site/ Unlikely to use site as breeding area or particular habitat on which the species depends. Yes = Recorded at site/ Likely to use site as breeding area or particular habitat on which the species depends.

Species	Common name	Threatened Status	Recorded at site during survey	Likely to use site as breeding area or habitat
Aegypius tracheliotos	**Lappet-faced Vulture**	Vulnerable	No	No
Anthropoides paradiseus	**Blue Crane**	Vulnerable	No	No
Aquila rapax	**Tawny Eagle**	Vulnerable	No	No
Ardeotis kori	**Kori Bustard**	Vulnerable	No	No
Balearica regulorum	**Grey Crowned Crane (Mahem)**	Vulnerable	No	No
Botaurus stellaris	**Eurasian Bittern**	Critically Endangered	No	No
Circus ranivorus	**African Marsh-Harrier**	Vulnerable	No	No
Crex crex	**Corn Crake**	Vulnerable	No	No
Eupodotis senegalensis	**White-bellied Korhaan**	Vulnerable	No	No
Falco naumanni	**Lesser Kestrel**	Vulnerable	No	No
Geronticus calvus	**Southern Bald Ibis**	Vulnerable	No	No
Gorsachius leuconotus	**White-backed Night-heron**	Vulnerable	No	No

Gypaetus barbatus	**Bearded Vulture**	Endangered	No	No
Gyps africanus	**White-backed Vulture**	Vulnerable	No	No
Gyps coprotheres	**Cape Vulture**	Vulnerable	No	No
Pelecanus rufescens	**Pink-backed Pelican**	Vulnerable	No	No
Polemaetus bellicosus	**Martial Eagle**	Vulnerable	No	No
Rhynchops flavirostris	**African Skimmer**	Endangered	No	No
Sagittarius serpentarius	**Secretarybird**	Vulnerable	No	No
Sarothrura ayresi	**White-winged Flufftail**	Critically Endangered	No	No
Tyto capensis	**African Grass-Owl**	Vulnerable	No	No

*** Though some of the above bird species that roam over large areas may ocassionally be found at the site, the site does not appear to be a habitat of particular importance to these birds, and these birds also do not use the site as breeding area**.

Table 4.14 Near threatened bird species of the North West Province. Literature sources Barnes (2000), Hockey, Dean & Ryan, P.G. (2005) and Chittenden (2007). No = Not recorded at site/ Unlikely to be particularly dependent on the site as breeding area or habitat. Yes = Recorded at site/ Likely to be particularly dependant on the site as breeding area or habitat.

Species	Common name	Threatened Status	Recorded at site during survey	Likely to use site breeding area or habitat
Certhilauda chuana	**Short-clawed Lark**	Near threatened	No	No
Charadrius pallidus	**Chestnut-banded Plover**	Near threatened	No	No
Ciconia nigra	**Black Stork**	Near threatened	No	No
Circus macrourus	**Pallid Harrier**	Near threatened	No	No
Eupodotis caerulescens	**Blue Korhaan**	Near threatened	No	No
Falco biarmicus	**Lanner Falcon**	Near threatened	No	No
Falco peregrinus	**Peregrine Falcon**	Near threatened	No	No
Glareola nordmanni	**Black-winged Pratincole**	Near threatened	No	No
Leptoptilos crumeniferus	**Marabou Stork**	Near threatened	No	No
Mirafra cheniana	**Melodious lark**	Near threatened	No	No
Mycteria ibis	**Yellow-billed Stork**	Near threatened	No	No
Phoenicopterus minor	**Lesser Flamingo**	Near threatened	No	No
Phoenicopterus ruber	**Greater Flamingo**	Near threatened	No	No
Rostratula benghalensis	**Greater Painted-snipe**	Near threatened	No	No
Sternia caspia	**Caspian Tern**	Near threatened	No	No

*** Though some of the above bird species that roams over large areas may ocassionally be found at the site, the site does not appear to be a habitat of particular importance to these birds, and these birds also do not use the site as breeding area.**

4.3.3 Reptiles of particular high conservation priority

The following tables list possible presence or absence of threatened reptile or near threatened reptile species in the study area. The Atlas and Red List of Reptiles of South Africa, Lesotho and South Africa (Bates, Branch, Bauer, Burger, Marais, Alexander & de Villiers, 2014) has been used as the main source to compile the list for assessment.

Table 4.15 Threatened reptile species in North West Province. Main Source: (Bates, Branch, Bauer, Burger, Marais, Alexander & de Villiers, 2014). No = Reptile species is not a resident on the site; Yes = Reptile species is found to be resident on the site.

Species	Threatened Status	Resident at site	Recorded at site during survey	Likely to be found based on habitat assessment
Crocodylus niloticus Nile Crocodile	Vulnerable	No	No	No

Table 4.16 Near threatened reptile species in North West Province. Main Source: Bates, Branch, Bauer, Burger, Marais, Alexander & de Villiers (2014). Though *Homoroselaps dorsalis* has not yet been recorded from the North West Province, its presence in some areas or the Province is anticipated. No = Reptile species is not a resident on the site; Yes = Reptile species is found to be resident on the site.

Species	Threatened Status	Resident at site	Recorded at site during survey	Likely to be found based on habitat assessment
Homoroselaps dorsalis Striped Harlequin Snake	Near threatened	No	No	No

4.3.4 Amphibian species of particular high conservation priority

Table 4.17 Near threatened amphibian species in North West Province. No = Amphibian species is not a resident on the site; Yes = Amphibian species is found to be resident on the site.

Species	Threatened Status	Resident at site	Recorded at site during survey	Likely to be found based on habitat assessment
Pyxicephalus adspersus Giant Bullfrog	**Least Concern (IUCN)**	No	No	No

4.4 ASSESSMENT OF INVERTEBRATE SPECIES OF PARTICULAR CONSERVATION PRIORITY

4.4.1 Butterflies of particular conservation priority

Table 4.18 Threatened butterfly species in North West Province and Gauteng Province (Mecenero *et. al.* 2020). Sources of information: Henning, Terblanche & Ball (2009), Mecenero *et al*. (2013), Mecenero *et.al.* (2020). Invertebrates such as threatened butterfly species are often very habitat specific and residential status imply a unique ecosystem that is at stake.

Species	Threatened Status	Recorded at site during survey	Residential status at the site: Yes confirmed, Highly likely, Likely, Medium possibility, Unlikely, Highly unlikely
Aloeides dentatis dentatis Roodepoort Toothed Russet	Endangered	No	Highly unlikely
Chrysoritis aureus Golden Opal/ Heidelberg Copper	Endangered	No	Highly unlikely
Lepidochrysops praeterita Highveld Giant Cupid/ Highveld Blue	Endangered	No	Highly unlikely
Orachrysops mijburghi Heilbron Cupid	Endangered	No	Highly unlikely

Table 4.19 Butterfly species of the North West Province and Gauteng Province that are Near Threatened (Mecenero *et al.*, 2020). No = Butterfly species is unlikely to be a resident at the study area; Yes = Butterfly species is a resident at the study area. Sources of information Henning, Terblanche & Ball (2009), Mecenero *et. al.* (2013), Mecenero *et. al.* (2020).

Species	Threatened Status	Recorded at site during survey	Residential status at the site: Yes confirmed, Highly likely, Likely, Medium possibility, Unlikely, Highly unlikely
Metisella meninx Marsh Sylph	**Near Threatened**	No	Highly unlikely

4.4.2 Beetles of particular conservation priority

Table 4.20 Fruit chafer species (Coleoptera: Scarabaeidae: Cetoninae) in the Gauteng Province and North-West Province which are of known high conservation priority.

Species	Threatened Status	Recorded at site during survey	Likely to be resident based on habitat assessment
Ichnestoma stobbiai	Uncertain	No	No
Trichocephala brincki	Uncertain	No	No

4.4.3 Scorpion species of particular conservation priority

Table 4.21 Rock scorpion species (Scorpiones: Ischnuridae) species that are of known high conservation priority in the Gauteng Province and North-West Province.

Species	Threatened Status	Recorded at site during survey	Likely to be resident at site based on habitat assessment
Hadogenes gracilis	Uncertain	No	No
Hadogenes gunningi	Uncertain	No	No

5 DISCUSSION

5.1 Habitat and vegetation characteristics

An outline of the habitat and vegetation characteristics is given in Table 4.1.

5.2 Plants

Extinct, threatened, near threatened and other plant species of high conservation priority in North West Province are listed in Tables 4.2 – 4.8. Protected tree species are listed in Table 4.9. The presence or not of all the species listed in the tables were investigated during the survey. None of the Threatened and Near Threatened plant species are likely to occur on the site. No other plant species of particular conservation concern appears to be present at the site with the exception of the Protected tree species *Vachellia erioloba* (Camel Thorn Tree) of which a few individuals occur at the site. Protected Tree species are listed under the National Forests Act No. 84 of 1998. In terms of a part of section 15(1) of Act No. 84 of 1998, no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a license granted by the Minister. A permit will be needed if any damage or removal of the individual Protected trees, at the site, cannot be avoided.

5.3 Vertebrates

5.3.1 Mammals

Table 4.10, Table 4.11 and Table 4.12 list the possible presence or absence of threatened mammal species, near threatened mammal species and mammal species of which the status is uncertain, respectively, at the site. Literature sources that were used are Friedman & Daly (2004), Skinner & Chimimba (2005) and Wilson & Reeder (2005). Since the site falls outside reserves, threatened species such as the black rhinoceros (*Diceros bicornis*) and the African wild dog (*Lycaon pictus*) are obviously not present. No smaller mammals of particular high conservation significance are likely to be found on the site as well.

5.3.2 Birds

Table 4.13 and Table 4.14 list the possible presence or absence of threatened bird species and near threatened bird species at the site. With bird species which often have a large distributional range, their presence does not imply that they are particularly dependent on a site as breeding location. Therefore the emphasis in the right hand columns of Table 4.12 and

Table 4.13 are on the particular likely dependance or not of bird species on the site. Literature sources that were mainly consulted are Barnes (2000), Hockey, Dean & Ryan, P.G. (2005) and Chittenden (2007). No threat to any threatened bird species or any bird species of particular conservation importance are foreseen.

5.3.3 Reptiles

Table 4.15 and Table 4.16 list the possible presence or absence of Threatened and Near Threatened reptile species on the site. Main Source used for the conservation status and identification of reptiles are Bates, Branch, Bauer, Burger, Marais, Alexander & de Villiers (2014). Alexander & Marais (2007) as well as Tolley & Burger 2007) give useful indications of distributions, habitats and identification of the reptile species. There appears to be no threat to any reptile species of particular high conservation importance if the site is developed.

5.3.4 Amphibians

No frog species that occur in the North West are listed as Threatened species (Vulnerable, Endangered or Critically Endangered) or Near Threatened species according to IUCN Amphibian Specialist Group (2013). Table 4.17 lists *Pyxicephalus adspersus* (Giant Bullfrog) as Least Concern globally. According to the Biodiversity Management Directorate of GDARD (Gauteng Department of Agriculture and Rural Development) (2014) there are no amphibians in Gauteng that qualify for red listed status (red listed here indicates a catecory of special conservation concern such as threatened or near threatened). Suitable habitat for Giant Bullfrog at site appears to be absent.

5.4 Invertebrates

5.4.1 Butterflies

Studies about the vegetation and habitat of threatened butterfly species in South Africa showed that ecosystems with a unique combination of features are selected by these often localised threatened butterfly species (Deutschländer and Bredenkamp 1999; Edge 2002, 2005; Terblanche, Morgenthal & Cilliers 2003; Lubke, Hoare, Victor & Ketelaar 2003; Edge, Cilliers & Terblanche, 2008). Threatened butterfly species in South Africa can then be regarded as bio-indicators of rare ecosystems.

Four species of butterfly in Gauteng Province and North West Province combined are listed as threatened in the recent butterfly conservation assessment of South Africa (Mecenero *et al*., 2013). The expected presence or not of these threatened butterfly species as well as species of high conservation priority that are not threatened, at the site (Table 4.18 and Table 4.19) follows.

5.4.1.1 Assessment of threatened butterfly species

***Aloeides dentatis dentatis (*Roodepoort Toothed Russet)**

The proposed global red list status for *Aloeides dentatis dentatis* according to the most recent IUCN criteria and categories is Endangered (Mecenero *et al.,* 2020). *Aloeides dentatis dentatis* colonies are found where one of its host plants *Hermannia depressa* or *Lotononis eriantha* is present. Larval ant association is with *Lepisiota capensis* (S.F. Henning 1983; S.F. Henning & G.A. Henning 1989). The habitat requirements of *Aloeides dentatis dentatis* are complex and not fully understood yet. See Deutschländer and Bredenkamp (1999) for the description of the vegetation and habitat characteristics of one locality of *Aloeides dentatis* subsp. *dentatis* at Ruimsig, Roodepoort, Gauteng Province. There is not an ideal habitat of *Aloeides dentatis* subsp. *dentatis* on the site and it is unlikely that the butterfly is present at the site.

Chrysoritis aureus (Golden Opal/ Heidelberg Copper)

The proposed global red list status for *Chrysoritis aureus* according to the most recent IUCN criteria and categories is Endangered (Mecenero *et al.,* 2020) *Chrysoritis aureus* (Golden Opal/ Heidelberg Copper) is a resident where the larval host plant, *Clutia pulchella* is present. However, the distribution of the butterfly is much more restricted than that of the larval host plant (S.F. Henning 1983; Terblanche, Morgenthal & Cilliers 2003). One of the reasons for the localised distribution of *Chrysoritis aureus* is that a specific host ant *Crematogaster liengmei* must also be present at the habitat. Fire appears to be an essential factor for the maintenance of suitable habitat (Terblanche, Morgenthal & Cilliers 2003). Research revealed that *Chrysorits aureus* (Golden Opal/ Heidelberg Copper) has very specific habitat requirements, which include rocky ridges with a steep slope and a southern aspect (Terblanche, Morgenthal & Cilliers 2003). Owing to a lack of habitat requirements and ideal habitat the presence of the taxon is highly unlikely.

***Lepidochrysops praeterita* (Highveld Blue)**

The proposed global red list status for *Lepidochrysops praeterita* according to the most recent IUCN criteria and categories is Endangered (G.A. Henning, Terblanche & Ball, 2009; Mecenero *et al.,* 2020). *Lepidochrysops praeterita* is a butterfly that occurs where the larval host plant *Ocimum obovatum* (= *Becium obovatum*) is present (Pringle, Henning & Ball, 1994), but the distribution of the butterfly is much more restricted than the distribution of the host plant. *Lepidochrysops praeterita* is found on selected rocky ridges and rocky hillsides in parts of Gauteng, the extreme northern Free State and the south-eastern Gauteng Province. No

ideal habitat appears to be present for the butterfly on the site. It is unlikely that *Lepidochrysops praeterita* would be present at the site.

***Orachrysops mijburghi* (Mijburgh's Blue)**

The proposed global red status for *Orachrysops mijburghi* according to the most recent IUCN criteria and categories is Endangered (Mecenero *et al.,* 2020). *Orachrysops mijburghi* favours grassland depressions where specific *Indigofera* plant species occur (Terblanche & Edge 2007). The Heilbron population of *Orachrysops mijburghi* in the Free State uses *Indigofera evansiana* as a larval host plant (Edge, 2005) while the Suikerbosrand population in Gauteng uses *Indigofera dimidiata* as a larval host plant (Terblanche & Edge 2007). There is no suitable habitat for *Orachrysops mijburghi* on the site and it is unlikely that *Orachrysops mijburghi* would be present on the site.

Conclusion on threatened butterfly species

There appears to be no threat to any threatened butterfly species if the site is developed.

5.4.1.2 Assessment of butterfly species that are Near Threatened

Metisella meninx (Marsh Sylph)

Henning and Henning (1989) in the first South African Red Data Book of Butterflies, listed *Metisella meninx* as threatened under the former IUCN category Indeterminate. Even earlier in the 20th century Swanepoel (1953) raised concern about vanishing wetlands leading to habitat loss and loss of populations of *Metisella meninx*. According to the second South African Red Data Book of butterflies (Henning, Terblanche & Ball, 2009) the proposed global red list status of *Metisella meninx* has been Vulnerable. During a recent large scale atlassing project the *Conservation Assessment of Butterflies of South Africa, Lesotho and Swaziland: Red List and Atlas* (Mecenero *et al.,* 2013) it was found that more *Metisella meninx* populations are present than thought before. Based on this valid new information, the conservation status of *Metisella meninx* is now regarded as Near Threatened (Mecenero *et al.,* 2020). Though *Metisella meninx* is more widespread and less threatened than perceived before, it should be regarded as a localised rare habitat specialist of conservation priority, which is dependent on wetlands with suitable patches of grass at wetlands (Terblanche In prep.). Another important factor to keep in mind for the conservation of *Metisella meninx* is that based on very recent discoveries of new taxa in the group the present *Metisella meninx* is species complex consisting of at least three taxa (Terblanche In prep., Terblanche & Henning In prep.). The ideal habitat of *Metisella meninx* is treeless marshy areas where *Leersia hexandra* (rice grass)

is abundant (Terblanche *In prep.*). The larval host plant of *Metisella meninx* is wild rice grass, *Leersia hexandra* (G.A. Henning & Roos, 2001). There is no suitable habitat for the species at the site.

5.4.2 Fruit chafer beetles

Table 4.20 lists the fruit chafer beetle species (Coleoptera: Scarabaeidae: Cetoninae) that are of known high conservation priority in the North West Province. No *Ichnestoma stobbiai* or *Trichocephala brincki* were found during the surveys. There appears to be no suitable habitat for *Ichnestoma stobbiai* or *Trichocephala brincki* at the site. There appears to be no threat to any of the fruit chafer beetles of particular high conservation priority if the site were developed.

5.4.3 Scorpions

Table 4.21 lists the rock scorpion species (Scorpiones: Ischnuridae) that are of known high conservation priority in the North West Province. None of these rock scorpions have been found at the site and the habitat does not appear to be optimal.

5.5 Screening tool (DFFE) and groundtruthing

Possible ecological sensitivities at the site were indicated by a report generated from the screening tool of DFFE. An assessment of these ecological sensitivities at the site, follow.

Animal species theme sensitivity
Relative animal species theme sensitivity is listed as possibly low. Based on the ground truthing the animal theme sensitivity at the site should be upheld as low.

Aquatic biodiversity theme sensitivity
Relative aquatic biodiversity theme sensitivity at the site is low. There is no distinct impact that the proposed development on any watercourses in the larger area. There are no wetlands or riparian areas at the site.

Plant species theme sensitivity
Relative plant species theme sensitivity is medium. This medium sensitivity is owing to plant species that are prone to illegal harvesting (Declining or Nationally Protected). Such species are included in the list of sensitive species, which are not threatened but prone to illegal

harvesting in the North West Province, in Table 4.8 and Table 4.9. None of these plant species prone to illegal harvesting which are found at the site. A few individuals of a protected tree which is widespread and not threatened, *Vachellia erioloba* (Camel Thorn Tree), are present at the site. The few individuals of *Vachellia erioloba* at the site are not large and not part of any Camel Thorn forest. Such as mentioned elsewhere in the report, a permit for the few *Vachellia erioloba* at the site must be applied if the removal of these cannot be avoided for the proposed development. Following the ground truthing the relative plant species theme sensitivity at the site is low rather than medium.

Terrestrial biodiversity theme sensitivity

Terrestrial biodiversity theme sensitivity at the site is listed as very high and also low at parts. This very high terrestrial sensitivity at the site is because of a Critical Biodiversity Area 2 that has been mapped for part of the site. During surveys at the site, it was found that the original vegetation type has been modified by cultivation in the past and that the scope to conserve the small area as a vital part of a Critical Biodiversity Area 2 in particular is small.

5.6 Ecological Sensitivity at the site

There are no Threatened or Near Threatened animal- or plant species at the site. There are no threatened ecosystems at the site. The vegetation has been extensively modified in the past (hitherto cultivated area). Ecological sensitivity at the site is low (Figure 2).

Figure 2 Indications of ecological sensitivity at the site.

	Red outline	Boundaries of the site
	Light yellow shading	Low sensitivity

Grid references and altitudes were taken at site with a GPS Garmin E-trex 10 ® instrument. Map information were analysed and depicted on Google images with the aid of Google Earth Pro (US Dept. of State Geographer, MapLink/ Tele Atlas, Google, 2024).

6 RISKS, IMPACTS AND MITIGATION

Background:

Habitats of threatened plants are in danger most often due to urban developments such as is the case for the Gauteng Province (Pfab & Victor, 2002). Habitat conservation is the key to the conservation of invertebrates such as threatened butterflies (Deutschländer and Bredenkamp 1999; Edge 2005; Terblanche, Morgenthal & Cilliers 2003; Lubke, Hoare, Victor & Ketelaar 2003; Edge, Cilliers & Terblanche, 2008). Furthermore, corridors and linkages may play a significant role in insect conservation (Pryke & Samways, 2003, Samways, 2005).

Urbanisation is a major additional influence on the loss of natural areas (Rutherford & Westfall 1994). In the South Africa the pressure to develop areas are high since its infrastructure allows for improvement of human well-being. Urban nature conservation issues in South Africa are overshadowed by the goal to improve human well-being, which focuses on aspects such as poverty, equity, redistribution of wealth and wealth creation (Cilliers, Müller & Drewes 2004). Nevertheless, the conservation of habitats is the key to invertebrate conservation, especially for those threatened species that are very habitat specific. This is also true for any detailed planning of corridors and buffer zones for invertebrates. Though proper management plans for habitats are not in place, setting aside special ecosystems is in line with the resent Biodiversity Act (2004) of the Republic of South Africa.

Corridors are important to link ecosystems of high conservation priority. Such corridors or linkages are there to improve the chances of survival of otherwise isolated populations (Samways, 2005). How wide should corridors be? The answer to this question depends on the conservation goal and the focal species (Samways, 2005). For an African butterfly assemblage this is about 250m when the corridor is for movement as well as being a habitat source (Pryke and Samways 2003). Hill (1995) found a figure of 200m for dung beetles in tropical Australian forest. In the agricultural context, and at least for some common insects, even small corridors can play a valuable role (Samways, 2005). Much more research remains to be done to find refined answers to the width of grassland corridors in South Africa. The width of corridors will also depend on the type of development, for instance the effects of the shade of multiple story buildings will be quite different from that of small houses.

To summarise: In practice, as far as developments are concerned, the key would be to prioritise and plan according to sensitive species and special ecosystems.

In the case of this study:

The site had been cultivated in the past. Secondary succession has taken place. A modified savanna is currently present at the site. Vegetation is an open savanna with large grassy patches.

There are no wetlands or rocky ridges at the site.

No Threatened or Near Threatened plant- or animal species appear to be resident at the site. No other plant species of particular conservation concern appears to be present at the site with the exception of the Protected tree species *Vachellia erioloba* (Camel Thorn Tree) of which a few individuals occur at the site. Protected Tree species are listed under the National Forests Act No. 84 of 1998. In terms of a part of section 15(1) of Act No. 84 of 1998, no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a license granted by the Minister. A permit will be needed if any damage or removal of the individual Protected trees, at the site, cannot be avoided.

There is little scope for the site to be part of a corridor of particular conservation importance.

The following potential risks, impacts and mitigation measures apply to the proposed development:

6.1 Identification of potential impacts and risks

The potential impacts identified are:

Construction Phase

- Potential impact 1: Loss of habitat owing to the removal of vegetation at the proposed development.
- Potential impact 2: Loss of sensitive species (Threatened, Near Threatened, Rare, Declining or Protected species) during the construction phase.
- Potential impact 3: Loss of connectivity and conservation corridor networks in the landscape.
- Potential impact 4: Contamination of soil during construction in particular by hydrocarbon spills.
- Potential impact 5: Killing of vertebrate fauna during the construction phase.

Operational Phase

- Potential impact 6: An increased infestation of exotic or alien invasive plant species owing to disturbance.

6.2 Potential impacts and risks during the construction phase

Classes of impacts for this study: Very High, High, Moderate, Low, Very Low

Aspect/Activity	Clearance of vegetation at part of the site for the development
Type of Impact	Direct
Potential Impact	Clearing of vegetation at the proposed development. This will entail the destruction of habitat of low ecological sensitivity.
Status	Negative
Mitigation Required	Planting of indigenous vegetation at the site.
Impact Significance (Pre-Mitigation)	Moderate
Impact Significance (Post-Mitigation)	Moderate
RISK	Following the mitigation measures a moderate risk of impact is expected.

Aspect/Activity	Removal of sensitive species
Type of Impact	Direct
Potential Impact	Sensitive species: Presence of Threatened or Near Threatened plant- or animal species appear to be unlikely. No other plant or animal species of particular conservation concern appears to be present at the site.
Status	Neutral.
Mitigation Required	No specific mitigation measures for Threatened or Near Threatened sensitive species apply at the site. A few individuals of the Protected tree species *Vachellia erioloba* (Camel Thorn Tree) occur at the site. Protected Tree species are listed under the National Forests Act No. 84 of 1998. In terms of a part of section 15(1) of Act No. 84 of 1998, no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a license granted by the Minister. A permit will be needed if any damage or removal of the individual Protected trees, at the site, cannot be avoided.
Impact Significance (Pre-Mitigation)	Low
Impact Significance (Post-Mitigation)	Low
RISK	A low risk of threat to any sensitive species at the site is anticipated.

Aspect/Activity	Fragmentation of corridors of particular conservation concern
Type of Impact	Direct
Potential Impact	The scope for the proposed footprint to be a corridor of particular conservation concern is small.
Status	Negative
Mitigation Required	Planting of indigenous vegetation at the site is imperative.
Impact Significance (Pre-Mitigation)	Low
Impact Significance (Post-Mitigation)	Low
RISK	Following mitigation, a low impact risk is expected.

Aspect/Activity	Contamination of soil by leaving rubble/ waste or spilling petroleum fuels or any pollutants on soil which could infiltrate the soil
Type of Impact	Direct
Potential Impact	Rubble or waste could lead to infiltration of unwanted pollutants into the soil. Spilling of petroleum fuels and unwanted chemicals onto the soils that infiltrate these soils could lead to pollution of soils.
Status	Negative
Mitigation Required	Rubble or waste that could accompany the construction effort, if the development is approved, should be removed during and after construction. Measures should be taken to avoid any spills and infiltration of petroleum fuels or any chemical pollutants into the soil during construction phase.
Impact Significance (Pre-Mitigation)	Moderate
Impact Significance (Post-Mitigation)	Low
RISKS	A low risk is expected following mitigation.

Aspect/Activity	Possible disturbance, trapping, hunting and killing of vertebrates during construction phase
Type of Impact	Direct
Potential Impact	During the construction phase animal species could be disturbed, trapped, hunted or killed.
Status	Negative
Mitigation Required	If the development is approved, contractors must ensure that no animal species are disturbed, trapped, hunted or killed during the construction phase.
Impact Significance (Pre-Mitigation)	Moderate
Impact Significance (Post-Mitigation)	Low
RISKS	Following mitigation a low risk is anticipated.

6.3 Potential impacts during the operational phase

Aspect/Activity	An increased infestation of exotic or alien invasive plant species owing to clearance or disturbance where the footprint took place.
Type of Impact	Direct
Potential Impact	Infestation by alien invasive species could replace indigenous vegetation or potential areas where indigenous vegetation could recover. It is in particular declared alien invasive species such as *Prosopis glandulosa* (Mesquite), *Melia* azedarach (Syringa) or alien invasive Australian *Acacia* species (Australian Wattles) that should not be allowed to establish. Once established these combatting these alien invasive plant species may become very expensive in the long term.
Status	Negative
Mitigation Required	Continued monitoring and eradication of alien invasive plant species are imperative. It is in particular declared alien invasive species such as *Prosopis glandulosa* (Mesquite), *Melia azedarach* (Syringa) and alien invasive Australian *Acacia* species (Australian wattles) that should not be allowed to establish.
Impact Significance (Pre-Mitigation)	Moderate
Impact Significance (Post-Mitigation)	Low
RISKS	Following mitigation, a low risk is anticipated.

6.4 Risk and impact assessment summary for the construction phase

Aspect/ Impact Pathway	Nature of Potential Impact/ Risk	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility of Impact	Irreplaceability	Potential Mitigation Measures	Significance of Impact and Risk		Confidence Level
										Without Mitigation/ Management	With Mitigation/ Management (Residual Impact/ Risk)	
Clearing of vegetation	Habitat loss, loss of indigenous species	Negative	Part of site	Long-Term	Substantial	Very likely	Low	Low	Clearance of vegetation of low sensitivity will take place if the development is approved.	Moderate	Moderate	High
Loss of sensitive species	Loss of sensitive species (Note no Threatened species or Near-threatened species)	Neutral	Site	Long-Term	Very low (No threatened species anticipated to be impacted)	Unlikely	Not applicable	Not applicable	No specific mitigation measures apply to Threatened and Near Threatened sensitive species at the site. A few individuals of the Protected tree species *Vachellia erioloba* (Camel Thorn Tree) occur at the site. A permit must be applied for if any damage or removal of the individual Protected trees, at the site, cannot be avoided.	Low	Low	High
Loss of corridors of particular conservation concern	Fragmentation of landscape and loss of connectivity	Negative	Site	Long-Term	Moderate	Unlikely	Moderate	Moderate	The scope for the proposed footprint to be part of a corridor of particular conservation concern is small.	Low	Low	High

Contamination of soil by spilling pollutants on soil which could infiltrate the soil	Soil contamination	Negative	Site	Long-Term	Moderate	Unlikely	Moderate	Moderate	Rubble and waste removal. Measures that avoid hydrocarbon (petroleum) spills to get into contact with the soil.	Moderate	Low	High
Disturbance or killing of vertebrates	Disturbance or killing of species	Negative	Site	Long-Term	Moderate	Unlikely	Moderate	Moderate	If the development is approved, contractors must ensure that no animal species are disturbed, trapped, hunted or killed during the construction phase.	Moderate	Low	High

6.5 Risk/ Impact assessment summary for the operational phase

Aspect/ Impact Pathway	Nature of Potential Impact/ Risk	Status	Spatial Extent	Duration	Consequence	Probability	Reversibility of Impact	Irreplaceability	Potential Mitigation Measures	Significance of Impact and Risk		Confidence Level
										Without Mitigation/ Management	With Mitigation/ Management (Residual Impact/ Risk)	
Increased infestation of exotic or alien invasive plant species	Loss of habitat quality	Negative	Site	Long-Term	Substantial	Likely	Moderate	Moderate	Monitoring and eradication of alien invasive plant species	Moderate	Low	High

6.6 Summary of risks and impacts

There are no Threatened or Near Threatened animal- or plant species at the site, the vegetation has been extensively modified in the past (hitherto cultivated area). Ecological sensitivity at the site is low (Figure 2).

Following the mitigations which will be upheld and planned for the proposed footprint, all the impact risks listed above are moderate or low.

7 CONCLUSION

- The site had been cultivated in the past. Secondary succession has taken place. A modified savanna is currently present at the site. Vegetation is an open savanna with large grassy patches. Indigenous trees at the site include *Vachellia karroo*, *Searsia lancea*, *Vachellia hebeclada*, *Vachellia erioloba* and *Grewia flava*. Shrub species such as *Lycium horridum*, *Hertia pallens*, *Laggera decurrens* as well as dwarf shrubs such as *Felicia muricata*, *Ziziphus zeyheriana* and *Pentzia globosa* are present at the site. Indigenous grass species at the site include *Aristida congesta*, *Melinis repens*, *Cynodon dactylon*, *Eragrostis lehmanniana*, *Tragus racemosus* and *Cenchrus ciliarus*. Indigenous forb species at the site include *Barleria macrostegia*, *Osteospermum muricatum* and *Lippia scaberrima*. The alien invasive tree species *Prosopis glandulosa* is present at the site. Alien invasive herbaceous weeds at the site include *Gomphrena celosioides*, *Schkuhria pinnata* and *Alternanthera pungens*.
- There are no wetlands or rocky ridges at the site.
- No Threatened ecosystems are present at the site.
- No Threatened or Near Threatened plant- or animal species appear to be resident at the site. No other plant species of particular conservation concern appears to be present at the site with the exception of the Protected tree species *Vachellia erioloba* (Camel Thorn Tree) of which a few individuals occur at the site. Protected Tree species are listed under the National Forests Act No. 84 of 1998. In terms of a part of section 15(1) of Act No. 84 of 1998, no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a license granted by the Minister. A permit will be needed if any damage or removal of the individual Protected trees, at the site, cannot be avoided.
- Possible ecological sensitivities at the site were indicated by a report generated from the screening tool of DFFE. An assessment of these ecological sensitivities at the site, follow.
- *Animal species theme sensitivity*
  Relative animal species theme sensitivity is listed as possibly low. Based on the ground truthing the animal theme sensitivity at the site should be upheld as low.
- *Aquatic biodiversity theme sensitivity*

Relative aquatic biodiversity theme sensitivity at the site is low. There is no distinct impact that the proposed development on any watercourses in the larger area. There are no wetlands or riparian areas at the site.

- *Plant species theme sensitivity*

  Relative plant species theme sensitivity is medium. This medium sensitivity is owing to plant species that are prone to illegal harvesting (Declining or Nationally Protected). Such species are included in the list of sensitive species, which are not threatened but prone to illegal harvesting in the North West Province, in Table 4.8 and Table 4.9. None of these plant species prone to illegal harvesting which are found at the site. A few individuals of a protected tree which is widespread and not threatened, *Vachellia erioloba* (Camel Thorn Tree), are present at the site. The few individuals of *Vachellia erioloba* at the site are not large and not part of any Camel Thorn forest. Such as mentioned elsewhere in the report, a permit for the few *Vachellia erioloba* at the site must be applied if the removal of these protected trees cannot be avoided for the proposed development. Following the ground truthing the relative plant species theme sensitivity at the site is low rather than medium.
- *Terrestrial biodiversity theme sensitivity*

  Terrestrial biodiversity theme sensitivity at the site is listed as very high and also low at parts. This very high terrestrial sensitivity at the site is because of a Critical Biodiversity Area 2 that has been mapped for part of the site. During surveys at the site, it was found that the original vegetation type has been modified by cultivation in the past and that the scope to conserve the small area as a vital part of a Critical Biodiversity Area 2 in particular, is small.
- The scope for the site to be part of a corridor of particular conservation importance is small.
- There are no Threatened or Near Threatened animal- or plant species at the site. There are no threatened ecosystems at the site. The vegetation has been extensively modified in the past (hitherto cultivated area). Ecological sensitivity at the site is low (Figure 2).
- Following the mitigations which will be upheld for the proposed footprint of development, all the impact risks listed above are moderate or low.

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ANNEXURE 1

List of plant species recorded at the site.

Plant species marked with an asterisk (*) are exotic.

Sources: Bromilow (2010); Crouch, Klopper, Court (2010); Duncan (2016); Fish, Mashau, Moeaha & Nembudani (2015); Germishuizen (2003), Goldblatt (1986); Goldblatt & Manning (1998); Johnson & Bytebier (2015); Manning (2007), Manning (2009), McMurtry, Grobler, Grobler & Burns (2008); Smith, Crouch. & Figueiredo (2017); Van Ginkel *et al*. (2011); Van Jaarsveld (2006); Van Oudtshoorn (2012); Van Wyk (2000); Van Wyk & Gericke (2000); Van Wyk & Malan (1998); Van Wyk & Van Wyk (2013); Van Wyk & Smith (2014); Van Wyk, van Oudtshoorn & Gericke (2009)

TAXON	COMMON NAMES	FAMILY
ANGIOSPERMAE: MONOCOTYLEDONS		
Aristida adscensionis		POACEAE
Aristida congesta	Tassel Three-awn	POACEAE
Asparagus laricinus	Common Wild Asparagus	ASPARAGACEAE
Bulbine narcissifolia		ASPHODELACEAE
Cynodon dactylon	Couch Grass	POACEAE
Cenchrus ciliaris		POACEAE
Digitaria eriantha	Common Finger Grass	POACEAE
Eragrostis lehmanniana		POACEAE
Eragrostis superba	Saw-toothed Love Grass	POACEAE
Heteropogon contortus	Spear Grass	POACEAE
Melinis repens	Natal Red-top	POACEAE
Pogonarthria squarrosa	Herringbone Grass	POACEAE
Tragus racemosus		POACEAE
Urochloa mosambicensis	Bushveld Signal Grass	POACEAE
ANGIOSPERMS: DICOTYLEDONS		
**** Alternanthera pungens***	Dubbeltjie	AMARANTHACEAE

Barleria macrostegia		ACANTHACEAE
**** Chenopodium album***	White Goosefoot	CHENOPODIACEAE
Convolvulus sagittatus	Wild Bindweed	CONVOLVULACEAE
Felicia muricata		ASTERACEAE
**** Gomphrena celosioides***	Bachelor's Button	AMARANTHACEAE
Grewia flava	Velvet Raisin	MALVACEAE
Helichrysum argyrosphaerum	Wild Everlasting	ASTERACEAE
Hertia pallens		ASTERACEAE
Laggera decurrens		ASTERACEAE
Lycium horridum		SOLANACEAE
Osteospermum muricatum		ASTERACEAE
Osteospermum scariosum		ASTERACEAE
Pavonia burchelli		
**** Prosopis glandulosa***		FABACEAE
**** Schkuhria pinnata***	Dwarf Marigold	ASTERACEAE
Searsia lancea	Karee	ANACARDIACEAE
Vachellia erioloba	Camel Thorn	FABACEAE
Vachellia hebeclada	Candlepod Thorn	FABACEAE
Vachellia karroo	Sweet Thorn	FABACEAE
Ziziphus zeyheriana	Dwarf Buffalo-thorn	RHAMNACEAE

Appendix G

Curriculum Vitae of EAP

Curriculum Vitae
Hélen Prinsloo

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9520
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Work experience:

Job title:	Owner, Ecologist and GIS Technician
Company:	Bucandi Environmental Solutions
Period:	October 2010 - current
Location:	Viljoenskroon, Free State, South Africa
Job description:	Managing my own environmental consulting business Compiling Environmental Authorisations, including Basic Assessment Reports Conducting specialist ecological studies Compile maps and conduct spatial analyses using ArcGIS 9.3 to produce deliverables for specialist studies and environmental applications.

Job title:	Environmental Scientist
Company:	Clean Stream Environmental Consultants
Period:	June 2009 – September 2010
Location:	Pretoria, Gauteng, South Africa
Job description:	Compiling the following environmental reports and applications: Basic Assessment Reports Scoping Reports Environmental Impact Assessment Environmental Management Program / Plan Integrated Water Use Licence Application Integrated Water and Waste Management Plan Conducting specialist ecological studies Leading and participating in public consultation associated with the abovementioned procedures. Compile maps and conduct spatial analyses using ArcGIS 9.2 to produce deliverables for specialist studies and environmental reports. Compiling budgets and proposals for environmental reports and applications.

Job title:	Coordinator – South African Crane Working Group (SACWG)
Company:	Endangered Wildlife Trust
Period:	January 2008 - February 2009
Location:	Howick, KwaZulu Natal, South Africa
Job description:	Review and update research strategy continuously. Formulate, prioritise and approve research projects as well as ensure acceptable quality of all research projects. Manage delivery of research work in appropriate manner with time frames. Accept overall fundraising responsibility and accountability for SACWG's sustainability. Write fundraising proposals and perform high-level, strategic donor funding activities.

Review conservation strategy annually.
Compile monthly and annual reports and work plans.
Develop and coordinate species action plans.
Lobby nationally and internationally to implement crane habitat objectives.
Ensure the employment of effective, efficient and suitably qualified staff.
Manage a group of 8 administrative and field staff.

Job title: Ecologist
Company: Biological Research Associates
Period: August 2006 – December 2007
Location: Tampa, Florida, USA
Job description: Writing budgets and proposals for environmental monitoring projects.
Conducting wildlife surveys to determining the presence and abundance of listed species.
Permit preparation and application for relocation of wildlife.
Conducting relocation of wildlife such as gopher tortoises, burrowing owls and various other species.
Coordinating research projects focused on the conservation of various wildlife species including gopher tortoises, burrowing owls, sandhill cranes, wading birds, snakes, small mammals, etc.
Writing management plans for wildlife preservation areas.
Compiling reclamation plans for phosphate mines.
Completing Environmental Impact Assessments and providing solutions based on a professional assessment.
Using ArcGIS and related software to report on all actions.
Writing scientific reports.
Delineating wetlands based on soil morphology, vegetation and topography.
Permit preparation and application for wetland impacts, preservation, reclamation and creation.

Job title: Bio Scientist II
Company: Florida Fish and Wildlife Conservation Commission
Period: March 2005 – July 2006
Location: Spring Hill, Florida, USA
Job description: Design and implement wildlife monitoring projects such as deer spotlight counts, turkey surveys, bob-white quail surveys, gopher tortoise surveys, shorebird counts etc.
Design and implement habitat restoration projects on 34 000 acre wildlife management area making use of mechanical action, chemical applications and prescribed fire.
Conducting photopoints and wildlife surveys to monitor the effect of habitat management practices on wildlife and their environment.
Conducting prescribed burns.
Restoration of scrub habitat and surveying for scrub jays.
Apply herbicides to exotic plants.
Restoration of hydrology on a 34 000 acre wildlife management area.
Oversee construction projects for erosion control.
Using ArcGIS and related software to report on management actions.
Writing scientific reports.
Conduct activities related to conservation of Red Cockaded Woodpeckers such as doing nest inserts, banding, roost checks and relocations.

Job title:	Safari coordinator and guide
Company:	High Adventure / SA Adventure
Period:	March 2004 – March 2005
Location:	Atlanta, Georgia, USA
Job description:	Selling photo and hunting safaris to Southern Africa, Argentina and the USA. Designing marketing material and delivering presentations to prospective clients. Attending conventions to liaise with outfitters and clients in order to compile FIT itineraries. Booking safaris based on FIT itineraries. Using airline software (Sabre) to plan and book airfare related to itineraries. Negotiate contracts with outfitters and airlines. Acting as guide on quail and deer hunts in Georgia and Texas.

Job title:	Research Assistant
Company:	Tshwane University of Technology
Period:	February 2002 – October 2003
Location:	Pretoria, South Africa
Job description:	Full-time research towards my master's degree. Studying the ecology of Helmeted Guineafowl on agricultural farmland in order to provide farmers with management plans and to provide hunters with ratios for sustainable utilisation. Constant sight tracking of several flocks of Helmeted Guineafowl. Capturing, tagging and radio-tracking individual guineafowl. Habitat and vegetation analyses. Dissecting approximately 600 guineafowl shot by wingshooters during the hunting season. Shooting and dissecting 5 guineafowl monthly. Collecting morphological, biological and dietary data on dissected specimens. Collecting endo-, ecto- and blood parasites from dissected specimens. Collecting and analyzing data on population dynamics and bag size history in order to investigate the sustainability of wingshooting in the area. Supervising up to 15 students at a time that assisted with field research, sight tracking and dissections. Conducting interviews with farmers and completing questionnaires in order to construct a land-use map covering approximately 200 000 hectares.

Job title:	Research Assistant
Company:	North West University
Period:	January 2000 – January 2002
Location:	Potchefstroom, South Africa
Job description:	Part-time, mostly weekends, field research towards my B.Sc. (Honors) degree. Studying ecology of small mammals as part of a management plan for Mongêna Game Ranch, South Africa. Capturing small mammals using Sherman live traps. Taking morphological measurements of small mammals and releasing them afterwards. Toe-clipping specimens and identifying recaptured specimens to estimate population sizes. Vegetation surveys to establish different habitat types. Relating small mammal surveys to habitat types in order to describe the

ecology of the small mammal species.
Using the occurrence of small mammals as indicators for assessing the status of the habitat in order to provide advice on the management plan for Mongêna Game Ranch.

Job title: Senior Credit Facilitator
Company: Avroy Shlain Cosmetics
Period: July 1996 – December 2000
Location: Midrand, South Africa
Job description: Responsible for collecting approximately R2 000 000 per month from existing clients.
Supervising two credit facilitators.
Liaising extensively with clients over the phone and in person in order to facilitate their accounts.
Regular office duties.

Publications: Sex-related variation in morphology of helmeted guineafowl (*Numida meleagris)* from the Riemland of the north-eastern Free State, South Africa. *South African Journal of Wildlife Research 35(1): 95 – 96 (April 2005).*
Authors: H.C. Prinsloo, V. Harley, B.K. Reilly & T.M. Crowe.

The diet of Helmeted Guineafowl (*Numida meleagris*) in the Riemland of the northeastern Free State, South Africa. *South African Journal of Wildlife Research.*
Authors: Hélen C. Prinsloo, Victor Harley, Prof. B.K. Reilly, Prof. T.M. Crowe.

Identifying potential protected areas in the Grassland Biome of South Africa. *South African Journal of Science 117(3/4)(March 2021)*.
Authors: Hélen C. Prinsloo, Prof. B.K. Reilly, Prof. W. Myburgh.
https://doi.org/10.17159/sajs.2021/7507

Additional private and consulting activities:

June 2002 – August 2003: Providing advice and help with organising of large gamebird hunts (36 people per hunting party) for Mr. Peter Wales in the northeastern Free State, South Africa.
Consulting Mr. Peter Wales and farmers in the northeastern Free State on conservation methods and wingshooting ratios for sustainable utilisation in the area.

February 2003 – May 2003: Consulting Middelburg Collieries on methods of improving the quality of habitat and increasing the numbers of gamebirds on rehabilitated land.

September 2003: Consulting farmers in the Arlington region of the eastern Free State on methods for improving gamebird habitat and ratios for sustainable utilisation.

September 2003: Consulting farmers in the Viljoenskroon region of the northern Free State on methods for improving gamebird habitat and ratios for sustainable utilisation.

October 2002: Speaker at conference day of The South African Journal of Wildlife Research. Topic: The ecology of small mammals on Mongêna Game Ranch, Gauteng, South Africa.

June 2003: Abstract of master's dissertation used in NRF's (National Research

Foundation) annual brochure representing the niche area: Decision Support to the Wildlife Industry.

Volunteer experience:

2000 – 2001: Collecting data on the status of wetlands in Mpumalanga, South Africa, for use in the Rennies Wetland Project.

2002: Tracking elephants in Kruger National Park to collect data on feeding behaviour and cortisol levels in faeces.

Corporate experience:

Personal assistant to credit manager
Credit facilitator
Senior credit facilitator

While studying towards my B.Sc. and Honors degrees, I worked fulltime at Avroy Shlain Cosmetics, a corporate company. I was promoted twice during the period 1997 – 2002 and my duties included assisting the credit manager in regular office activities, full credit control (debt collecting) and supervising other credit facilitators.

Education:

Institution: Tshwane University of Technology
Location: Pretoria, South Africa
Period: 2017-2021
Qualification: D.Tech (Nature Conservation)

Institution: Tshwane University of Technology
Location: Pretoria, South Africa
Period: 2002-2003
Qualification: M.Tech (Nature Conservation) - Cum Laude

Institution: Northwest University
Location: Potchefstroom, South Africa
Period: 2000-2001
Qualification: B.Sc. (Hons.) Zoology - Cum Laude

Institution: UNISA
Location: Pretoria, South Africa
Period: 1996-1999
Qualification: B.Sc (Biology)

Institution: Salomon Senekal Hoërskool
Location: Viljoenskroon, South Africa
Qualification: Senior Certificate
Subjects: Afrikaans (1st language) - A
English - A
Mathematics - A
Accountancy - A
Biology - A
Science - B

Computer skills: MS Office - Expert
ArcView / ArcMap / ArcCatalog / GIS / GPS – Expert
BPCS - Expert
Sabre - Expert
Statistica - Intermediate

Additional training and licences: ArcGIS 9.0
Basic Fire Management
Interagency Prescribed Fire School
Licensed Restricted Herbicide Applicator
Licensed Archeological Resource Monitor
Safe-Capture and Immobilisation of Animals
Natural Plant Communities of Florida
Teambuilding
Communication skills
Junior management

References:

Dr. Ray Jansen: Senior Lecturer - Tshwane University of Technology
email: jansenr@tut.ac.za
Phone: 012 318 6115

Dr. Henry Davies: Chairman - KZN Crane Foundation
email: henry@kzncrane.co.za
Phone: 033 343 3630

Mr. Tim Snow: Project Manager - Endangered Wildlife Trust
email: snowman@ewt.org.za
Phone: 082 802 6223

Prof. Brian Reilly: Professor - Tshwane University of Technology
email: reillyb@techpta.ac.za
Phone: 012 318 5215

Prof. Tim Crowe: Professor - University of Cape Town
email: Timothy.Crowe@uct.ac.za
Phone: 021 650 3292

Mr. Lee Walton: Senior Ecologist - Biological Research Associates
email: lwalton@entrix.com