DRAFT BASIC ASSESSMENT REPORT

DIE VLAKTE NO.731 POULTRY BROILER HOUSE DEVELOPMENT

12 June 2026

GREEN-BOX CONSULTING

Report Prepared By:

Environmental Assessment Practitioner:

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Applicant:

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Applicant Contact Person	Arno van der Nat
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Site Information:

Farm name and number	Farm Die Vlakte No. 731
Region	Boshof
21 Digit Surveyors Code	F00400000000073100000
Area	5.4 ha
Magisterial District	Boshof
District Municipality	Lejweleputswa District Municipality
Local Municipality	Tokologo Local Municipality
Site coordinates (Centre of site)	28°33'08.6"S 25°21'29.5"E

Green-Box Consulting

Revision & Tracking Schedule:

Document Title	Poultry Broiler House Development on the Farm Die Vlakte No.731, District of Boshof, Free State		
Client name & Address	Arbor Acres SA (Pty) Ltd, 48 President Steyn Avn., WESTDENE, Bloemfontein		
Green-Box Consulting Project Number	01/P/2026/DK		
Status	Draft Basic Assessment Report		
Issue Date	12 June 2026		
Lead Authors	Mr. Danie Krynauw		
Registered EAP	Mr. Danie Krynauw – EAPASA – 2019/1348		
Report Distribution	Circulate to	No. of hard copies	No. electronic copies
	I&APs		1
	Authorising Authority	1	1

Acronyms used in this report:

CA	Competent Authority
CBA	Critical Biodiversity Areas
CBD	Central Business District
DESTEA	Department of Economic, Small Business Development, Tourism and Environmental Affairs
DFFE	Department of Forestry, Fisheries and Environment
EAPASA	Environmental Assessment Practitioners Association of South Africa
EIA	Environmental Impact Assessment
EMPR	Environmental Management Program
ESA	Ecological Support Area
I&AP	Interested and Affected Party
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEMBA	National Environmental Management Biodiversity Act (Act No 10 of 2004)
PPP	Public Participation Process
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resource Information System
SANBI	South African National Biodiversity Institute
SDF	Spatial Development Framework
TOR	Terms of Reference
CA	Competent Authority
CBA	Critical Biodiversity Areas

Project team:

Green-Box Consulting has been appointed by Mr Arno van der Nat General Manager of Arbor Acres SA to undertake the Basic Assessment required for the proposed project. The EIA team which is involved in this Process is listed in Table 1 below. This team includes several specialists which have been involved to date.

Table 1: EIA Team

NAME	ORGANISATION	ROLE/STUDY TO BE UNDERTAKEN
ENVIRONMENTAL MANAGEMENT SERVICES		
Danie Krynauw	Green-Box Consulting	Lead EAP (EAPASA) Certified
SPECIALISTS		
Mr. Rikus Lamprecht	Eco Focus	Terrestrial Impact Assessment

Danie Krynauw is the sole director and owner of Green-Box Consulting and has a master's degree in Town and Regional Planning and completed studies in Environmental Management at the University of the Free State. D. Krynauw has over 25 years' experience in the environmental management field and is an EAPASA registered Environmental Assessment Practitioner (EAPASA – 2019/1348). He is also a member of the International Association of Impact Assessments South Africa. He has been project manager of several EIAs, Basic Assessments, Mining Permits and Water Use Licensing applications.

Mr. Krynauw (the EAP) is supported by the EIA Team as outlined in Table 1.

Report details:

Title:	DRAFT BASIC ASSESSMENT REPORT Die Vlakte No.731 Poultry Broiler House Development
Purpose of this report:	This Draft Basic Assessment Report (DBAR) has been compiled in terms of the Environmental Impact Assessment (EIA) Regulations, 2014, promulgated under the National Environmental Management Act (Act No. 107 of 1998), as amended (NEMA). The BAR is required for listed activities that may have a significant effect on the environment and serves as the primary submission to the competent authority to obtain environmental authorisation prior to commencement. The objectives of the Basic Assessment process are to: (a) establish the legislative and policy context within which the proposed activity is to be considered; (b) describe the need and desirability of the activity in relation to the development footprint and socio-economic setting; (c) identify and assess the location of the activity and its footprint based on environmental sensitivity, cumulative impacts, and risks across physical, biological, social, economic, heritage, and cultural aspects; (d) determine the nature, significance, consequence, extent, duration, and probability of potential impacts, and evaluate the degree to which these impacts— (i) can be reversed, (ii) may cause irreplaceable loss of resources, and (iii) can be avoided, managed, or mitigated; (e) identify feasible measures to avoid, manage, or mitigate impacts associated with the proposed activity; (f) document residual risks that require ongoing management and monitoring; and (g) provide an Environmental Management Programme (EMr) that sets out enforceable commitments for mitigation, rehabilitation, and compliance.
Report submission date:	12 June 2026

destea
department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE

(For official use only)

File Reference Number:	
Application Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 as amended and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **09 August 2022**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent and **EAPASA registered** environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? YES

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

Green Box Consulting is appointed by Arbor Acres SA (Pty) Ltd (hereafter referred to as *the Applicant*) as the independent Environmental Assessment Practitioner (EAP) to undertake a legally required Basic Assessment (BA) process for a proposed poultry facility development on the Remaining Extent of the Farm Die Vlakte No. 731, situated outside the municipal urban edge, approximately 12 km east of the town of Boshof in the Free State Province (see Figure 1).

Due to the nature of the development footprints and their proximity to regulated watercourses, the development triggers listed activities in terms of the National Environmental Management Act (NEMA) Environmental Impact Assessment Regulations (2014) as amended. An application for Environmental Authorisation (EA) under NEMA is therefore required prior to the implementation of the proposed development.

The proposed project entails the construction of 4 separate blocks of poultry laying farms and 2 separate blocks of poultry rearing farms. Each of these 6 distinct blocks will be fenced off and will contain 5 broiler houses each (see Figure 2). The infrastructure footprints will comprise a total development area size of approximately ≤ 5.4 ha.

Due to the proximity of the proposed development footprints to watercourses located on the property, and the planned abstraction of groundwater from on-site boreholes to supply its utility requirements, a water use application is required in terms of the National Water Act (Act 36 of 1998) (NWA).

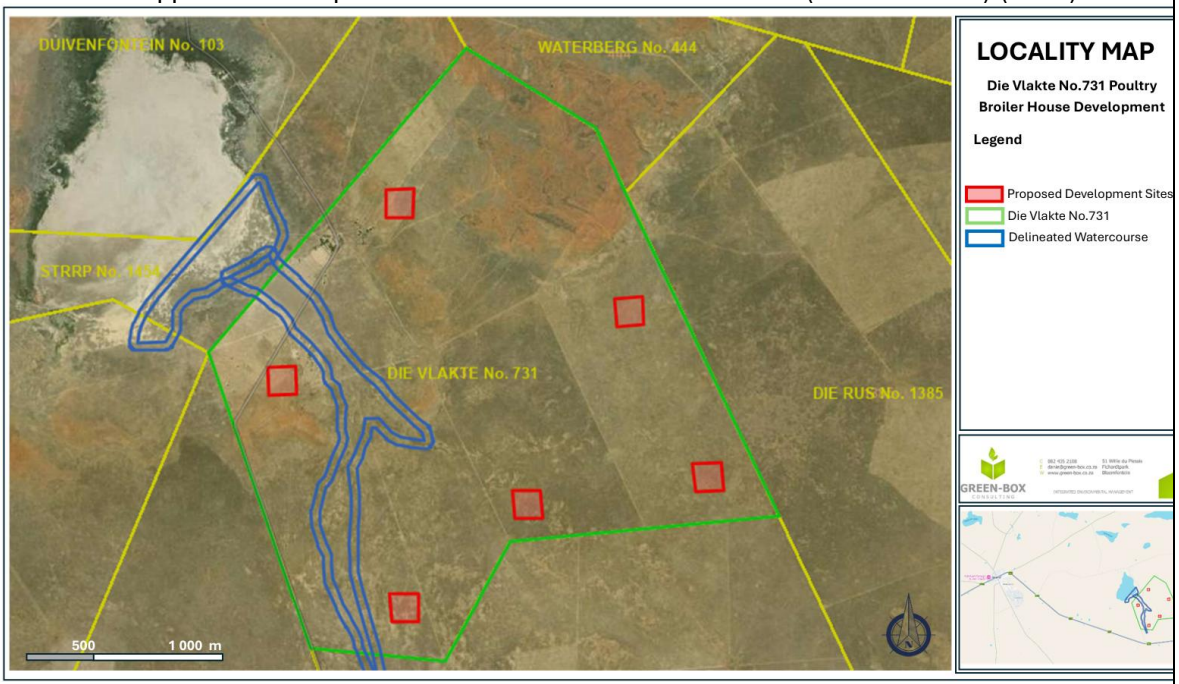


Figure 1: Site Location

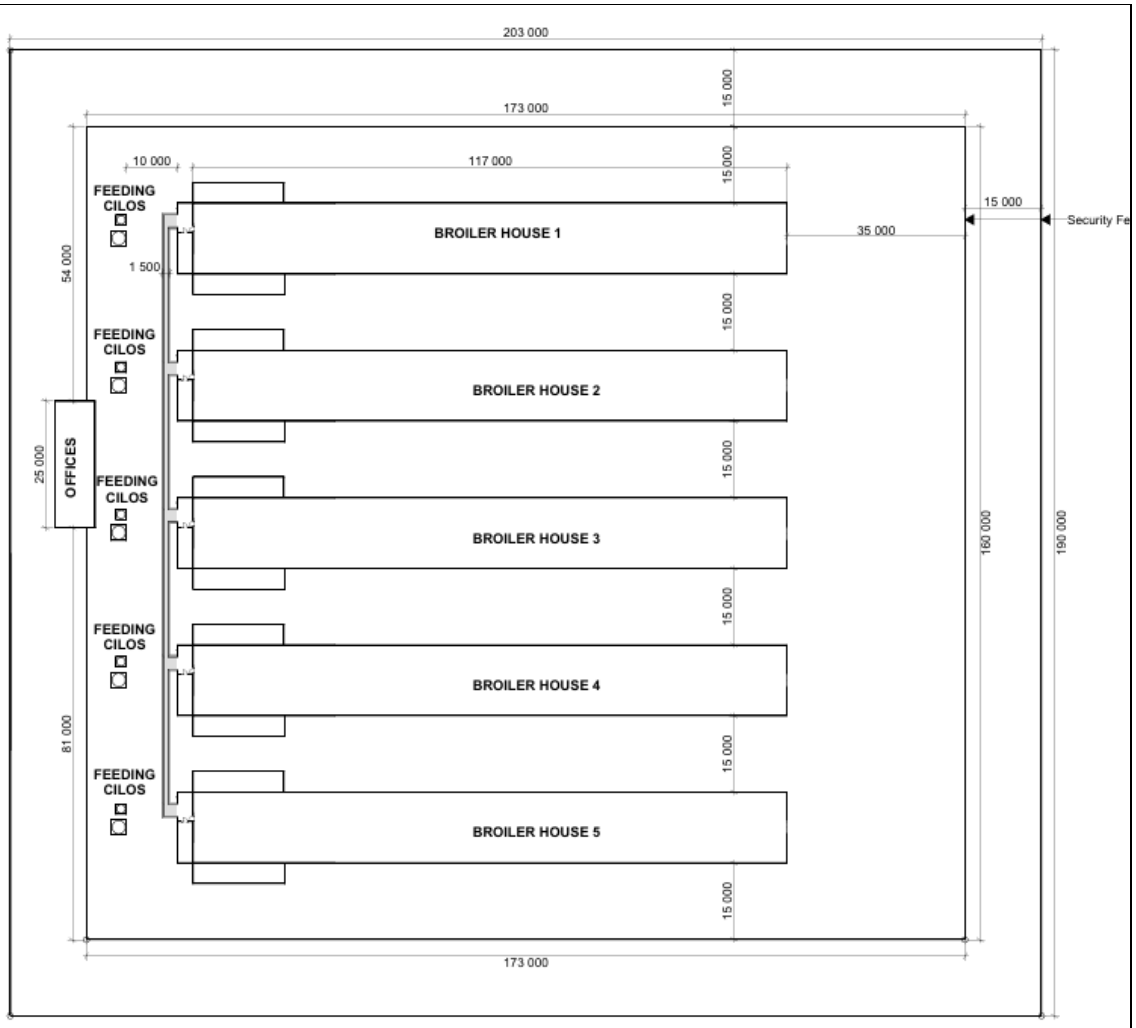


Figure 2: Typical Broiler House Layout (Just-Us Architecture, 2026)

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN 983,984 and 985 (as amended)	Description of project activity
GNR 983, as amended – <u>Listing Notice 1 Activity 5:</u> 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.	Triggered as the project involves building a poultry facility with 6 blocks of 5 houses each (6500 capacity per house) on the Farm Die Vlakte, situated outside the urban edge, with a total capacity of 195 000 poultry.
<u>Listing Notice 1 Activity 27:</u> The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—(i) the undertaking of a linear activity; or(ii)	Triggered because the total construction footprint for the 6 blocks spans up to 5.4 hectares, requiring the clearing of indigenous karroid vegetation, exceeding the 1-hectare threshold.

maintenance purposes undertaken in accordance with a maintenance management plan.	

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h) of GN 326, Regulation 2014 as amended. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The preferred site alternative is located on the Remaining Extent of the Farm Die Vlakte No. 731, situated outside the municipal urban edge, approximately 12 km east of the town of Boshof within the Tokologo Local Municipality in the Free State Province. The proposed activity involves the construction of a new poultry facility consisting of 4 separate blocks of poultry laying farms and 2 separate blocks of poultry rearing farms. Each of these 6 distinct blocks will be fenced off and will contain 5 broiler houses	28°33'09" S	25°21'30" E

each, creating a total development footprint size of approximately ≤ 5.4 ha across the parent property. No other alternative sites exist or are feasible for assessment.		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Not Applicable		
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
Not Applicable		

In the case of linear activities: **Not Applicable**

Alternative:	**Latitude (S):**	**Longitude (E):**
Alternative S1 (preferred)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The preferred layout alternative involves the optimised configuration of 4 separate blocks of poultry laying farms and 2 separate blocks of poultry rearing farms on the Remaining Extent of the Farm Die Vlakte No. 731. This design features a total infrastructure footprint of approximately ≤ 5.4 ha, with each of the 6 blocks completely fenced off and housing 5 broiler houses. This layout was proactively chosen because it completely avoids all delineated watercourses	Site 1 - 28°32'58.83"S Site 2 – 28°33'24.30"S Site 3 – 28°34'3.39"S Site 4 – 28°34'9.38"S Site 5 – 28°34'33.63"S Site 6 - 28°33'40.30"S	25°21'56.98"E 25°22'58.57"E 25°23'19.48"E 25°22'31.13"E 25°21'58.26"E 25°21'25.77"E

and high-sensitivity ecological zones on the property. All infrastructure footprints are placed well clear of the northeastern rocky ridge to protect critical Secretarybird nesting habitats. Furthermore, the entire layout maintains a strict protective buffer from local aquatic features, with the closest infrastructure point (Rearing House 6) safely positioned approximately 100 m east of the non-perennial, ephemeral watercourse confluence. This configuration represents the most environmentally sustainable and operationally feasible layout for the applicant.		

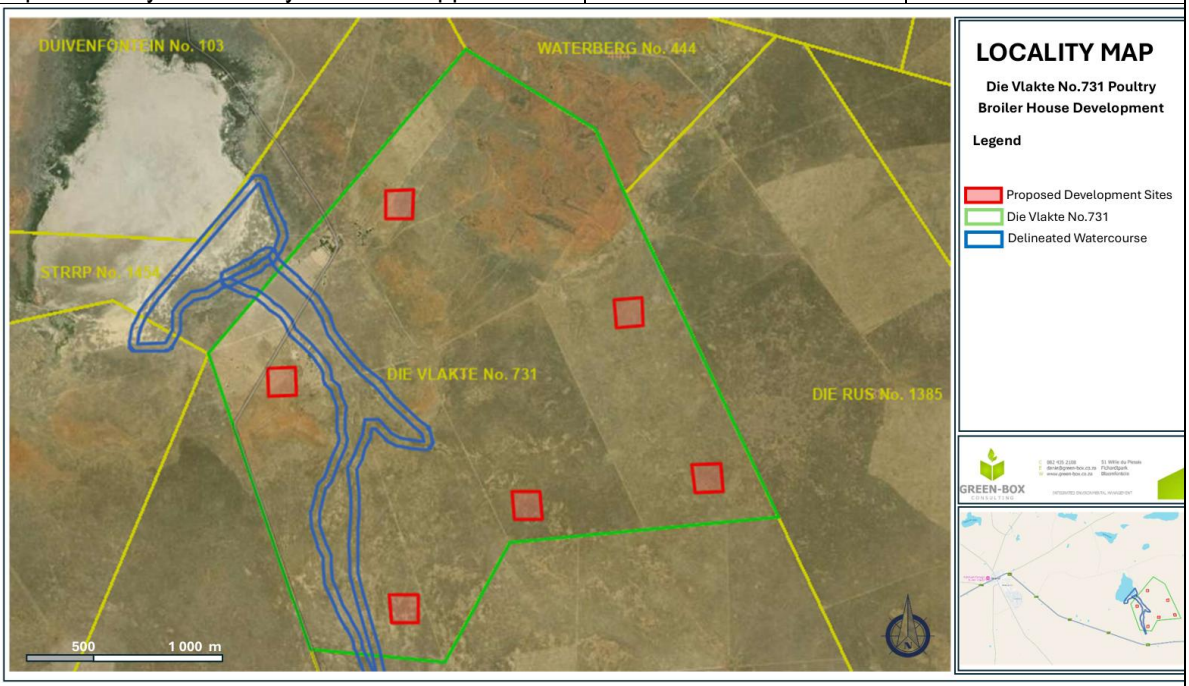


Figure 3: Layout alternative 1

Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 2 represents the initial project design where two of the proposed poultry houses were located much closer to the delineated watercourses on the farm property. While this option met the basic spatial requirements for the poultry facility, it was rejected due to heightened environmental risks. Placing infrastructure in close proximity to the non-perennial, ephemeral drainage lines significantly increased the potential for edge-effect contamination, surface water runoff pollution, and accelerated soil erosion during heavy downpours. It also failed to maintain the required protective buffer zones necessary to safeguard the local aquatic ecosystem and associated drainage paths.	Site 1 - 28°32'58.83"S Site 2 – 28°33'24.30"S Site 3 – 28°34'3.39"S Site 4 – 28°34'9.38"S Site 5 - 28°34'33.52"S Site 6 - 25°21'47.60"E	25°21'56.98"E 25°22'58.57"E 25°23'19.48"E 25°22'31.13"E 25°21'47.60"E 25°21'52.06"E

Consequently, this layout was abandoned in favour of the more sensitive and ecologically responsible configuration under Alternative 1 (see Figure 3).		

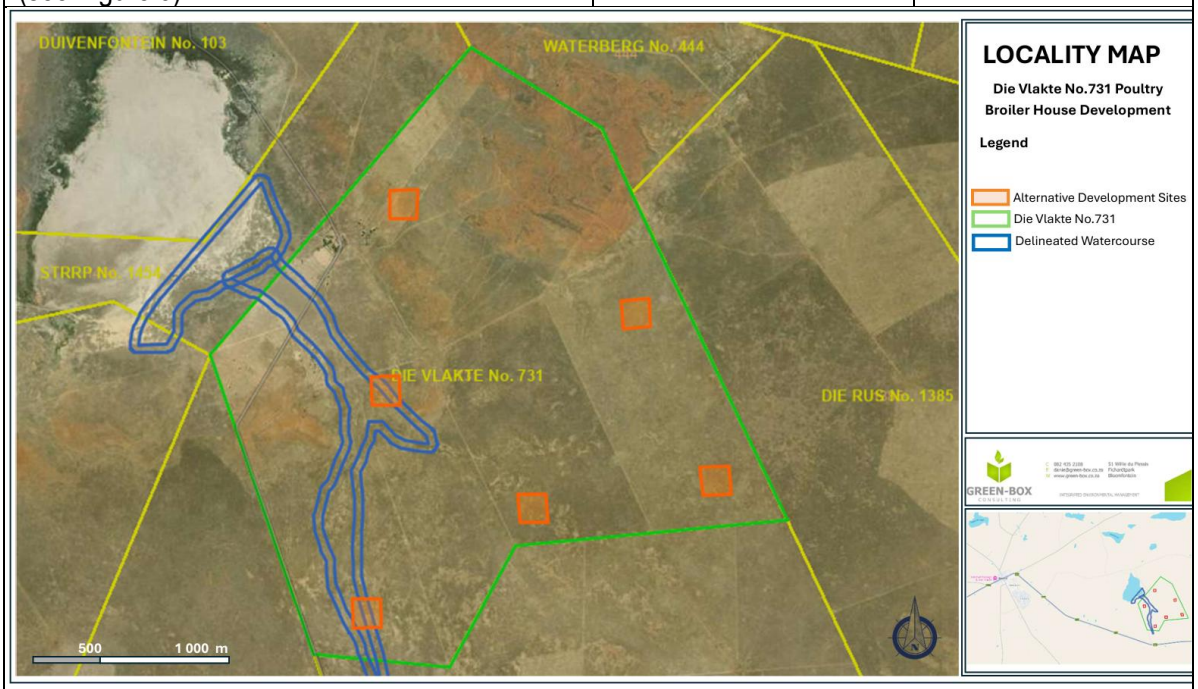


Figure 4: Layout Alternative 2

Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
Not Applicable		

c) Technology alternatives

Alternative 1 (preferred alternative):
The preferred technology alternative for heating the thirty proposed poultry houses relies on diesel combustion utilising dedicated, small localised storage tanks installed at each of the six fenced-off blocks. This method is preferred as it ensures highly localised, consistent thermal regulation for both the laying and rearing house environments, securing strict operational climate isolation independently across each block. For utilities and facility operations, the project will tie directly into the existing municipal electrical infrastructure framework for its main power supply, while sustainably abstracting groundwater from on-site boreholes to fulfil all water requirements. Sanitation and domestic wastewater from the on-site office building will be managed independently through the installation of a localised, closed septic tank sewage system to ensure secure containing of biological waste
Alternative 2
Not Applicable
Alternative 3
Not Applicable

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternative 1 (preferred alternative)
Not Applicable
Alternative 2
Not Applicable
Alternative 3
Not Applicable

e) No-go alternative

The No-Go Alternative refers to the option of not proceeding with the proposed development of the poultry facility. Under this alternative, the existing karroid grassland and property conditions would remain unchanged, and no infrastructure development, fencing, or clearance of vegetation would take place. While this option would completely eliminate short-term, construction related environmental impacts such as the localised clearance of approximately 5.4 hectares of indigenous vegetation, temporary noise, potential hydrocarbon spill risks from construction machinery, and initial disturbances near the non-perennial watercourses, it would result in significant lost opportunities for the local area and the agricultural sector.

If the development is not implemented, the potential economic benefits, long-term employment opportunities, and specialised localised production capacity for the applicant, Arbor Acres (Pty) Ltd, would not be realised. From an ecological perspective, opting for the No-Go Alternative means the proactive layout revisions and formal environmental management controls established during the assessment process would not be implemented. The current ecological support areas and nesting habitats for the local Secretarybird population would remain in their baseline state, but without the structured environmental oversight, alien invasive plant monitoring, and storm-water management frameworks proposed under the preferred development layout.

For these reasons, the No-Go Alternative is not considered a desirable option for the property, and proceeding with the carefully mitigated, ecologically responsible development under Alternative 1 remains the preferred approach.

Paragraphs 3 – 13 below should be completed for each alternative.

3. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:	**Size of the activity:**
Alternative A1[1] (preferred activity alternative)	Approximately 54 000 m^2
Alternative A2	Approximately 54 000 m^2
Alternative A3 (if any)	

or, for linear activities: **Not Applicable**

[1] "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	[redacted]
Alternative A2 (if any)	
Alternative A3 (if any)	

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	10366075.64 m^2
Alternative A2 (if any)	[redacted]
Alternative A3 (if any)	

4. SITE ACCESS

Does ready access to the site exist?	YES
If NO, what is the distance over which a new access road will be built	[redacted]

Describe the type of access road planned:

The proposed development site is directly accessible from the R64 provincial road, which runs along the southern boundary and connects to Boshof, eliminating the need for new long-distance access roads. Fenced production blocks will be situated adjacent to this corridor, utilising existing farm tracks for internal movement during construction and operation.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s;)
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and

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

6. LAYOUT/ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

8. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report**.** It must be supplemented with additional photographs of relevant features on the site, if applicable.

9. FACILITY ILLUSTRATION

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

10. ACTIVITY MOTIVATION

Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?	YES		Please explain
The development takes place on land that carries existing agricultural land use rights. The construction of an intensive animal production facility, specifically a commercial poultry broiler and laying house operation, is an established agricultural practice that aligns directly with the primary purpose and zoning of rural farm land. Because the development optimises the utilisation of the site for food production without requiring a change in the overarching land use category, it is fully permitted in terms of the existing land use rights			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		Please explain
The proposed development aligns with the Free State Provincial Spatial Development Framework (PSDF) by prioritising agricultural growth, rural development, and regional food security. By establishing a commercial poultry facility in a rural area, the project supports provincial goals for agro-economic productivity, job creation, and sustainable land use.			
(b) Urban edge / Edge of Built environment for the area	YES		Please explain
The development is situated approximately 12 km east of the town of Boshof, placing it well outside the municipal urban edge and within a designated rural, agricultural zone. Because the development consists of agricultural infrastructure that requires operational isolation and spatial separation from high-density urban nodes for biophysical security, its placement outside the built environment is appropriate. The development therefore complies with urban edge planning policies, as it does not promote urban sprawl or encroach on land earmarked for future township expansion			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES		Please explain
The development directly aligns with the strategic objectives of the Tokologo Local Municipality's Integrated Development Plan (IDP) and Spatial Development Framework (SDF). These municipal planning instruments prioritise rural economic development, localised job creation, and the promotion of commercial agricultural productivity to strengthen the regional economy. Because the development optimises existing agricultural land for high-yield food production without requiring infrastructure extensions from the local authority, it supports rather than conflicts with municipal mandates. Approval			

of this application will therefore not compromise the integrity of the existing approved and credible municipal IDP or SDF			
(d) Approved Structure Plan of the Municipality	YES		Please explain
The Tokologo Local Municipality does not maintain a separate, standalone Approved Structure Plan for this specific rural zone, as spatial and development priorities are managed dynamically through the integrated municipal Spatial Development Framework (SDF). The development is entirely consistent with these broader municipal planning mechanisms, which designate the zone for continued and intensive agricultural production. Because the development supports the primary planning objective of driving commercial agro-economic growth on rural land, it does not conflict with any municipal planning instruments or compromise municipal structure planning.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	Not Applicable		Please explain
There is no formally adopted Environmental Management Framework (EMF) specific to this local municipality. Consequently, the development cannot compromise the integrity of any localised environmental management zones. From a broader environmental management perspective, potential impacts on localised ecological features such as nearby ephemeral watercourses and local fauna were comprehensively assessed through ground-truthed specialist studies. The development configuration was proactively revised to incorporate strict buffer zones that protect local sensitive features. The development is therefore fully consistent with regional environmental management priorities and the principles of sustainable development, as it promotes economic and agricultural productivity while ensuring that local ecosystems are appropriately safeguarded and managed under a formal compliance framework			
(f) Any other Plans (e.g. Guide Plan)		NO	Please explain
Not Applicable			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES		Please explain
The land use associated with the development falls squarely within the long-term planning and timeframes of the currently approved municipal Spatial Development Framework (SDF). The local planning instruments explicitly designate rural areas outside the urban edge for ongoing and enhanced commercial agricultural development. Because the development supports regional food security and agricultural economic resilience. both of which are identified as permanent, high-priority programs within the municipal Integrated Development Plan (IDP), it directly satisfies the strategic spatial timeline. The development does not require a change in land use or zoning, ensuring it remains fully aligned with the phased infrastructure and growth targets agreed to by the relevant authorities.			

4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES	[redacted]	Please explain
The development addresses a critical societal and economic priority at both a strategic national level and a localised regional scale. Nationally, expanding commercial poultry production directly supports the South African Poultry Master Plan, which aims to boost local food security, substitute imports, and stimulate agricultural employment. At the local level within the Tokologo Local Municipality, the area suffers from limited economic diversification and high unemployment rates. The development addresses these local socio-economic challenges by generating immediate job opportunities during construction and sustainable, long-term employment during the operational phase. Because the development is situated in a rural agricultural zone well away from urban settlements, it avoids the localised conflicts, such as odour or traffic concerns, that would make it inappropriate for a town setting. It therefore delivers vital economic upliftment to the community in a highly appropriate and compatible local context.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	[redacted]	Please explain
The development will not place any additional burden on municipal water or sanitation infrastructure because it relies entirely on self sufficient on site services. The development will tie directly into the existing municipal electrical infrastructure which has adequate capacity to support operations. All bulk water required for the poultry houses will be abstracted independently from on-site boreholes, avoiding the use of municipal supply. Furthermore, all domestic waste and sewage from the office building will be managed independently through a newly installed septic tank system. No additional municipal service capacity needs to be created to cater for the development.			
6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	[redacted]	Please explain
The development does not require any specific municipal capital infrastructure allocation or service extensions because it relies entirely on self-sufficient utilities. While private commercial agricultural projects are not individually listed in municipal infrastructure master plans, the development aligns with the broad planning frameworks that designate this rural zone for independent commercial farming expansion. Because the electrical connection will utilise existing infrastructure grid networks and all water and sanitation needs are managed privately on site via boreholes and a septic system, there are no negative implications for the infrastructure planning of the local municipality. The development will not alter the priority or placement of public services, nor will it create public opportunity costs or divert municipal capital budget away from essential community infrastructure projects.			

7. Is this project part of a national programme to address an issue of national concern or importance?		NO	Please explain
The development directly supports the strategic objectives of the South African Poultry Master Plan, which is a formal national program established to drive localisation, enhance agricultural productivity, and protect regional food security. Avian production and affordable protein supply are matters of national importance, and expanding localised production capacity aligns with national directives to reduce import reliance and strengthen commercial value chains. Furthermore, by generating sustainable rural employment and fostering agro-economic growth, the development contributes directly to the national agenda for job creation and poverty alleviation as outlined in the National Development Plan.			
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES		Please explain
The location factors heavily favour this specific land use due to the combination of operational isolation, existing transport access, and verified ecological compatibility. From a biophysical perspective, poultry production requires a rural setting well away from high-density urban areas to maintain strict biosecurity protocols and prevent the spread of avian diseases. The development sits in an established agricultural region with direct access to the R64 provincial road, which allows for the efficient transport of feed, materials, and produce without routing heavy vehicles through sensitive residential zones. Furthermore, the local topography allows the development layout to be configured in a way that completely avoids high-sensitivity natural features. Ground-truthing confirmed that the footprint maintains safe buffer distances from local non-perennial watercourses and sensitive rocky ridge habitats, ensuring the land use fits into the broader environmental and agricultural context of the area.			
9. Is the development the best practicable environmental option for this land/site?	YES		Please explain
The development represents the best practicable environmental option because it balances commercial agricultural productivity with strict ecological preservation. Ground-truthed specialist findings were directly integrated into the project planning to ensure the development layout completely avoids all high-sensitivity biophysical features. The infrastructure blocks are positioned away from the northeastern rocky ridge to protect critical nesting habitats for local avifauna. Furthermore, the layout respects hydrological constraints by maintaining a protective buffer zone, keeping the nearest footprint approximately 100 metres clear of the local non-perennial watercourse confluence. Because the project utilises a highly localised footprint of under six hectares on a large rural farm property, it limits habitat fragmentation while driving sustainable food production. When paired with the formal mitigation frameworks and self-sufficient on-site services, this specific development layout achieves the most responsible environmental outcome for the land.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES		Please explain
The strategic socio-economic and food security benefits of the development outweigh the localised biophysical impacts, which can be successfully managed through formal mitigation measures. On an economic scale, the development injects private capital into a rural municipality, generating immediate construction jobs and sustainable long-term employment opportunities in an area characterised by high unemployment. It also strengthens national food security by expanding local poultry production in alignment with the South African Poultry Master Plan.			

Conversely, the negative environmental impacts are minor and highly localised. The development requires the clearing of under six hectares of vegetation across a large rural property, and the layout was proactively revised to avoid high-sensitivity features. By maintaining safe buffer zones that keep the infrastructure clear of the northeastern rocky ridge and approximately 100 metres away from the non-perennial watercourse confluence, critical avifauna nesting areas and drainage lines are fully protected. With the implementation of the strict Environmental Management Programme and the independent nature of the on-site utilities, the long-term positive contributions to the community and agricultural sector clearly outweigh the minimal environmental risks.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES		Please explain
The development will not set an undesirable or unplanned precedent because it occurs on land already designated and utilised for agricultural purposes. Intensive animal production and commercial farming operations are well-established, standard land uses within the Tokologo Local Municipality's rural landscape. Because the development conforms completely to the existing agricultural zoning and does not require a change in land use rights or a shift in the municipal urban edge, it aligns with ongoing planning frameworks rather than creating a new planning deviation. Furthermore, any future similar developments in the region would still require independent, site-specific environmental assessments and water use authorisations based on their own localised biophysical constraints. The project merely reinforces the existing, intended agricultural character of the area rather than setting a precedent for conflicting or ad-hoc land use patterns.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		NO	Please explain
The development takes place entirely within the boundaries of a privately owned commercial farm property and will not infringe upon the constitutional, environmental, or property rights of any individuals in the area. Potential localised disturbances typically associated with construction and operations, such as dust, noise, or traffic, will be controlled through the strict implementation of the Environmental Management Programme. Biosecurity and health risks are mitigated by the remote, rural location of the site, which ensures adequate physical separation from residential communities and high-density urban nodes. Furthermore, because the project relies entirely on self-sufficient on-site boreholes for water supply and a private septic tank system for sanitation, it will not reduce the capacity or availability of municipal services for local citizens.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		NO	Please explain
The development is situated approximately 12 kilometres east of the town of Boshof, placing it deep within a designated rural and agricultural zone well beyond the built environment. Because the development consists entirely of commercial agricultural infrastructure that requires strict biosecurity isolation and separation from high-density residential areas, it is appropriately located away from urban settlements. The development does not require the extension of municipal services, nor does it encourage residential or industrial sprawl along the urban periphery. By remaining confined to an established rural property zone, the development respects the integrity of municipal spatial boundaries and will not compromise or alter the urban edge as defined by the local municipality.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES		Please explain
The development contributes directly to the objectives of Strategic Integrated Project 11 (SIP 11), which focuses on Agri-logistics and Rural Infrastructure. SIP 11 aims to improve investment in agricultural			

infrastructure, enhance rural production capacity, and support localised value chains to ensure national food security. By establishing a modern, commercially viable poultry facility on rural agricultural land, the development introduces localised private infrastructure investment that expands the national food production footprint. Furthermore, it strengthens agro-processing capabilities and creates direct, sustainable employment opportunities within a vulnerable rural economy, aligning perfectly with the core socio-economic mandates of the national infrastructure plan.
15. What will the benefits be to society in general and to the local communities? Please explain
For society in general, the development strengthens national food security by expanding domestic poultry and egg production in direct alignment with the strategic goals of the South African Poultry Master Plan. By increasing local commercial capacity, the project supports a more resilient agricultural value chain and contributes to stabilising the supply and affordability of essential, high-quality protein for consumers nationwide. For the local communities within the Tokologo Local Municipality, the development acts as a much needed catalyst for rural economic growth. The construction and operational phases will generate direct, localised employment opportunities, helping to alleviate the high unemployment and poverty rates characteristic of the region. Additionally, the injection of private capital into the local economy stimulates secondary business activities, such as regional transport and supply procurement networks, ensuring long-term sustainable development for the immediate rural area.
16. Any other need and desirability considerations related to the proposed activity? Please explain
An essential consideration for the development is the proactive alignment of biosecurity and animal welfare with modern environmental planning. Standard poultry operations require extensive biophysical separation to prevent disease transmission and isolate production cycles. By selecting a site in an established, low-density rural zone, the development ensures maximum operational isolation, which reduces the risk of avian disease outbreaks and limits the need for intensive veterinary medical interventions. Furthermore, the layout design explicitly incorporates modern climate-controlled housing technology. This infrastructure minimises internal thermal stress for the livestock while optimising feed and water use efficiency on-site. This operational configuration, combined with self-sufficient borehole abstraction and private waste handling, allows the development to achieve high commercial yields without straining public municipal infrastructure or compromising the surrounding agricultural character of the region.
17. How does the project fit into the National Development Plan for 2030? Please explain
The NDP 2030 identifies the agricultural sector as a primary catalyst for economic growth and employment generation within vulnerable rural landscapes. By establishing a commercial poultry production facility on rural land, the development contributes directly to the national target of expanding sustainable employment opportunities outside of major urban economic nodes. Furthermore, the development supports the NDP mandate for rural infrastructure development and food security. It achieves this by bringing private capital investment into the local municipality. This specialised infrastructure increases the domestic production volume of an affordable, essential protein source, supporting the national goal of building a food security. Finally, the project promotes inclusive growth by transferring skills in advanced agricultural practices to local community members.
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.
The proposed development has been planned and assessed in line with the general objectives of Integrated Environmental Management as outlined in Section 23 of the National Environmental Management Act (NEMA, 1998). Key considerations include:

Sustainable Development:

The development balances socio-economic benefits, including immediate job creation during construction and enhanced commercial agro-economic productivity for the poultry sector, with environmental protection by configuring the production footprints within localised areas under six hectares rather than fragmenting the entire rural farm property.

Avoidance, Minimisation, and Mitigation of Impacts:

Potential environmental impacts on the local ephemeral drainage lines and sensitive avifauna nesting habitats have been identified through ground-truthed specialist studies. The development layout was proactively revised to completely avoid the northeastern rocky ridge and maintain a protective 100-metre buffer from the non-perennial watercourse confluence.

Environmental Awareness and Participation:

The Basic Assessment process includes structured stakeholder engagement and consultation with neighbouring landowners, Interested and Affected Parties, and relevant conservation authorities. This ensures transparency and the incorporation of relevant environmental and social concerns.

Integrated Planning:

The development has been assessed in the context of national, provincial, and local planning instruments, including the South African Poultry Master Plan, the Free State Provincial Spatial Development Framework, and the Tokologo Local Municipality IDP and SDF, ensuring direct alignment with broader agro-industrial growth and rural development objectives.

Precautionary Principle:

Where risk exists regarding potential impacts, such as surface water runoff or localised biological waste handling, mitigation measures, isolated diesel storage, and a closed septic tank sewage system have been explicitly incorporated into the design to prevent or minimise environmental harm during both the construction and operational phases.

By addressing these objectives, the development demonstrates responsible environmental management, compliance with legislative requirements, and promotion of sustainable and socially beneficial development.

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

The proposed development has been planned and assessed in accordance with the environmental management principles outlined in Section 2 of the National Environmental Management Act (NEMA, 1998):

Sustainable Development:

The project promotes socio-economic development, including local employment and support for the commercial agricultural sector, while minimising environmental impacts by configuring the production footprints within localised areas under six hectares rather than fragmenting or developing the entire rural farm property.

Avoiding and Minimising Environmental Impacts:

Potential impacts on the local ephemeral drainage lines and sensitive avifauna nesting habitats have been identified, and specific mitigation measures, such as shifting the infrastructure layout away from the northeastern rocky ridge and maintaining a protective 100-metre watercourse buffer, have been proposed to prevent, minimise, or remedy adverse effects.

Equitable Access and Social Responsibility:

The development within the rural agricultural zone ensures that any potential operational or biosecurity risks are kept completely clear of high-density residential areas, avoiding impacts while securing long-term economic upliftment and job creation for the local community.

Integration and Consideration of Environmental, Social, and Economic Factors:

The assessment integrates environmental, social, and economic considerations, ensuring that the development aligns with the South African Poultry Master Plan, the Tokologo Local Municipality IDP and SDF, and broader provincial agricultural growth frameworks.

Precautionary Principle:

Where uncertainty exists regarding potential impacts, such as surface water runoff or localised biological waste handling, precautionary measures, isolated diesel storage frameworks, and a closed septic tank sewage system have been applied to avoid or reduce harm to the environment.

Public Participation and Accountability:

Stakeholders and the affected community have been engaged through the Basic Assessment process, promoting transparency and ensuring that local concerns and those of adjacent landowners are addressed in the decision-making process.

By incorporating these principles, the project demonstrates compliance with NEMA, promotes sustainable development, and ensures environmental, social, and economic considerations are balanced in the decision-making process

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management Act, 1998 (Act No. 107 of 1998)	2014 NEMA Regulations applicable; listed activities triggered. NEMA principles and Section 28(1) Duty of Care apply.	National Department of Environmental Affairs and Tourism (DFFE) & Free State Department of Economic Development, Tourism and Environmental Affairs (DESTEA)	1998
National Water Act (Act 36 of 1998)	Water use must be registered and managed in accordance with licensing requirements.	DWS	1998
National Heritage Resources Act (Act 25 of 1999)	Any development must consider heritage resources; if any heritage features are present on site or nearby, mitigation measures may be required.	South African Heritage Resources Agency (SAHRA) / Provincial Heritage Resources Authority	1999

National Waste Management Act, (Act 59 of 2008)	Governs disposal of manure, mortalities, and other waste streams.	DFFE	2008
South African Poultry Association (SAPA) Code of Practice (2022)	Provides standards for housing, stocking densities, feed, water, and welfare for broilers and layers.	SAPA	2002

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES ☐
If YES, what estimated quantity will be produced per month?	Approximately 40 m^3

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

The solid construction waste generated during the construction and initiation phase, consisting primarily of inert material such as excavated soil, rock, excess concrete fragments, building rubble, and general packaging materials, will be managed through a structured hierarchy of minimisation, reuse, and responsible disposal.

Waste materials will be sorted and separated at source within designated, temporary waste collection areas at each of the fenced production blocks. Inert building rubble and clean excavated soil will be stockpiled separately from general domestic or hazardous construction waste to facilitate reuse and prevent cross-contamination.

To minimise the volume of waste requiring external disposal, clean excavated soil and suitable rock material will be backfilled and utilised on-site for foundational levelling, embankment stabilisation, and the maintenance of the localised internal farm tracks.
Packaging materials, timber pallets, and scrap metal will be separated and collected by certified recycling contractors wherever feasible.

Any remaining non-recyclable structural waste and general construction refuse will be temporarily stored in covered skips to prevent windblown litter or scavenging. This material will be collected at regular intervals and transported via covered trucks to the nearest registered and licensed municipal landfill site that has the permitted capacity to accept general and building waste. No burning, burying, or long-term dumping of construction waste will be permitted anywhere on the property.

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

The non-recyclable solid construction waste and building refuse will be collected at regular intervals and transported via covered vehicles to the nearest registered and licensed municipal landfill site, historically the Boshof landfill site, which possesses the permitted capacity to receive general building waste.

Prior to transportation, all materials will be temporarily contained within designated, covered skips situated inside the fenced production blocks to ensure no windblown litter or scavenging occurs on the property. Clean, inert materials such as excavated soil and rock will be separated at source and entirely repurposed on-site for structural backfilling, foundational levelling, and the reinforcement of the internal farm tracks, thereby reducing the total volume of waste requiring external disposal.

The contractor will maintain accurate waste disposal manifests and receipts from the licensed facility to verify compliance with national environmental regulations, and no informal burning, burying, or dumping of waste will be permitted anywhere on the land.

Will the activity produce solid waste during its operational phase?	NO
If YES, what estimated quantity will be produced per month?	Approx. 120 m^3

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

The operational phase will generate distinct streams of solid waste, primarily consisting of dry poultry manure mixed with bedding material, also known as poultry litter, bird mortalities from natural attrition, and general domestic refuse from the office building.

The poultry litter will be managed through a dry-handling system where it remains inside the climate controlled houses until the end of each production cycle, preventing any environmental exposure.

Once a cycle is complete, the dry litter will be mechanically scraped out, loaded directly into covered commercial vehicles, and immediately transported off-site to be sold or supplied to local agricultural farms for use as organic fertilizer or compost, ensuring that no large-scale stockpiling occurs on the property.

Mortalities will be collected daily from the houses and temporarily stored in secure, biological waste containers or specialised on-site mortality pits designed with impermeable linings to prevent scavenging, odour, and groundwater contamination. These mortalities will be regularly collected and transported by a registered service provider to a licensed rendering facility or incinerator, or handled on-site through a strictly managed composting process in accordance with veterinary health guidelines. A lion farmer in the area also agreed to receive mortalities.

General domestic waste from the office building will be collected in covered bins and integrated into the municipal waste management stream for disposal at the nearest registered landfill site. No informal dumping, burying, or open burning of any operational waste will be permitted anywhere on the property to safeguard local biosecurity and ensure full environmental compliance.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

The registered municipal waste disposal facility that will be used for the final disposal of general, non-recyclable solid waste is the Boshof Landfill Site, which is the designated and licensed municipal waste disposal facility operated by the Tokologo Local Municipality.

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

The solid waste that does not feed into a municipal waste stream, which comprises commercial agricultural process waste such as poultry litter and bird mortalities, will be disposed of through direct off-site agricultural utilisation and certified specialised processing facilities. The dry poultry litter will be scraped from the floors at the end of each production cycle and loaded directly into covered bulk transport vehicles to be distributed immediately to pre-contracted local crop farmers for use as organic agricultural fertilizer, ensuring that no large-scale manure stockpiles are left exposed on the property.

Mortalities collected during daily inspections will be temporarily held in secure, closed biological waste containers on-site to eliminate odour and prevent scavenging before being collected by a registered agricultural service provider for transport to a licensed rendering plant or a specialised commercial incineration facility. A lion farmer in the area also agreed to receive mortalities. Any hazardous operational waste, such as spent veterinary chemical containers or used maintenance hydrocarbons, will be isolated in a bunded storage area on-site and collected by an accredited hazardous waste management contractor for disposal at a formally registered hazardous landfill site.

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? [redacted] NO
If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? [redacted] NO
If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? [redacted] NO
If YES, what estimated quantity will be produced per month? [redacted]
Will the activity produce any effluent that will be treated and/or disposed of on site? Yes [redacted]
If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

The development will produce wash-water effluent from the periodic cleaning of the poultry houses, which will be managed and disposed of entirely on-site using a separate system from the domestic sewage. At the end of each production cycle, after the dry poultry litter has been completely scraped out and removed from the houses, the internal floors and walls will be washed down and disinfected.

This wash-water effluent will drain into localised, impermeable wash-water collection sumps or specialized containment tanks installed at each of the six production blocks, ensuring that none of the wastewater escapes into the surrounding environment or local soils. The collected wash-water will be allowed to settle, and the liquid will be carefully managed through a dedicated on-site evaporation pond system or reused responsibly for dust suppression on internal farm tracks, provided it meets the quality standards set out in the National Water Act General Authorisations.

Alternatively, if required by the final Water Use Licence conditions, the captured wash-water will be regularly pumped out of the containment tanks by a registered service provider and hauled to a licensed waste disposal facility. Normal domestic sewage from the office building will be routed to a separate, newly installed septic tank and soakaway system, ensuring that all liquid waste streams are effectively controlled on-site without any reliance on or connection to the municipal sewage network.

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

If YES, provide the particulars of the facility:

Facility name:	.		
Contact person:			
Postal address:			
Postal code:			
Telephone:		**Cell:**	
E-mail:		**Fax:**	

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

Not Applicable

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that exhaust emissions and dust associated with construction phase activities?		NO
If YES, is it controlled by any legislation of any sphere of government?		NO

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

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

Not Applicable

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?		NO

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?	YES	
If YES, is it controlled by any legislation of any sphere of government?		NO

Describe the noise in terms of type and level:

During the construction phase, the development will generate localised, mechanical noise through the use of heavy earthmoving machinery, such as excavators, tractor-loader-backhoes, delivery trucks, and concrete mixers, during initial site clearing, foundation excavations, and structural assembly. Noise levels will typically range between 70 and 85 decibels (dB) at the immediate source, which is standard for agricultural building projects. This noise will be strictly intermittent, confined to standard daylight working hours between 07:00 and 17:00, and will attenuate naturally over distance due to the remote, isolated positioning of the production blocks on the large farm property, avoiding disturbance to any distant residential nodes.

During the operational phase, the development will generate continuous, low-frequency mechanical noise from the automated ventilation and extraction fans required to maintain optimal climate-controlled conditions inside the poultry houses. The operational noise level from these automated extraction fans and the localised feed auger delivery systems will typically range between 50 and 65 decibels (dB) when measured adjacent to the structures. Because the development is situated in a rural agricultural zone well away from urban settlements and surrounded by open veld, this operational noise will blend into the baseline agricultural environment and attenuate completely before reaching the property boundaries.

Both the construction and operational noise emissions are governed by the National Environmental Management Act (Act 107 of 1998) and are subject to the Free State Province Noise Control Regulations alongside local municipal bylaws. Compliance will be strictly maintained by keeping all machinery and ventilation equipment well-serviced, fitting acoustic mufflers where required, and operating within regulated hours to ensure that noise levels remain well below the statutory thresholds for rural districts.

13. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

	Groundwater	

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	Approx. 4 500 m^3
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?	YES

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

14. ENERGY EFFICIENCY

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

The development incorporates several modern, climate-controlled engineering and structural design measures to optimise energy resource utilisation and minimise electricity and fuel consumption across all six production blocks:

Advanced Thermal Insulation:
The walls and roofs of the thirty poultry houses are designed using high-specification insulated sandwich panels and polyurethane foam linings. This specialised thermal insulation reduces heat transfer between the internal and external environments, maintaining a stable indoor temperature, lowering the heating load required from the diesel combustion units during brooding phases, and reducing the cooling demand on the electrical ventilation systems during hot summer months.

Energy-Efficient Ventilation and Climate Automation:
The internal climate control relies on an automated ventilation system fitted with high-efficiency variable speed extraction fans and static pressure controllers. These automated systems continuously regulate airflow, humidity, and temperature based on live sensor data, ensuring the extraction fans operate only at the exact capacities required for bird welfare, which prevents excessive electrical consumption compared to traditional fixed-speed ventilation fans.

Low-Energy Lighting Infrastructure:
All internal and external illumination across the poultry houses, fenced blocks, and office buildings will utilise low-energy light-emitting diode (LED) fixtures. These lighting installations are paired with automated timer controls and dimmers programmed to match specific avian growth cycles, which significantly reduces the baseline electrical demand of the facility.

Optimised Mechanical Heating Systems:
The small-scale diesel combustion heaters installed at each block are modern, high-dispersion units engineered for maximum thermal efficiency and clean combustion. These units are integrated directly into the automated climate control network, ensuring they fire dynamically and shut down instantly once the target temperature is achieved, thereby avoiding unnecessary fuel waste.

Operational Integration:
The entire operational layout is configured to tie directly into the existing municipal electrical grid using high-efficiency step-down transformers, and all machinery, such as the automated feed auger delivery systems, features low-kilowatt high-torque electric motors to ensure minimal line loss and conservative energy draw during daily operational hours.

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

Not Applicable

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A): **A**

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section? NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Free State
District Municipality	Lejweleputswa District Municipality
Local Municipality	Tokologo Local Municipality
Ward Number(s)	Ward 1
Erf number	Farm Die Vlakte No. 731
Portion number	-
SG Code	F0040000000073100000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Agriculture

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required? NO

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	[redacted]

The overall terrain for the project is officially classified as Rolling.

Alternative S2 (if any):

~~Flat~~	~~1:50 – 1:20~~	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

~~Alternative S3 (if any):~~

~~Flat~~	~~1:50 – 1:20~~	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

2. LOCATION IN LANDSCAPE

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

~~2.1 Ridgeline~~		~~2.4 Closed valley~~		2.7 Undulating plain / low hills	X
~~2.2 Plateau~~		2.5 Open valley	X	~~2.8 Dune~~	
~~2.3 Side slope of hill/mountain~~		2.6 Plain	X	~~2.9 Seafront~~	
~~2.10 At sea~~					

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

	Alternative S1:		**Alternative S2 (if any):**		**Alternative S3 (if any):**	
Shallow water table (less than 1.5m deep)	[redacted]	NO	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Dolomite, sinkhole or doline areas	[redacted]	NO	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Seasonally wet soils (often close to water bodies)	YES	[redacted]	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Unstable rocky slopes or steep slopes with loose soil	[redacted]	NO	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Dispersive soils (soils that dissolve in water)	[redacted]	NO	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Soils with high clay content (clay fraction more than 40%)	[redacted]	NO	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Any other unstable soil or geological feature	[redacted]	NO	~~YES~~	~~NO~~	~~YES~~	~~NO~~
An area sensitive to erosion	YES	[redacted]	~~YES~~	~~NO~~	~~YES~~	~~NO~~

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the

completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition[E]	

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River		NO	
Non-Perennial River	YES	NO	
Permanent Wetland		NO	
Seasonal Wetland	YES	NO	
Artificial Wetland		NO	
Estuarine / Lagoonal wetland		NO	

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

Non-Perennial Watercourses:
Ground-truthing site assessments confirmed the presence of two first-order non-perennial watercourses on the farm property. These features function as small, ephemeral preferential drainage lines that flow only during and immediately after high-rainfall storm events. They join together in a confluence located approximately 100 metres to the west of the proposed Rearing House 6 footprint layout. These channels do not support defined alluvial vegetation or perennial aquatic habitats but serve as important localised conduits for seasonal surface water runoff (*EcoFocus Consulting Aquatic Biodiversity Compliance Statement, 2026*) (see Appendix D).

Seasonal Wetland (Pan / Depression and Valley Bottom Features):
Ground-truthing and hydrogeomorphic typing identified a large, inward-draining depression pan system on the property that acts as an isolated basin for seasonal surface water accumulation. Additionally, unchannelled valley-bottom wetland features exist within the broader 500-metre extended study area. The preferred development layout has been designed using calculated setback

buffers to remain completely clear of these seasonal systems to optimise natural flood attenuation and sediment trapping *(Limnology Pty Ltd, Aquatic Ecosystem Delineation: Die Vlakte 731, May 2026)* (see Appendix D).

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

Natural area	~~Dam or reservoir~~	~~Polo fields~~
	~~Hospital/medical centre~~	~~Filling station H~~
~~Medium density residential~~	~~School~~	~~Landfill or waste treatment site~~
~~High density residential~~	~~Tertiary education facility~~	~~Plantation~~
~~Informal residential A~~	~~Church~~	Agriculture
~~Retail commercial & warehousing~~	~~Old age home~~	River, stream or wetland
~~Light industrial~~	~~Sewage treatment plant A~~	~~Nature conservation area~~
~~Medium industrial AN~~	~~Train station or shunting yard N~~	Mountain, koppie or ridge
~~Heavy industrial AN~~	~~Railway line N~~	~~Museum~~
~~Power station~~	~~Major road (4 lanes or more) N~~	~~Historical building~~
~~Office/consulting room~~	~~Airport N~~	~~Protected Area~~
~~Military or police base/station/compound~~	~~Harbour~~	~~Graveyard~~
~~Spoil heap or slimes dam A~~	~~Sport facilities~~	~~Archaeological site~~
~~Quarry, sand or borrow pit~~	~~Golf course~~	~~Other land uses (Public open Space)~~

If any of the boxes marked with an "N "are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Not Applicable

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Not Applicable

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Not Applicable

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)		NO
Core area of a protected area?		NO
Buffer area of a protected area?		NO

Planned expansion area of an existing protected area?		NO
Existing offset area associated with a previous Environmental Authorisation?		NO
Buffer area of the SKA?		NO

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

7. CULTURAL/HISTORICAL FEATURES

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

Desktop evaluation confirmed that no signs of culturally, historically, or archaeologically significant elements occur within the development footprints. No historical graves, structural remains older than sixty years, or surface Stone Age artefacts were identified during the property surveys.

From a palaeontological perspective, while the broader Boshof region contains sedimentary strata that can possess fossil-bearing potential, the development footprints are located on heavily weathered surface horizons where no prominent bedrock outcrops or surface fossils are exposed. To ensure absolute compliance under the National Heritage Resources Act, a standard chance finds protocol will be integrated into the Environmental Management Programme, requiring all excavations to cease if any underground heritage or fossil resources are uncovered during earthworks.

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

Will any building or structure older than 60 years be affected in any way?		NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		NO

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

The Tokologo Local Municipality is a predominantly rural, sparsely populated region where formal employment opportunities are severely constrained. According to municipal socioeconomic data, the official narrow unemployment rate within the local municipality is approximately 26.1% to 36.7%, reflecting significant structural joblessness across the primary settlements of Boshof, Dealesville, and

Hertzogville. The local economy relies heavily on the agricultural sector as its primary economic driver and employer of low-skilled and semi-skilled workers.

Because a high proportion of the working-age population remains economically inactive or underemployed due to a lack of local industrial diversification and low education levels, youth unemployment is particularly severe. The introduction of capital investment through intensive agricultural initiatives like the development provides essential economic relief. It creates immediate local livelihoods during civil works and stable, long-term employment opportunities during operations without placing new service burdens on the local municipality.

Economic profile of local municipality:

The Tokologo Local Municipality possesses a vulnerable economic profile that relies heavily on primary production sectors and public services. The two dominant pillars of the local economy are households at approximately 28% and agriculture at roughly 25% of gross domestic product. Community services represent 13% of local economic activity, while retail and trade account for under 9%. The remaining secondary and tertiary sectors, including manufacturing, mining, finance, and construction, are severely underdeveloped, with each contributing less than 3% to the municipal economic output.

Because the local economy lacks industrial diversification, it has a high comparative advantage in agriculture, which is supported by over fourteen hundred farms focusing on livestock and crop cultivation. This concentration makes the region vulnerable to macro-economic changes and environmental factors like drought. To build economic resilience and reduce a high dependency on social grants, municipal planning focuses on attracting private capital to expand intensive agricultural operations and localised agro-processing value chains.

Level of education:

The level of education within the Tokologo Local Municipality is relatively low, reflecting significant historic challenges in access to schooling and rural infrastructure constraints. Approximately 8% of the adult population has received no formal schooling whatsoever, while roughly 40% has only completed some level of primary education or basic secondary training. Only about 24% of the working age population has successfully completed a matric qualification, and less than 5% has gone on to obtain any form of higher tertiary or technical certification. This educational profile severely limits the availability of highly skilled local labour and reinforces a high reliance on low-skilled and semi-skilled employment sectors. Because the local workforce is primarily suited for practical, operational roles, the development serves as a critical entry point for localised economic inclusion. The project provides accessible employment opportunities that can be paired with practical, on-site skills transfer in modern agricultural practices, directly supporting the human capital development goals of the local municipality.

b) Socio-economic value of the activity

The following table provides the socio-economic values specifically for the culvert watercourse crossing) activity:

What is the expected capital value of the activity on completion?	R 40 – 50 million
What is the expected yearly income that will be generated by or as a result of the activity?	Unknown
Will the activity contribute to service infrastructure?	NO
Is the activity a public amenity?	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	25–40 temporary jobs
What is the expected value of the employment opportunities during the development and construction phase?	Unknown
What percentage of this will accrue to previously disadvantaged individuals?	≥ 80 %
How many permanent new employment opportunities will be created during the operational phase of the activity?	12 – 18 permanent jobs
What is the expected current value of the employment opportunities during the first 10 years?	Unknown
What percentage of this will accrue to previously disadvantaged individuals?	≥ 85 %

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult http://bgis.sanbi.org or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				**If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan**
~~Critical Biodiversity Area (CBA)~~	Ecological Support Area (ESA)	Other Natural Area (ONA)	~~**No Natural Area Remaining (NNR)**~~	Portions of the development land fall within designated provincial Ecological Support Areas (ESA 1 and ESA 2) according to the Free State Terrestrial CBA spatial dataset. The primary reason for this selection in the biodiversity plan is that the property acts as an active ecological corridor linked directly to the topological pan and depression ecosystem on the western and northwestern boundary, which supports regional

	species movement and hydrological connectivity.
	The footprints chosen for the six infrastructure blocks fall within the remaining natural karroid grassland zones classified as Other Natural Area (ONA). These specific pocket zones represent intact indigenous vegetation that forms a matrix around the high-sensitivity drainage lines and rocky outcrops, carrying a low conservation risk for direct habitat fragmentation.

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0%	No pristine or completely undisturbed natural habitats remain within the localised project footprints.
Near Natural (includes areas with low to moderate level of alien invasive plants)	90%	The vast majority of the development footprints consist of open, low-gradient karroid grassland and natural veld in good ecological condition. The primary land-use driver across this area is commercial livestock grazing, which has maintained the structural integrity of the indigenous groundcover. The specialist ground-truthing assessment confirmed that alien invasive plant encroachment is minimal, but historic grazing pressures have subtly modified the baseline species composition. While parts of the property are designated as Provincial Ecological Support Areas due to a localised ecological corridor, the chosen infrastructure layout spans under six hectares, preventing significant habitat fragmentation or landscape degradation.
Degraded (includes areas heavily invaded by alien plants)	5%	Minor localised patches of degradation exist immediately adjacent to the existing farm tracks and the highly erodible margins of the non-perennial watercourse lines. These narrow strips exhibit structural soil erosion, accelerated rill formation, and low-density encroachment of opportunistic alien weeds where past vehicle movement or concentrated stormwater runoff has disturbed the topsoil
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	5%	This portion comprises the fully transformed footprints of the existing internal farm tracks, fence line clearings, and localised borehole infrastructure locations on the property. These localised areas have been completely cleared of indigenous groundcover, compacted by vehicular traffic, and permanently altered from their natural state.

c) Complete the table to indicate:

(i) the type of vegetation, including its ecosystem status, present on the site; and

(ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		**Aquatic Ecosystems**				
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	[redacted]	Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)		Estuary		Coastline
	Least Threatened	YES	[redacted]	NO	[redacted]	NO

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

Terrestrial Vegetation Type and Status:

The development is located within the Western Free State Clay Grassland vegetation type. According to national environmental spatial datasets, this ecosystem carries an official conservation threat rating of Least Threatened.

Ground-truthing assessments confirmed that the natural karroid grassland is intact and remains in good ecological condition across the broader property. While the dominant groundcover consists of ubiquitous grass and hardy dwarf shrub species, two provincially protected plant species under the Free State Nature Conservation Ordinance (*Helichrysum dregeanum)* and (*Helichrysum zeyheri)* were found to be highly abundant across the proposed development area. Due to their widespread local distribution, these specific floral populations carry low modern conservation value, and a formal plant relocation program is not required by the ecological specialist.

Aquatic Ecosystems and Delineated Features:

The localised development footprints contain no natural perennial channels, open rivers, or active wetlands. However, independent field surveys verified multiple distinct aquatic features within the property boundaries and the surrounding 500-metre extended study area:

- Non-Perennial Watercourses: Two first-order non-perennial watercourses, which function as small, ephemeral preferential drainage lines, pass through the property and join in a confluence. This confluence flows past the proposed footprint layout of Rearing House 6, situated approximately 100 metres to the west. These drainage paths do not support distinct alluvial riparian vegetation but act as important seasonal conduits for regional surface water runoff during high-rainfall storm events.
- Seasonal Wetland Pans: The broader terrain includes a large, inward-draining closed endorheic depression pan system, locally designated as Kareepan, alongside unchannelled valley-bottom wetland features. These systems act as critical localised landscape components for flood attenuation, sediment trapping, and water quality enhancement during wet seasonal cycles.

Special Habitats and Threatened Animal Species:

The site surveys identified key faunal sensitivities and critical habitats that required active structural alterations to the project design:

- The Secretarybird (*Sagittarius serpentarius*): Listed globally and nationally as Endangered, a mature breeding pair and two additional individuals were actively observed foraging across the property.
- Special Nesting Habitat: A prominent rocky ridge and outcrop feature located on the northeastern portion of the farm property was identified as an ideal, sensitive nesting and roosting habitat for this priority avifaunal species. The ridge also supports significant localised mammalian burrow networks.
- Proactive Design Buffers: To prevent structural disturbance and habitat fragmentation, the applicant proactively shifted the original layout positions of all six infrastructure blocks away from the rocky ridge. The preferred layout now enforces strict protective buffers, keeping all broiler houses on low-sensitivity ground well clear of the rocky outcrop and outside the active watercourse channels.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Boshof Rekord	
Date published	17 June 2026	
Site notice position	**Latitude**	**Longitude**
	28°35'19.41"S	25°21'50.03"E
	28°32'14.07"S	25°14'45.21"E
Date placed	12 June 2026	

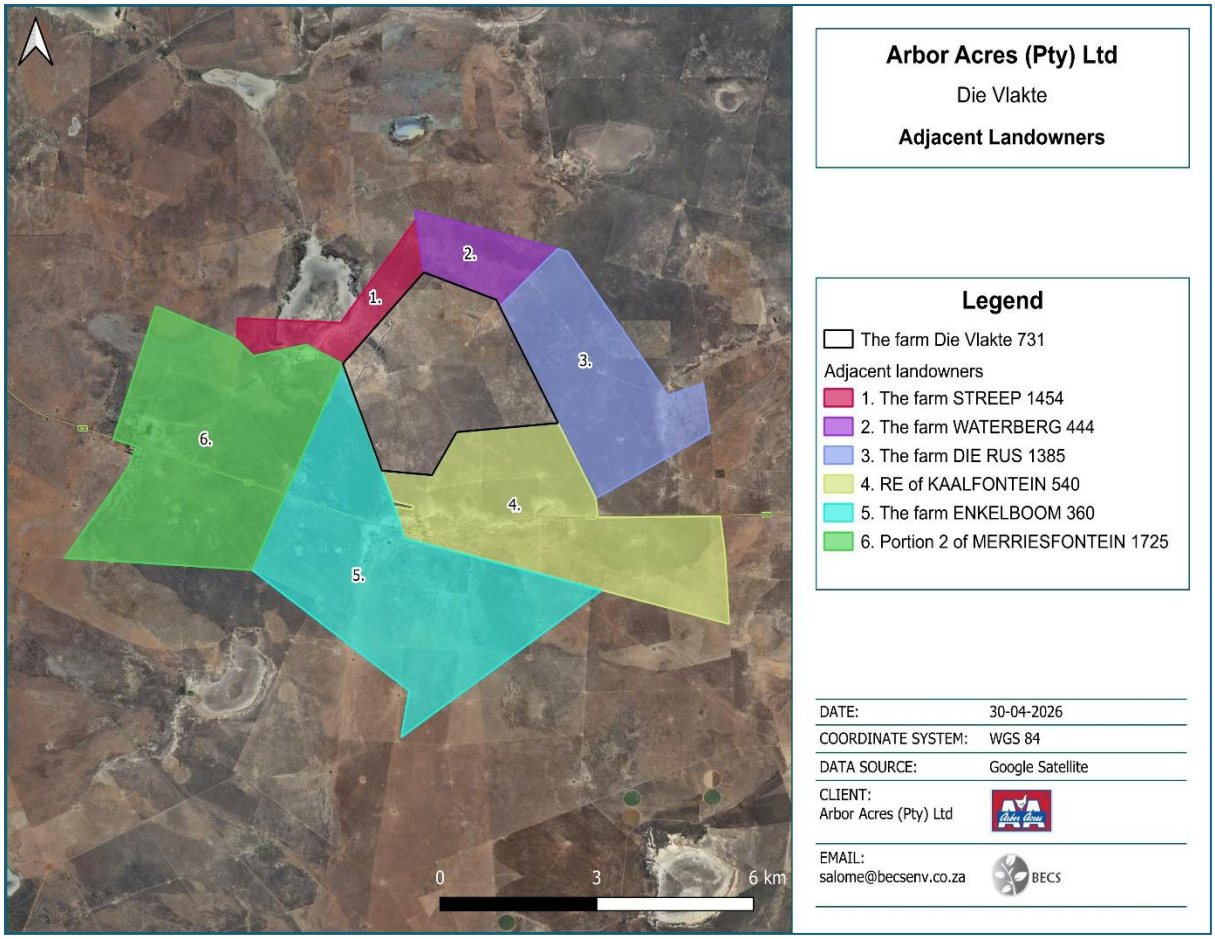
Include proof of the placement of the relevant advertisements and notices in Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 326

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 326

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Sakkie Groenewald (RG TRUST, WALDI TRUST)	Surrounding landowner - The farm STREEP 1454, The farm WATERBERG 444, The farm DIE RUS 1385	conradgroenewald7@gmail.com
Amanda Bosman ("AKKERKRAG BOERDERY PTY LTD")	Surrounding landowner - Remaining extent of the farm KAALFONTEIN 540	meyerbosman@vodamail.co.za
J Neetling (KRUHAN TRUST)	Surrounding landowner - The farm ENKELBOOM 360, Portion 2 of the farm MERRIESFONTEIN 1725	0829440670



Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
To be included with the final Basic Assessment report, after the 30 days public participation period (15 June – 15 July 2026)	

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	e-mail
Department of Water and Sanitation (DWS)			
Free State Department of Agriculture and Rural Development	Mrs. Moliehi Moeng, Dr. Kristan J. Mojapelo	051-861 8515, 051-436 3677	moengm@dard.gov.za, drkris@dard.gov.za
Lejweleputswa District Municipality	Motlatsi Lesley Makhetha	057-353 3094	khaya@lejw.co.za
Ward Councillor Ward 3	Cllr. Boitumelo Enock, Seakge	053-541 0014	info@tokologolm.gov.za
Tokologo Local Municipality	Mr. Mpho Aron Sehloho	053-541 0014	info@tokologolm.gov.za
Department of Health (Provincial)	Mr. JNI Mbalula	051-408 1107	sechod@fshealth.gov.za
FS Heritage Resources Agency (SAHRA)	Ms. Malintja Molahloe	051-522 6762	malintjam@sacr.fs.gov.za
Provincial Department of Roads	Mr. Hannes Maree	082 059 9725	fsroadplanning@gmail.com

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Construction Phase			
Vegetation clearing and earthworks for poultry infrastructure blocks	***Direct impacts:*** *Loss of approximately 5,4 hectares of intact Western Free State Clay Grassland vegetation type and destruction of individuals of provincially protected flora (Helichrysum dregeanum and Helichrysum zeyheri).*	**Medium (-) Before Mitigation** **Low (-) After Mitigation**	- Clearances must be strictly restricted to the immediate structural footprints. - Staff must be prohibited from harvesting adjacent veld flora.
	Indirect impacts: *Encroachment of alien invasive plants.*	**Medium (-) Before Mitigation** **Very Low (-) After Mitigation**	- Implement a continuous alien invasive eradication programme. - Apply organic mulches or geotextiles to exposed soil stockpiles.
	Cumulative impacts: *Fragmentation of Ecological Support Areas.*	**Low (-) Before Mitigation** **Low (-) After Mitigation**	- The layout is clustered on low-sensitivity ground to prevent large-scale ecological corridor fragmentation.
Earthworks, internal track preparation, and layout activities near drainage zones	***Direct impacts:*** *Damage to local non-perennial watercourses.*	**Medium (-) Before Mitigation**	- Enforce a strict developmental exclusion zone that keeps all infrastructure a minimum of 100 metres away from the watercourse confluence.

Activity	Impact summary	Significance	Proposed mitigation
		Very Low (-) After Mitigation	
Construction Activities near watercourses	***Indirect impacts:*** *Sedimentation of downstream aquatic systems..*	**Medium (-) Before Mitigation** **Low (-) After Mitigation**	- Install geosynthetic silt fences and sandbag barriers down-gradient of all construction activities near the 100-metre buffer line.
	Cumulative impacts: *Degradation of localised watershed catchment performance.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	- Construct unlined, wide stormwater dispersion swales to slow down and diffuse runoff across open veld before it reaches drainage channels.
Deep foundation excavations and borehole drilling	***Direct impacts:*** *Destruction of underground fossil resources..*	**High (-) Before Mitigation** **Low (-) After Mitigation**	- Implement a Chance Finds Protocol. - A qualified palaeontologist must inspect any exposed bedrock. - Stop work immediately and report finds to SAHRA if fossils are uncovered.
	Indirect impacts: *Permanent loss of scientific data and prehistoric heritage.*	**High (-) Before Mitigation** **Low (-) After Mitigation**	- Fossil rescue and curation by a qualified professional if triggered
	Cumulative impacts: *Progressive loss of fossil heritage due to regional development.*	**Medium (-) Before Mitigation** **Very Low (-) After Mitigation**	- Proper documentation and archiving of all finds to contribute to the national record. - Ensure all monitoring reports are submitted to the Provincial Heritage Resources Authority.
Machinery operation and	***Direct impacts:***	**Medium (-) Before Mitigation**	- Water spraying during dry conditions

Activity	Impact summary	Significance	Proposed mitigation
structural assembly.	*Increased airborne dust from earthworks, material handling, and construction vehicle movement could cause a nuisance to surrounding land users.*	**Very Low (-) After Mitigation**	- Limit exposed soil - Restrict activities - Monitor dust levels
	Indirect impacts: *Reduction in ambient air quality.*	**Low (-) Before Mitigation**	
		Very Low (-) After Mitigation	
	Cumulative impacts: *Elevation of regional dust loads.*	**Low (-) Before Mitigation**	
		Very Low (-) After Mitigation	
Noise generation from construction machinery and vehicles	***Direct impacts:*** *Noise from trucks, earthmoving equipment, and general construction activities.*	**Medium (-) Before Mitigation**	- Restrict working hours - Maintain equipment - Ensure all construction vehicles are fitted with standard silencers and noise-suppression mufflers in good working order. - Prohibit the unnecessary idling of heavy machinery and delivery vehicles when stationary on site.
		Very Low (-) After Mitigation	
	Indirect impacts: *Temporary disturbance to local wildlife and avifauna.*	**Medium (-) Before Mitigation**	
		Low (-) After Mitigation	
	Cumulative impacts: *Temporary alteration of the quiet rural acoustic environment.*	**Low (-) Before Mitigation**	
		Very Low (-) After Mitigation	
Potential soil/water contamination due to improper waste and hazardous material handling	***Direct impacts:*** *Potential soil/water contamination from fuel leaks or concrete wash water.*	**Medium (-) Before Mitigation**	- Bunded refuelling areas. - Drip trays under stationary machinery
		Low (-) After Mitigation	
	Indirect impacts: *Chemical pollution of nearby ephemeral channels*	**Low (-) Before Mitigation**	- Position dedicated spill kits on-site. Place heavy-duty drip trays beneath all stationary generators and parked earthmoving machinery.
		Very Low (-) After Mitigation	
	Cumulative impacts: *Degradation of the broader Kareepan endorheic basin.*	**Low (-) Before Mitigation**	- Strictly prohibit the washing of tools, concrete mixers, or construction vehicles within 100 metres of any watercourse.
		Very Low (-) After Mitigation	
	Direct impacts:	**Medium (-) Before Mitigation**	- Reduced speed limits and flagmen.

Activity	Impact summary	Significance	Proposed mitigation
Increased traffic and road use during construction	*Higher vehicle volumes on local roads; minor delays and safety risks.*	**Very Low (-) After Mitigation**	- Safe pedestrian bypasses. - Limit heavy vehicle movement during school peaks. - Adhere to a Traffic Management Plan.
	Indirect impacts: *Slightly increased dust, noise, and road wear; risk to pedestrians.*	**Low (-) Before Mitigation** **Low (-) After Mitigation**	
	Cumulative impacts: *Combined with existing traffic from nearby residential areas.*	**Low (-) Before Mitigation** **Low (-) After Mitigation**	
Operational Phase			
Commercial poultry rearing and laying house operations	***Direct impacts:*** *Generation of agricultural gross domestic product.*	**High (+) Before Mitigation** **High (+) After Mitigation**	- Maintain high biosecurity controls and automated ventilation efficiency to protect production yields and secure macro-economic viability. - Prioritise the recruitment of semi-skilled and low-skilled labourers from communities inside the local municipality.
	Indirect impacts: *Creation of long-term local employment opportunities.*	**High (+) Before Mitigation** **High (+) After Mitigation**	
	Cumulative impacts: *Expansion of the national agro-industrial value chain.*	**High (+) Before Mitigation** **High (+) After Mitigation**	
Climate-controlled facility automation (use of generators)	***Direct impacts:*** *Release of odour emissions.*	**Medium (-) Before Mitigation** **Low (-) After Mitigation**	- Install wingwalls and stone pitching - Utilise modern, automated climate control and high-velocity extraction fans to continuously dilute and disperse internal air. - Enforce a strict dry-handling system inside the houses, keeping litter completely dry to prevent anaerobic ammonia generation. - Clear and load out spent litter rapidly at the end of cycles directly into covered vehicles for immediate off-site transport.
	Indirect impacts: *Nuisance impacts on surrounding land users.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	
	Cumulative impacts: *Influx of regional agricultural atmospheric emissions.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	

Activity	Impact summary	Significance	Proposed mitigation
Waste generation from poultry litter and mortalities	***Direct impacts:*** *Generation of biological waste.*	**High (-) Before Mitigation** **Low (-) After Mitigation**	- Store daily mortalities in sealed, impermeable biological containers before collection by an accredited specialised rendering service. - Prohibit any on-site long-term stockpiling of spent litter; transport all material directly to contracted crop farms as organic fertilizer. - Maintain complete compliance with national veterinary health guidelines and execute full structural sanitisation between production cycles.
	Indirect impacts: *Attraction of vectors and fly breeding.*	**Medium (-) Before Mitigation** **Very Low (-) After Mitigation**	
	Cumulative impacts: *Increase in regional biosecurity risks.*	**Medium (-) Before Mitigation** **Very Low (-) After Mitigation**	

Activity	Impact summary	Significance	Proposed mitigation
Alternative 2 (Alternative Layout)			
Construction Phase			
Vegetation clearing and earthworks for poultry infrastructure blocks	***Direct impacts:*** *Loss of approximately 5,4 hectares of intact Western Free State Clay Grassland vegetation type and destruction of individuals of provincially protected flora (Helichrysum dregeanum and Helichrysum zeyheri).*	**Medium (-) Before Mitigation** **Low (-) After Mitigation**	- Clearances must be strictly restricted to the immediate structural footprints. - Staff must be prohibited from harvesting adjacent veld flora.
	Indirect impacts: *Encroachment of alien invasive plants.*	**Medium (-) Before Mitigation** **Very Low (-) After Mitigation**	- Implement a continuous alien invasive eradication programme. - Apply organic mulches or geotextiles to exposed soil stockpiles.
	Cumulative impacts: *Fragmentation of Ecological Support Areas.*	**Low (-) Before Mitigation** **Low (-) After Mitigation**	- The layout is clustered on low-sensitivity ground to prevent large-scale ecological corridor fragmentation.
Earthworks, internal track preparation, and layout activities	***Direct impacts:*** *Damage to local non-perennial watercourses.*	**High (-) Before Mitigation**	- Enforce a strict developmental exclusion zone that keeps all infrastructure as far away as

Activity	Impact summary	Significance	Proposed mitigation
near drainage zones		**Medium (-) After Mitigation**	possible from the watercourse confluence.
Construction activities near watercourses	***Indirect impacts:*** *Sedimentation of downstream aquatic systems.*	**Medium (-) Before Mitigation** **Low (-) After Mitigation**	- Install geosynthetic silt fences and sandbag barriers down-gradient of all construction activities near the 100-metre buffer line.
	Cumulative impacts: *Degradation of localised watershed catchment performance.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	- Construct unlined, wide stormwater dispersion swales to slow down and diffuse runoff across open veld before it reaches drainage channels.
Deep foundation excavations and borehole drilling	***Direct impacts:*** *Destruction of underground fossil resources..*	**High (-) Before Mitigation** **Low (-) After Mitigation**	- Implement a Chance Finds Protocol. - A qualified palaeontologist must inspect any exposed bedrock. - Stop work immediately and report finds to SAHRA if fossils are uncovered.
	Indirect impacts: *Permanent loss of scientific data and prehistoric heritage.*	**High (-) Before Mitigation** **Low (-) After Mitigation**	- Fossil rescue and curation by a qualified professional if triggered
	Cumulative impacts: *Progressive loss of fossil heritage due to regional development.*	**Medium (-) Before Mitigation** **Very Low (-) After Mitigation**	- Proper documentation and archiving of all finds to contribute to the national record. - Ensure all monitoring reports are submitted to the Provincial Heritage Resources Authority.
Machinery operation and	***Direct impacts:***	**Medium (-) Before Mitigation**	- Water spraying during dry conditions

Activity	Impact summary	Significance	Proposed mitigation
structural assembly.	*Increased airborne dust from earthworks, material handling, and construction vehicle movement could cause a nuisance to surrounding land users.*	**Very Low (-) After Mitigation**	- Limit exposed soil - Restrict activities - Monitor dust levels
	Indirect impacts: *Reduction in ambient air quality.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	
	Cumulative impacts: *Elevation of regional dust loads.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	
Noise generation from construction machinery and vehicles	***Direct impacts:*** *Noise from trucks, earthmoving equipment, and general construction activities.*	**Medium (-) Before Mitigation** **Very Low (-) After Mitigation**	- Restrict working hours - Maintain equipment - Ensure all construction vehicles are fitted with standard silencers and noise-suppression mufflers in good working order. - Prohibit the unnecessary idling of heavy machinery and delivery vehicles when stationary on site.
	Indirect impacts: *Temporary disturbance to local wildlife and avifauna.*	**Medium (-) Before Mitigation** **Low (-) After Mitigation**	
	Cumulative impacts: *Temporary alteration of the quiet rural acoustic environment.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	
Potential soil/water contamination due to improper waste and hazardous material handling	***Direct impacts:*** *Potential soil/water contamination from fuel leaks or concrete wash water.*	**Medium (-) Before Mitigation** **Low (-) After Mitigation**	- Bunded refuelling areas. - Drip trays under stationary machinery
	Indirect impacts: *Chemical pollution of nearby ephemeral channels*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	- Position dedicated spill kits on-site. Place heavy-duty drip trays beneath all stationary generators and parked earthmoving machinery.
	Cumulative impacts: *Degradation of the broader Kareepan endorheic basin.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	- Strictly prohibit the washing of tools, concrete mixers, or construction vehicles within 100 metres of any watercourse.

Activity	Impact summary	Significance	Proposed mitigation
Increased traffic and road use during construction	***Direct impacts:*** *Higher vehicle volumes on local roads; minor delays and safety risks.*	**Medium (-) Before Mitigation** **Very Low (-) After Mitigation**	- Reduced speed limits and flagmen. - Safe pedestrian bypasses. - Limit heavy vehicle movement during school peaks. - Adhere to a Traffic Management Plan.
	Indirect impacts: *Slightly increased dust, noise, and road wear; risk to pedestrians.*	**Low (-) Before Mitigation** **Low (-) After Mitigation**	
	Cumulative impacts: *Combined with existing traffic from nearby residential areas.*	**Low (-) Before Mitigation** **Low (-) After Mitigation**	
Operational Phase			
Commercial poultry rearing and laying house operations	***Direct impacts:*** *Generation of agricultural gross domestic product.*	**High (+) Before Mitigation** **High (+) After Mitigation**	- Maintain high biosecurity controls and automated ventilation efficiency to protect production yields and secure macro-economic viability. - Prioritise the recruitment of semi-skilled and low-skilled labourers from communities inside the local municipality.
	Indirect impacts: *Creation of long-term local employment opportunities.*	**High (+) Before Mitigation** **High (+) After Mitigation**	
	Cumulative impacts: *Expansion of the national agro-industrial value chain.*	**High (+) Before Mitigation** **High (+) After Mitigation**	
Climate-controlled facility automation (use of generators)	***Direct impacts:*** *Release of odour emissions.*	**Medium (-) Before Mitigation** **Low (-) After Mitigation**	- Install wingwalls and stone pitching - Utilise modern, automated climate control and high-velocity extraction fans to continuously dilute and disperse internal air. - Enforce a strict dry-handling system inside the houses, keeping litter completely dry to prevent anaerobic ammonia generation. - Clear and load out spent litter rapidly at the end of cycles directly into covered vehicles for immediate off-site transport.
	Indirect impacts: *Nuisance impacts on surrounding land users.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	
	Cumulative impacts: *Influx of regional agricultural atmospheric emissions.*	**Low (-) Before Mitigation** **Very Low (-) After Mitigation**	

Activity	Impact summary	Significance	Proposed mitigation
Waste generation from poultry litter and mortalities	***Direct impacts:*** *Generation of biological waste.*	**High (-) Before Mitigation**	- Store daily mortalities in sealed, impermeable biological containers before collection by an accredited specialised rendering service. - Prohibit any on-site long-term stockpiling of spent litter; transport all material directly to contracted crop farms as organic fertilizer. - Maintain complete compliance with national veterinary health guidelines and execute full structural sanitisation between production cycles
		Low (-) After Mitigation	
	Indirect impacts: *Attraction of vectors and fly breeding.*	**Medium (-) Before Mitigation**	
		Very Low (-) After Mitigation	
	Cumulative impacts: *Increase in regional biosecurity risks.*	**Medium (-) Before Mitigation**	
		Very Low (-) After Mitigation	
Alternative 3			
	Direct impacts:	[redacted]	
	Indirect impacts:		
	Cumulative impacts:		
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
Terrestrial & Aquatic Biodiversity	***Direct impacts:*** Preservation of baseline indigenous vegetation.	Low (+)	N/A
	Indirect impacts: *Loss of formal environmental monitoring oversight*	Low (-)	N/A
	Cumulative impacts: *Continuation of extensive livestock grazing practices*	N/A	N/A
Heritage & Palaeontology	***Direct impacts:*** Elimination of risks to subsurface fossil-bearing strata.	Low (+)	N/A
	Direct impacts:	High (-)	N/A

Activity	Impact summary	Significance	Proposed mitigation
Socio-Economic & Public Safety	Loss of private capital investment into the region.		
	Indirect impacts: Forfeiture of local employment opportunities.	High (-)	N/A
	Cumulative impacts: Stagnation of the localised agricultural sector.	Medium (-)	N/A
Decommissioning Phase – Note that Decommissioning Phase Impacts are identical to Construction Phase Impacts. Refer to Construction Phase Impacts.			

A complete impact assessment in terms of Regulation 19(3) of GN 326 must be included as Appendix F.

2. ENVIRONMENTAL IMPACT STATEMENT

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

Alternative A (preferred alternative)

The development involves the construction of four separate blocks of poultry laying farms and two separate blocks of poultry rearing farms, spanning an infrastructure footprint of approximately ≤ 5.4 hectares on the Remaining Extent of the Farm Die Vlakte No. 731. Taking the comprehensive assessment of potential impacts into account, the implementation of the preferred layout will not result in any high-significance residual impacts on the biophysical, social, or heritage environments, provided that the specified management and mitigation measures are strictly enforced through the Environmental Management Programme (EMPr).

Terrestrial and Aquatic Biodiversity Impacts:

The construction phase will cause the direct, permanent loss of indigenous vegetation within the Western Free State Clay Grassland ecosystem. This impact has a definite likelihood of occurrence but is restricted to a localised operational footprint, reducing its post-mitigation significance to Low (-). Ground-truthing assessments determined that the natural veld is in good condition and contains high abundances of provincially protected flora (*Helichrysum dregeanum* and *Helichrysum zeyheri*); however, the low-gradient terrain lacks unique botanical features and carries a threat status of Least Threatened. Potential edge effect impacts on surface water resources, specifically the two first-order non-perennial watercourses and the nearby *Kareepan* seasonal wetland system, carry a possible likelihood of occurrence. These include risks of downstream sedimentation, accelerated soil erosion, and chemical contamination from construction fuel storage or operational wash water. By enforcing a strict developmental exclusion zone that keeps all infrastructure a minimum of 100 metres away from the non-perennial watercourse confluence and well clear of hydromorphic soils, the significance of these hydrological impacts is reduced to Very Low (-) to Low (-) over a long-term duration. Furthermore, shifting the layout blocks completely away from the northeastern rocky ridge eliminates long-term operational disturbances to the Endangered Secretarybird (*Sagittarius serpentarius*) breeding pair and associated mammalian burrows, lowering faunal displacement impacts to Low (-) significance.

Nuisance and Operational Waste Impacts:
Localised nuisance impacts, including the generation of airborne dust, mechanical noise emissions, and minor traffic delays during the construction phase, carry a highly probable likelihood of occurrence. These impacts are entirely short-term, intermittent, and confined to regulated daylight working hours, resulting in a post-mitigation significance of Very Low (-). During the operational phase, the automated climate-control systems, mechanical feed delivery lines, and extraction fans will introduce low-frequency mechanical noise with a definite likelihood of occurrence over a permanent duration. Because the production blocks are remotely positioned within a large rural property, this noise will attenuate naturally before reaching property boundaries, carrying a Very Low (-) significance. Diffuse ammonia gas and agricultural odour emissions carry a possible likelihood of occurrence. These atmospheric risks will be managed over the long term through a strict dry-handling litter system and automated high-dispersion extraction fans, keeping the residual significance at Low (-). Operational biological waste, comprising poultry manure and natural bird mortalities, represents a definite long-term risk. By prohibiting on-site stockpiling, transporting spent litter directly to contracted crop farms as organic fertilizer, and utilising sealed biological containers for regular third-party rendering collection, the biosecurity and soil contamination risks are successfully mitigated to a Very Low (-) significance.

Sub-surface Resource and Socio-Economic Impacts:
Deep foundation excavations and borehole drilling infrastructure introduce a possible risk of structural destruction to underground fossil resources within the regional sedimentary strata. This potential impact would be irreversible and permanent in duration; however, by implementing a formal heritage Chance Finds Protocol and retaining an accredited palaeontologist if bedrock is exposed, the post-mitigation significance is limited to Low (-). Long-term groundwater drawdown from abstracting approximately 4,500 m³ of utility water per month from on-site aquifers carries a probable likelihood of occurrence. Managed via ongoing geohydrological yield testing, borehole monitoring, and authorisation under a formal Water Use License Application (WULA), the cumulative drawdown pressure on the regional aquifer is mitigated to a Low (-) significance, while sub-surface contamination risks from office sanitation are neutralised to Very Low (-) via a closed septic tank soakaway system.

In contrast to the minor biophysical risks, the development introduces significant, permanent High (+) positive socio-economic impacts that are definite to occur. The project injects substantial private capital investment into a vulnerable rural municipality, creating 25 to 40 temporary construction jobs and 12 to 18 stable, long-term operational positions. This directly addresses local structural unemployment, facilitates technical agricultural skills transfer to previously disadvantaged individuals, and actively aligns the region with national food security goals under the South African Poultry Master Plan and the NDP 2030. Consequently, the long-term socio-economic benefits clearly outweigh the localised, well-mitigated environmental risks, confirming the preferred layout as the best practicable environmental option for the site.

Layout Alternative (Not Preferred)

This alternative represents the initial project design where two of the proposed poultry blocks were configured closer to the drainage channels on the property, failing to maintain the protective setbacks recommended during subsequent specialist assessments. This alternative is strictly not preferred because its implementation would result in elevated, high-significance residual impacts on the localised biophysical environment that could not be successfully managed or neutralised by standard mitigation.

Terrestrial and Aquatic Biodiversity Impacts:

Similar to the preferred layout, construction would cause a direct, definite, and permanent loss of indigenous Western Free State Clay Grassland vegetation. However, by placing infrastructure blocks adjacent to the active channels, this alternative layout is not preferred as it carries a definite likelihood of causing severe, long-term degradation to the local hydrological systems. Encroaching upon the calculated ecological buffer zones of the two first-order non-perennial watercourses significantly increases the risk of direct physical damage to the drainage paths. During the construction and operational phases, surface water runoff from the facility would have a highly probable likelihood of causing extensive downstream sedimentation, accelerated soil erosion along the channel banks, and rill formation. Because the layout borders the active watercourse confluence, the risk of chemical and biological contamination from organic poultry runoff or wash-water entering the downstream catchment is elevated to a probable likelihood. This runoff would drain directly into the sensitive, inward-draining endorheic basin of the *Kareepan* seasonal wetland system, causing irreversible cumulative degradation to the broader watershed.

Nuisance, Resource, and Socio-Economic Impacts:
Short-term construction impacts such as airborne dust, noise, and traffic disruptions would remain highly probable with a Very Low (-) post-mitigation significance. Similarly, long-term operational factors, including extraction fan noise, ammonia gas emissions, biological waste handling, and sub-surface paleontological risks, would mirror the preferred alternative and could be managed to Low (-) significance thresholds. Groundwater drawdown from abstracting 4,500 m³ per month would remain a probable long-term impact with a Low (-) significance when managed under a formal Water Use License Application.

While this alternative layout would still deliver the same definite, permanent High (+) positive socio-economic benefits regarding private capital investment, local job creation, and national food security, these contributions are heavily compromised by the severe biophysical trade-offs. Because the design fails to take into account hydrological constraints, increases regional biosecurity risks, the long-term environmental degradation outweighs the economic gains. Consequently, this alternative layout is explicitly not preferred, is not considered an environmentally responsible or sustainable option for the property, and was rejected as it does not represent the best practicable environmental option.

Alternative C

Not Applicable

No-go alternative (compulsory)

The No-Go Alternative refers to the baseline option of not proceeding with the proposed development of the poultry facility, meaning that the four separate blocks of poultry laying farms and two separate blocks of poultry rearing farms would not be constructed on the Remaining Extent of the Farm Die Vlakte No. 731. Under this alternative, the existing environment would remain entirely unchanged from its current status, resulting in no new biophysical impacts but causing significant, permanent negative socio-economic impacts for the region.

Terrestrial and Aquatic Biodiversity Impacts:
The No-Go Alternative means there is a definite certainty that short-term, construction-related environmental impacts would be completely avoided. There would be zero permanent loss of the 5.4 hectares of indigenous Western Free State Clay Grassland vegetation, and no direct removal of the provincially protected flora (*Helichrysum dregeanum* and *Helichrysum zeyheri*). Furthermore, the possible operational risks of downstream sedimentation, soil erosion, and organic runoff contamination affecting the two first-order non-perennial watercourses and the *Kareepan* seasonal wetland system would be entirely eliminated. The Endangered Secretarybird (*Sagittarius*

serpentarius) breeding pair and local mammalian burrow networks on the northeastern rocky ridge would remain entirely undisturbed by development activities. This results in a positive biophysical significance rating of Low (+) over a permanent duration. However, because the development is not implemented, the property would miss out on the structured environmental management frameworks, formal alien invasive plant eradication programmes, and engineered stormwater controls that would actively improve the baseline condition of the surrounding area.

Socio-Economic and Development Impacts:

In sharp contrast to the minor environmental savings, the No-Go Alternative has a definite likelihood of causing permanent, High (-) significance negative socio-economic impacts. The Tokologo Local Municipality suffers from severe structural unemployment, a low level of adult education, and an undiversified economic profile that is heavily dependent on public social grant funding. By not proceeding with the project, the local community permanently forfeits the creation of 25 to 40 temporary construction jobs and 12 to 18 stable, long-term operational positions. The region also loses a substantial private capital investment of R40 to R50 million, alongside the long-term operational expenditure value of R18 to R24 million that would directly stimulate secondary local transport and procurement supply chains.

At a broader level, the No-Go Alternative results in a missed opportunity to expand high-yield commercial food production, directly undermining the national food security and localisation targets established under the South African Poultry Master Plan and the NDP 2030. Because the baseline extensive livestock grazing practices would continue without any agro-industrial diversification, the property would fail to transform into a highly productive node of the national agricultural value chain. Therefore, while the No-Go Alternative carries minimal biophysical risk, its severe socio-economic opportunity costs and failure to meet national developmental goals mean it is not considered a desirable long-term option for the site.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	YES	[redacted]

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

Not Applicable

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

Recommended Conditions and Mitigation Measures (Refer to EMPr for detailed mitigation measures):

Spatial and Layout Constraints:

- Enforce Buffer Zones: All development infrastructure footprints must be strictly restricted to the preferred layout (Alternative 1) to ensure a protective barrier zone of at least 100 metres is maintained around the non-perennial watercourse confluence.
- Ridge Exclusion Zone: No construction activities, fence lines, or heavy machinery movement may encroach upon the northeastern rocky ridge and outcrop feature to safeguard the nesting habitat of the Endangered Secretarybird.
- Demarcation of Site Boundaries: The exact construction footprint limits for all six blocks must be physically demarcated using temporary fencing before any earthworks begin to prevent accidental vegetation clearing in the surrounding area.

Water and Sanitation Management:

- Groundwater Extraction Compliance: All groundwater abstracted from on-site boreholes must be monitored monthly via flow meters, and extraction volumes must be kept within the limits authorised under the formal Water Use License Application (WULA).
- Wastewater Containment: Wash-water effluent from poultry house cleaning cycles must drain exclusively into localised, impermeable containment sumps at each block and may not be discharged directly into the surrounding soil or watercourses.
- Sanitation System Standards: The domestic sewage system for the office building must utilise a closed, pre-fabricated septic tank system engineered and installed to prevent untreated effluent seepage into the sub-surface water table.

Waste and Biosecurity Protocols:

- Prohibit On-Site Stockpiling: Spent poultry litter must be mechanically scraped and loaded directly into covered bulk transport commercial vehicles for immediate off-site distribution to crop farms at the end of each production cycle.
- Mortality Disposal Framework: Daily bird mortalities must be collected immediately from the houses and stored in sealed, impermeable biological waste containers before being removed by an accredited specialised rendering service provider.
- Hazardous Material Bunding: All construction and operational hydrocarbons, fuels, and lubricants must be stored on impermeable concrete bunded platforms capable of containing 110% of the total storage tank volume.

Earthworks:

- Dust Control Actions: Regular water spraying must be applied to all internal unpaved tracks and exposed working areas during dry or windy periods, and internal vehicle speed limits must be strictly capped at 40 km/h.
- Regulated Working Hours: All noisy civil engineering works and heavy vehicle deliveries must be restricted to standard daylight hours between 07:00 and 17:00 from Monday to Saturday to limit acoustic disturbances.
- Chance Finds Protocol: A formal paleontological and archaeological chance finds protocol must be active during all deep excavations; works must cease instantly if any sub-surface fossil or heritage resources are uncovered.

With the above conditions and mitigation measures implemented, the project's residual impacts are low, manageable, and environmentally acceptable. The proposed development is therefore sustainable and justifiable from an environmental, socio-economic, and planning perspective.

Is an EMPr attached?	YES

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

Danie Krynauw

NAME OF EAP

SIGNATURE OF EAP

12 June 2026

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

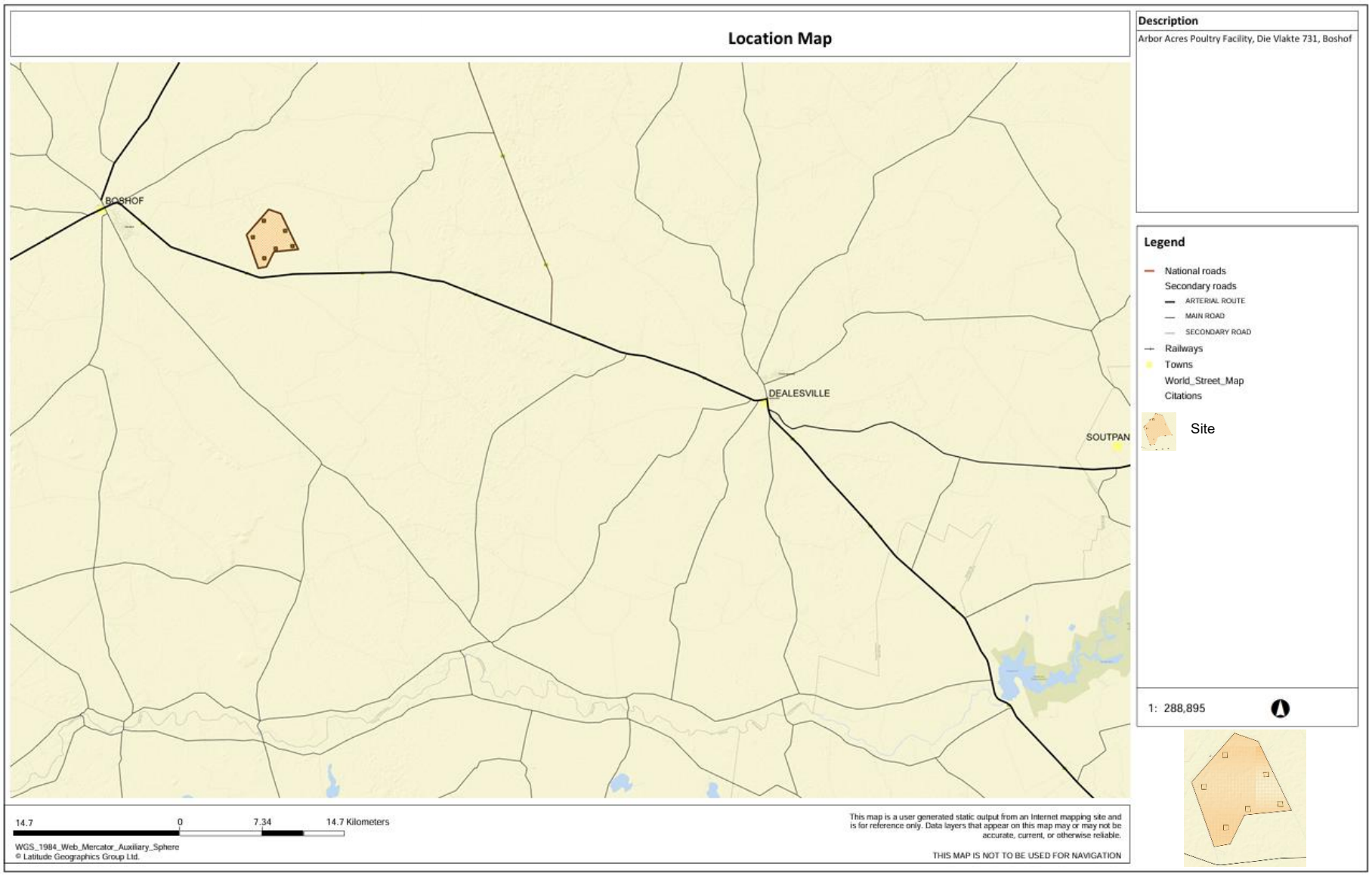
Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

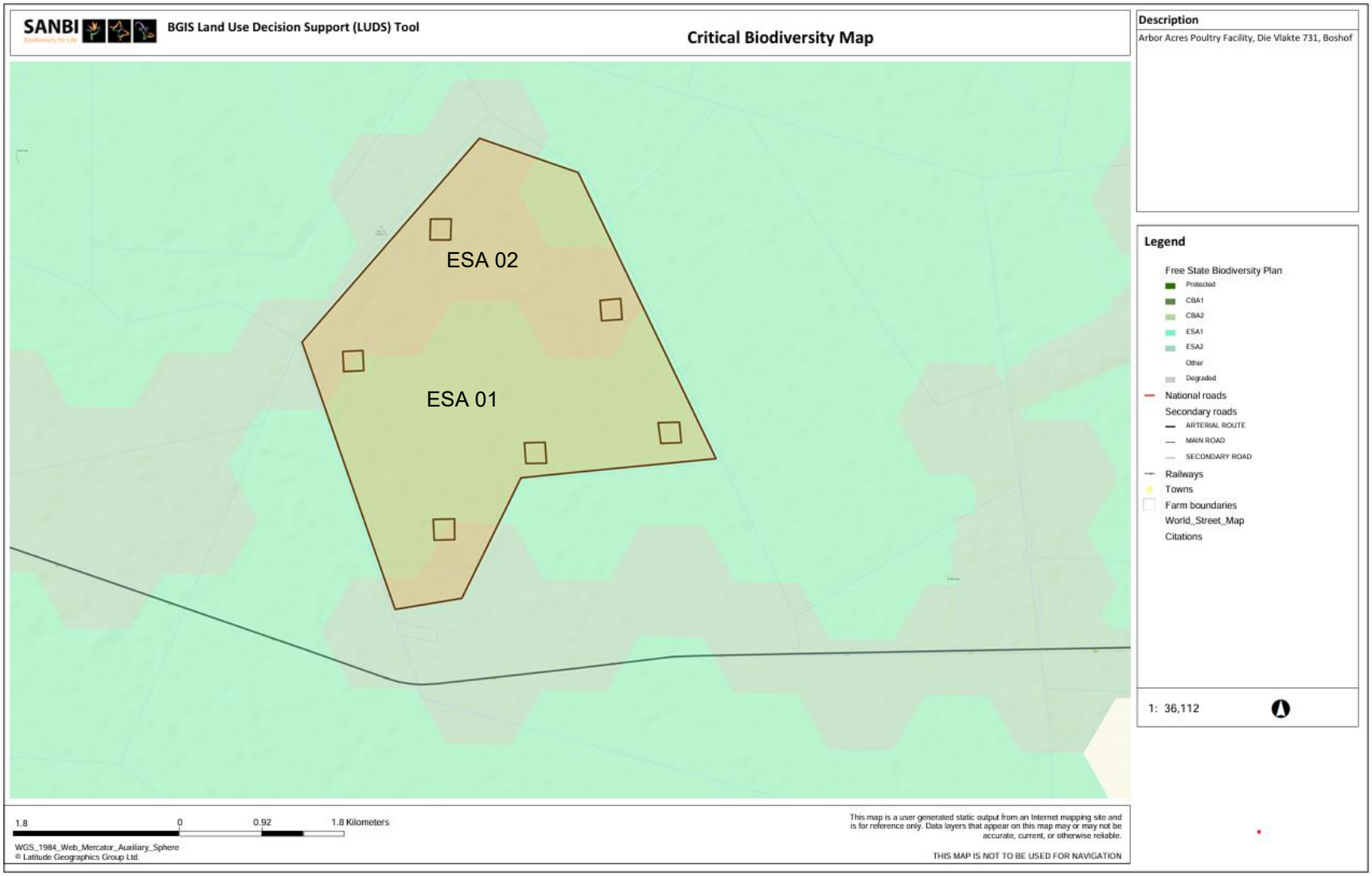
Appendix J: Additional Information

Appendix A: Maps

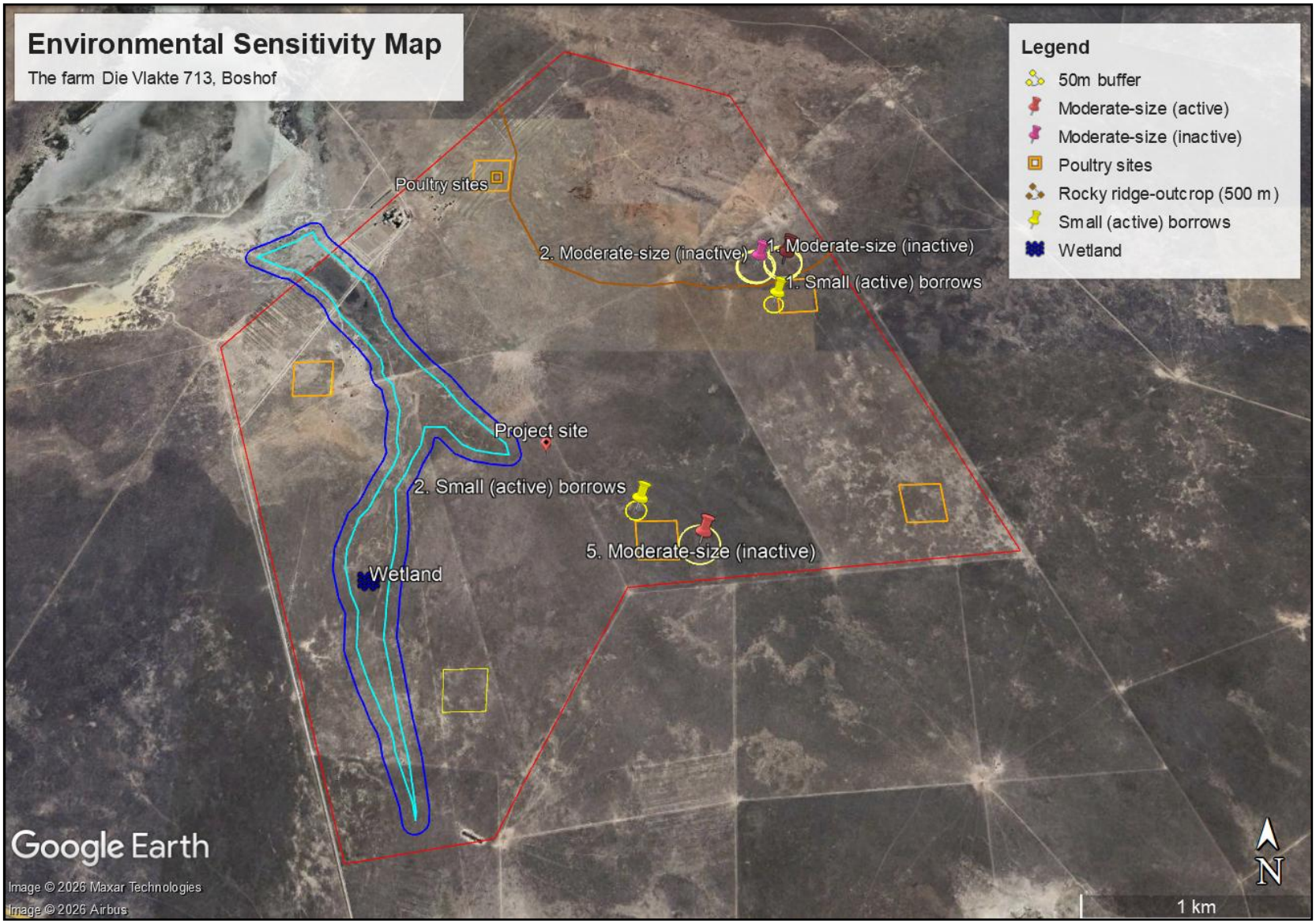


Locality map of the proposed Poultry site

Aerial image of proposed poultry site (Source: Google Earth Pro, 2023)



Critical Biodiversity Map (Source: Sanbi: BGIS, 2016)



Site environmental sensitivity map

Appendix B: Photographs

Electricity point

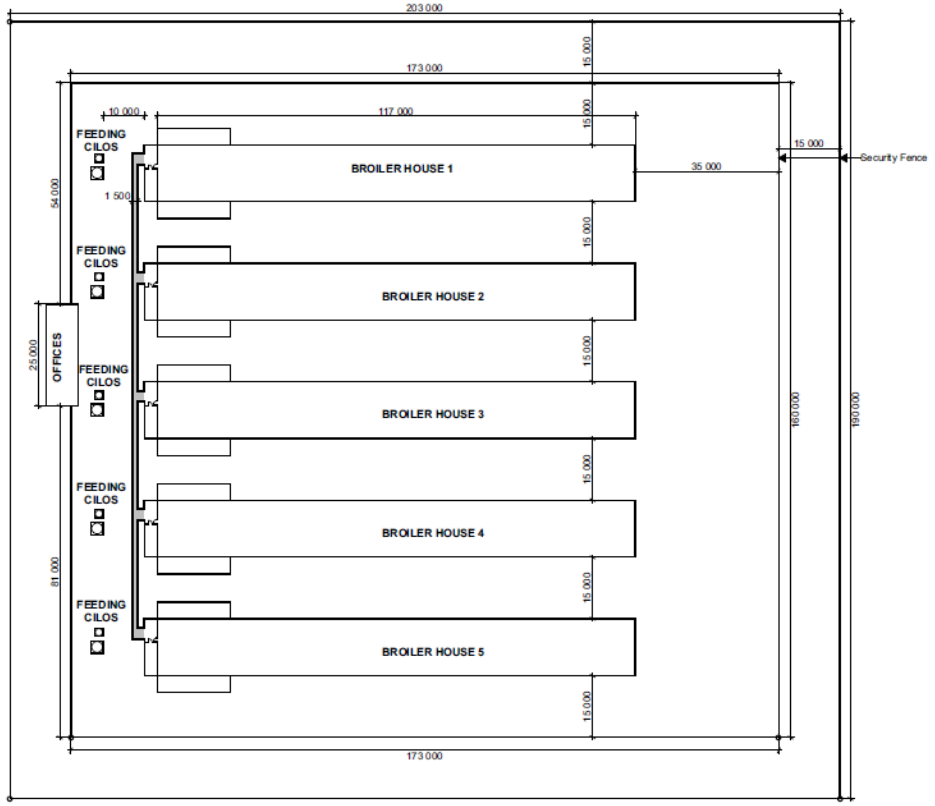
Existing farm infrastructure and electricity connection point

Vegetation cover, trees are sparsely spread

Borrows located near site 2 and 4

Site 1 vegetation cover, and general terrestrial character of the farm

Appendix C: Facility illustration



SITE LAYOUT
BROILER HOUSES
North Orientation to be determined by client
Scale 1:500

ARCHITECT

JUST - US ARCHITECTURE INC.

11 JASMYN ROAD
JIM FOUCHE PARK
WELKOM

CELL: 084 951 0074
EMAIL: liebenberg.justus@gmail.com

PROJECT NUMBER
JUA 087

Arbor Acres Broiler House Diagram

DRAWING NUMBER

JUA 087 BH 003

DRAWING DESCRIPTION

Broiler House Site Layout (Simplified)

REVISION NUMBER

DATE

10 DECEMBER 2025

DOCUMENTED BY:

Checked by:
J.LIEBENBERG
SACAP reg. PrArch 21341

Drawn By:
Q. ALBERTS
SACAP reg. CAT 2024123680

CLIENT

Arbor Acres

Site layout design (5 x houses for each site)

Appendix D: Specialists Reports

1. Ecological Impact Assessment
2. Limnology impact assessment

Appendix E: Public Participation

Notice for public participation provided to Stakeholders and Interested and Affected Parties

The following was also conducted:

Publication name	Boshof Rekord	
Date published	17 June 2026	
Site notice position	**Latitude**	**Longitude**
	28°35'19.37"S	25°21'49.95"E
	28°32'11.72"S	25°14'53.66"E
Date placed	12 June 2026	

Combating, Detective Branch and for robbery during tracing

ENVIRONMENTAL IMPACT ASSESSEMENT APPLICATION NOTICE

DEVELOPMENT OF POULTRY BROILER AND LAYER HOUSES ON THE FARM DIE VLAKTE 731, BOSHOF DISTRICT

In terms of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended April 2017) published under the National Environmental Management Act, 1998 (Act No.107 of 1998) (NEMA), as amended, notice is hereby given of Arbor Acres SA (Pty) Ltd intention to obtain environmental authorisation for the proposed development of 4 separate blocks of poultry laying farms and 2 separate blocks of poultry rearing farms, on portions of the farm Die Vlakte 731, located in the magisterial district of Boshof, Free State.

Activity description: Construction of 4 separate blocks of poultry laying farms and 2 separate blocks of poultry rearing farms. Each of these 6 distinct blocks will be fenced off and will contain 5 broiler houses each. The infrastructure footprints will comprise a total development area size of approximately ≤ 5.4 ha.

Location of the proposed project: The farm Die Vlakte 731, situated 13km south-east of Boshof town next to the R64 Provincial Road. Site coordinates are at: 28°33'09" S 25°21'30" E

Environmental Authorisation: The project triggers activities listed in Listing 1 (GN R 327) of the 2014 EIA Regulations (as amended April 2017), published under NEMA and therefore requires environmental authorisation via the undertaking of a Basic Assessment (BA) process. The BA Process will be inclusive of technical studies and public participation. The competent authority responsible for issuing environmental authorization is the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA). The listed activities for authorisation include Listing Notice 1, Activities no. 5 & 27.

Please note that comments will be sought from the South African Heritage Resources Agency (SAHRA) in terms of the National Heritage Resources Act, Act 25 of 1999.

Green-Box Consulting is appointed as the Environmental Assessment Practitioner (EAP) to undertake and manage the legislative processes. You are hereby notified that the Draft Basic Assessment Report for the above-mentioned project is now available for review and comment, till 15 July 2026. The report can be downloaded from the Green-Box Consulting website (www.gree-box.co.za) under the "documents" "public participation". Written comments can be sent to: Danie Krynauw, Green-Box Consulting- P.O. Box 37738, Langenhovenpark 9330, Cell: 082 435 2108, or e-mail: danie@green-box.co.za

Boshof Rekord newspaper – 17 June 2026

Boshof Record newspaper

Site Notices:

Site notice 01: 28°32'11.72"S, 25°14'53.66"E (entrance to Boshof town)

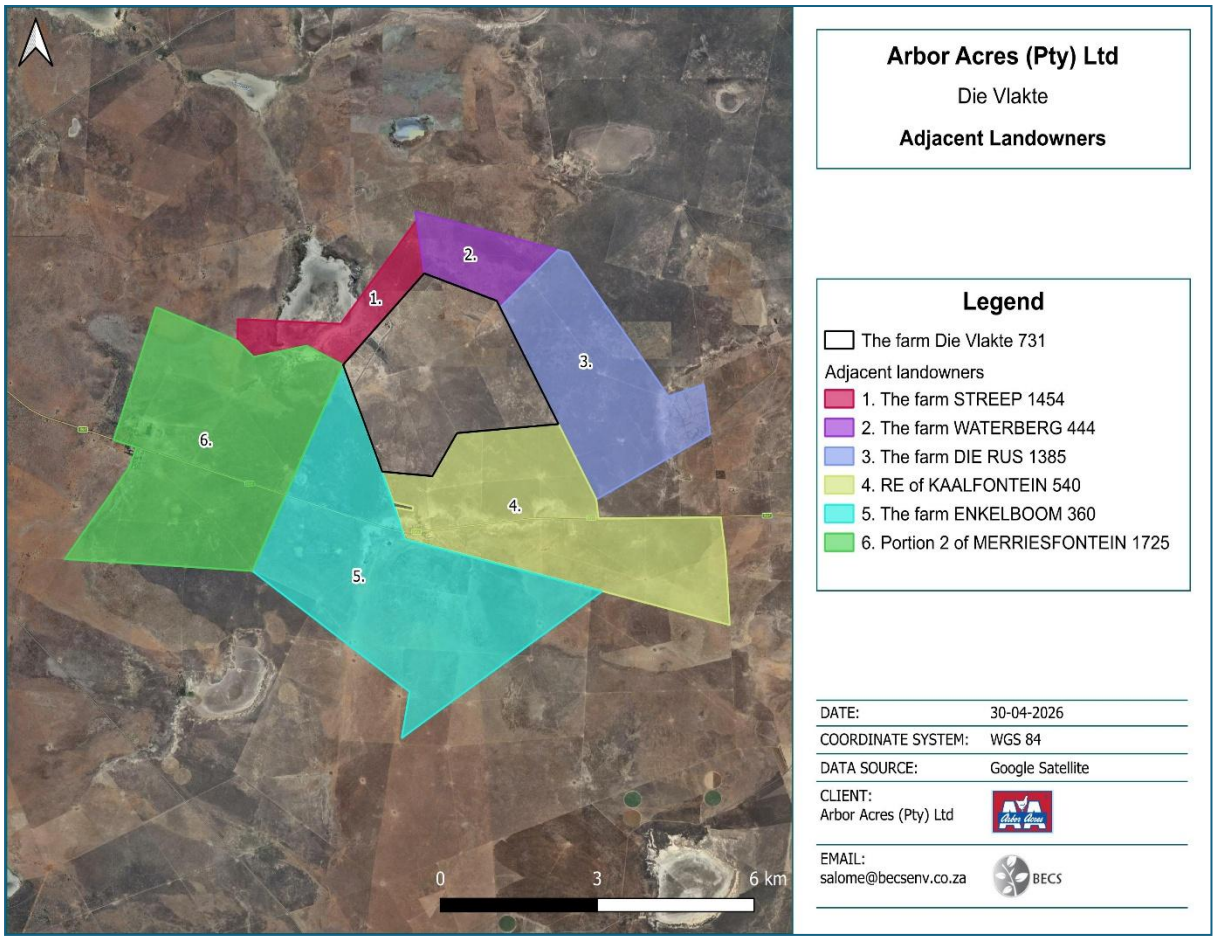
Site notice 01: 28°32'11.72"S, 25°14'53.66"E (entrance to Boshof town)

Site notice 02: 28°35'19.37"S, 25°21'49.95"E (entrance to development site)

Site notice 02: 28°35'19.37"S, 25°21'49.95"E (entrance to development site)

Key stakeholders:

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Sakkie Groenewald (RG TRUST, WALDI TRUST)	Surrounding landowner - The farm STREEP 1454, The farm WATERBERG 444, The farm DIE RUS 1385	conradgroenewald7@gmail.com
Amanda Bosman ("AKKERKRAG BOERDERY PTY LTD")	Surrounding landowner - Remaining extent of the farm KAALFONTEIN 540	meyerbosman@vodamail.co.za
J Neetling (KRUHAN TRUST)	Surrounding landowner - The farm ENKELBOOM 360, Portion 2 of the farm MERRIESFONTEIN 1725	0829440670



Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	e-mail
Department of Water and Sanitation (DWS)			
Free State Department of Agriculture and Rural Development	Mrs. Moliehi Moeng, Dr. Kristan J. Mojapelo	051-861 8515, 051-436 3677	moengm@dard.gov.za, drkris@dard.gov.za
Lejweleputswa District Municipality	Motlatsi Lesley Makhetha	057-353 3094	khaya@lejw.co.za
Ward Councillor Ward 3	Cllr. Boitumelo Enock, Seakge	053-541 0014	info@tokologolm.gov.za
Tokologo Local Municipality	Mr. Mpho Aron Sehloho	053-541 0014	info@tokologolm.gov.za
Department of Health (Provincial)	Mr. JNI Mbalula	051-408 1107	sechod@fshealth.gov.za
FS Heritage Resources Agency (SAHRA)	Ms. Malintja Molahloe	051-522 6762	malintjam@sacr.fs.gov.za
Provincial Department of Roads	Mr. Hannes Maree	082 059 9725	fsroadplanning@gmail.com

Appendix F: Impact Assessment

Impact Assessment Methodology

Table 1: Criteria used to determine the consequence of an impact

Rating	Definition of Rating	Score
A. Extent– the area over which the impact will be experienced		
Site	Within the construction site	1
Local	Within a radius of 2 km of the construction site	2
Regional	Provincial and parts of neighbouring provinces	3
National	The whole of South Africa	4
B. Intensity– the magnitude of the impact in relation to the sensitivity of the receiving environment, taking into account the degree to which the impact may cause irreplaceable loss of resources		
Low	Site-specific and wider natural and/or social functions and processes are negligibly altered	1
Medium	Site-specific and wider natural and/or social functions and processes continue albeit in a modified way	2
High	Site-specific and wider natural and/or social functions or processes are severely altered	3
C. Duration– the timeframe over which the impact will be experienced and its reversibility		
Short-term	Up to 2 years and reversible	1
Medium-term	2 to 15 years and reversible	2
Long-term	More than 15 years and irreversible	3

The combined score of these three criteria corresponds to a *consequence rating*, as set out in Table 2.

Table 2: Method used to determine the consequence rating.

Combined score (A+B+C)	**3-4**	**5**	**6**	**7**	**8-9**
Consequence rating	Very Low	Low	Medium	High	Very High

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications presented in Table 3 below.

Table 3: Probability classification

Probability – the likelihood of the impact occurring	
Improbable	<40% chance of occurring
Possible	40% - 70% chance of occurring
Probable	>70% - 90% chance of occurring
Definite	>90% chance of occurring

The overall significance of an impact is determined by considering the consequence rating and the probability classification using the rating system prescribed in Table 4 below.

Table 4: Impact significance rating

		Probability			
		Improbable	**Possible**	**Probable**	**Definite**
Consequence	**Very Low**	INSIGNIFICANT	INSIGNIFICANT	VERY LOW	VERY LOW
	Low	VERY LOW	VERY LOW	LOW	LOW
	Medium	LOW	LOW	MEDIUM	MEDIUM
	High	MEDIUM	MEDIUM	HIGH	HIGH
	Very High	HIGH	HIGH	VERY HIGH	VERY HIGH

Finally, the impact is also considered in terms of its status (positive or negative) and the confidence in the ascribed impact significance rating.

The prescribed system for considering impact status and confidence (in the assessment) is laid out in Table 5 below.

Table 5: Impact status and confidence classification

Status of Impact	
Indication whether the impact is adverse (negative) or beneficial (positive).	**+ ve (positive – a 'benefit')**
	– ve (negative – a 'cost')
Confidence in the assessment	
The degree of confidence in predictions based on available information, Green-Box Consulting judgment and/or specialist knowledge.	**Low**
	Medium
	High

The impact significance rating should be considered by authorities in their decision-making process based on the implications of ratings ascribed below:

- **INSIGNIFICANT: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity/development.**
- **VERY LOW: the potential impact is very small and should not have any meaningful influence on the decision regarding the proposed activity/development.**
- **LOW: the potential impact may not have any meaningful influence on the decision regarding the proposed activity/development.**
- **MEDIUM: the potential impact should influence the decision regarding the proposed activity/development.**
- **HIGH: the potential impact will affect the decision regarding the proposed activity/development.**
- **VERY HIGH: The proposed activity should only be approved under special circumstances.**

Practicable mitigation and optimization measures are recommended, and impacts are rated in the prescribed way both without and with the assumed effective implementation of the recommended mitigation (and/or optimization) measures. Mitigation and optimization measures are either:

- **Essential: measures that must be implemented and are non-negotiable; or**
- **Best Practice: recommended to comply with best practice, with adoption dependent on the proponent's risk profile and commitment to adhere to best practice, and which must be shown to have been considered and sound reasons provided by the proponent if not implemented.**

Impacts will then be collated into the EMPr and these will include the following:

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

Other aspects to be taken into consideration in the assessment of impact significance are:

- **Impacts will be evaluated for the construction and operation phases of the development. The assessment of impacts for the decommissioning phase will be brief, as there is limited understanding at this stage of what this might entail. The relevant rehabilitation guidelines and legal requirements applicable at the time will need to be applied;**
- **Impacts will be evaluated with and without mitigation in order to determine the effectiveness of mitigation measures on reducing the significance of a particular impact;**

- **The impact evaluation will, where possible, take into consideration the cumulative effects associated with this and other facilities/projects which are either developed or in the process of being developed in the local area; and**
- **The impact assessment will attempt to quantify the magnitude of potential impacts (direct and cumulative effects) and outline the rationale used. Where appropriate, national standards are to be used as a measure of the level of impact.**

Appendix G: Environmental Management Programme

Arbor Acres SA, Poultry Facility, Die Vlakte 731, Boshof District

ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

June 2026

TITLE	Poultry Broiler House Development on the farm Die Vlakte No.731, District of Boshof, Free State
REPORT TYPE	Environmental Management Programme (EMPr)
REPORT STATUS	DRAFT
REVISION	1
REVISION DATE	10 June 2026
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The Author / Environmental Assessment Practitioner (EAP) herewith confirms the correctness of the information provided in this Report, including supporting documents and reports, to the best of his/ her knowledge.

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Danie Krynauw
(Environmental Assessment Practitioner)

Signature of the Environmental Assessment Practitioner

Name of the Company: Green-Box Consulting

Date: 10 June 2026

Terminology

The following abbreviations are used in this report:

Abbreviations	Description
BPEO	Best Practical Environmental Option
CA	Competent authority
CBA	Critical Biodiversity Area
CBD	Convention on Biological Diversity
C&RT	Comments and Responses Table
DFFE	Department of Forestry, Fisheries, and the Environment
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAPASA	Environmental Assessment Practitioners Association of South Africa
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMC	Environmental Management Consulting
EMPr	Environmental Management Programme
ESA	Ecological Support Area
GDPR	Gross Domestic Product
ha	Hectare
IAIAsa	International Association for Impact Assessment South Africa
I&APs	Interested and Affected Parties
IDP	Integrated Development Plan
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NEMA	National Environmental Management Act, 1998 (Act No 107 of 1998), as amended
NEM:BA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NEM:AQA	National Environmental Management: Air Quality Act, 2004 (Act No. 29 of 2004), as amended
NWA	National Water Act, 1998 (Act No. 36 of 1998), as amended
NFEPA	National Freshwater Ecosystems Priority Area
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999), as amended
NWA	National Water Act
PSDF	Provincial Spatial Development Framework

PPP	Public Participation Process
SACNASP	South African Council for Natural Scientific Professions
SANS	South African National Standards
SDP	Spatial Development Plan
SDF	Spatial Development Framework

1 ACTIVITY INFORMATION

1.1 Introduction

The Environmental Management Programme (EMPr) outlines the procedures that control the way the Applicant[1], Arbor Acres SA, the Project Manager and the Contractors appointed for the construction phase activities and the operational phase activities of the proposed poultry facility (hereafter referred to as 'the site'), shall conduct himself/ herself/ themselves.

The EMPr covers the spectrum of pre-construction, construction (including post-construction and rehabilitation), and operation phases, and incorporates the recommendations of the Basic Assessment Report (BAR) and specialist studies in respect of the various actions that need to be taken to avoid / minimize / mitigate potential adverse impacts and enhance potential beneficial impacts of the project.

The EMPr describes impact management outcomes and impact management actions that need to be implemented during the various phases of the proposed project, including the careful implementation and management of the various proposed activities on the site from conception to implementation. The focus is usually placed on the activities to occur on the application property, i.e., the site; however, consideration of the adjacent or receiving environment (socially and ecologically) is equally important.

The impact management actions represented in this EMPr should not be regarded as static measures, but rather as procedures that can be adapted, as and when site conditions require. This EMPr sufficiently serves to provide the most practicable methods to promote sound environmental management during the construction and operational phases of the development. The EMPr subsequently is an on-site working and dynamic document.

This EMPr must be read in conjunction with the BAR, and the conditions of authorisation that the Authorising Authority is likely to put forward should authorisation be granted. In the unlikely event of any conflicting responsibilities or procedures, the precautionary principle must be adopted. Hard copies of the aforementioned documents should be kept on site along with the EMPr.

The EMPr is a fundamental element of the management process that is aimed at ensuring the environmental sustainability of the proposed development. The implementation of the EMPr will also aim to ensure that the conditions of approval laid down by the competent authority will be met. It is imperative for the EMPr to be actively implemented and used at all management levels as an integral part of the project. It is equally important to revise the EMPr in accordance with information that becomes available from the monitoring processes during the construction and operational phases and any new management practices that may be developed in the future.

1.2 Property Description

Arbor Acres SA intend a poultry facility development on the Remaining Extent of the Farm Die Vlakte No. 731, situated outside the municipal urban edge, approximately 12 km east of the town of Boshof in the Free State Province (see Figure 1).

Due to the nature of the development footprints and their proximity to regulated watercourses, the development triggers listed activities in terms of the National Environmental Management Act (NEMA) Environmental Impact Assessment Regulations (2014) as amended. An application for Environmental Authorisation (EA) under NEMA is therefore required prior to the implementation of the proposed development.

The poultry facility layout was proactively chosen because it completely avoids all delineated watercourses and high-sensitivity ecological zones on the property. All infrastructure footprints are placed well clear of the northeastern rocky ridge to protect critical Secretary bird nesting habitats. Furthermore, the entire layout maintains a strict protective buffer from local aquatic features, with the closest infrastructure point (Rearing House 6) safely positioned approximately 100 m east of the non-perennial, ephemeral watercourse confluence. This configuration represents the most environmentally sustainable and operationally feasible layout for the applicant.

The six poultry farms will be located at the following coordinate points (see figure 1):

Site 1 - 28°32'58.83"S 25°21'56.98"E

Site 2 – 28°33'24.30"S 25°22'58.57"E

Site 3 – 28°34'3.39"S 25°23'19.48"E

Site 4 – 28°34'9.38"S 25°22'31.13"E

Site 5 – 28°34'33.63"S, 25°21'58.26"E

Site 6 - 28°33'40.30"S, 25°21'25.77"E

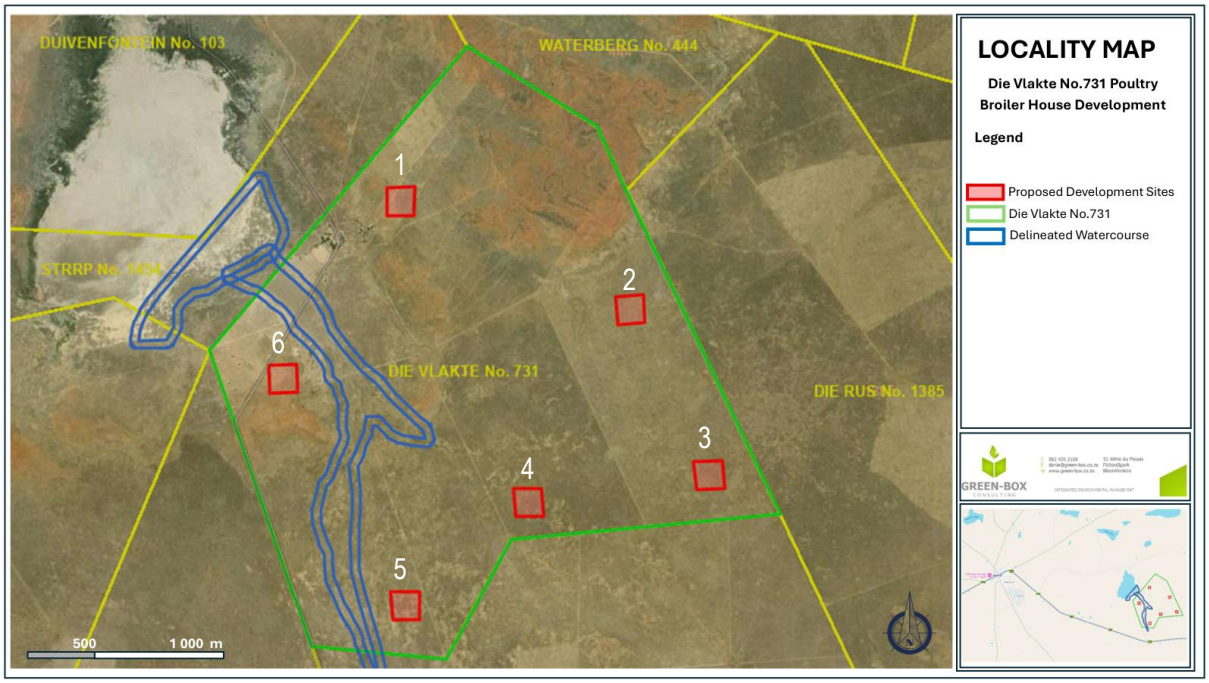

Figure 1: Site Location

[1]The term 'Applicant' and 'Holder of the Environmental Authorisation' are interchangeable

1.3 Project Description / Components (Scope)

The proposed activity involves the construction of a new poultry facility consisting of 4 separate blocks of poultry laying farms and 2 separate blocks of poultry rearing farms. Each of these 6 distinct blocks will be fenced off and will contain 5 broiler houses each (see figure 2 for layout), creating a total development footprint size of approximately ≤ 5.4 ha across the parent property. Each house will accommodate 6500 chickens.

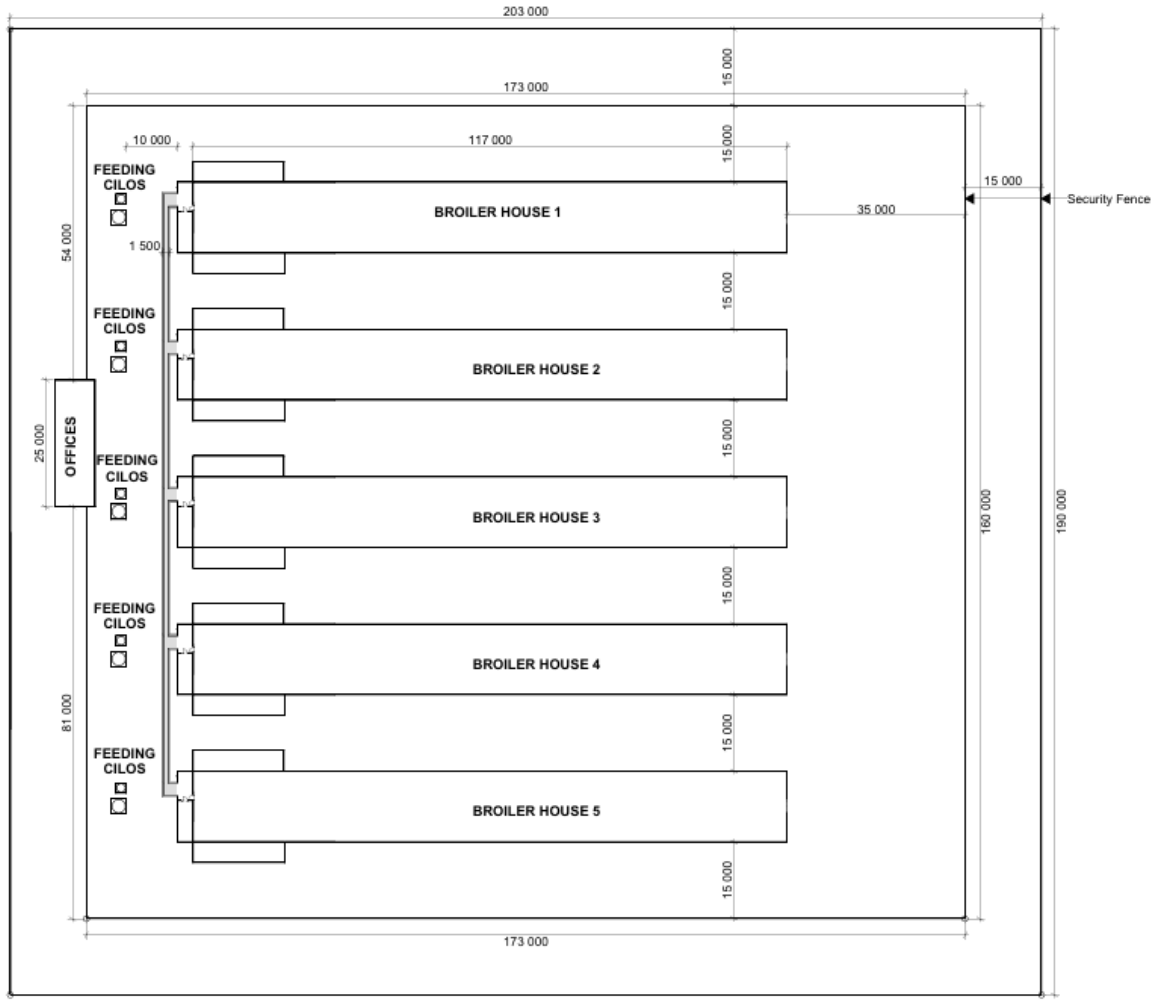

Figure 2: Typical Broiler House Layout (Just-Us Architecture, 2026)

The broiler and layer houses will be connected to service infrastructure including the installation of water network from groundwater sources (e.g. 8 x boreholes), diesel operated boilers will heat the houses, and septic tank French drain systems at each site will manage wastewater. It is proposed that mortalities be taken of site to a lion farmer in the area (existing service agreements are in place).

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2 PURPOSE OF THE EMPr

2.1 Scope of the EMPr

The aim of the EMPr is to ensure that proper controls are in place to address the potential environmental and social impacts of the proposed pre-construction, construction, and operation phases of the development. The key activities to be undertaken in each phase are elaborated below.

The **pre-construction (or planning/ design)** phase of the proposed poultry facility will include, amongst other activities, the following:

- Undertaking the various application processes for the required authorizations (permits) from the relevant competent authorities to implement the proposed development. This phase also involves planning for and preparing/ refining the site layout plan.
- Appointment of a suitably experienced project team, including a Project Manager, Environmental Control Officer (ECO), External Auditor and an Occupational Health and Safety (H&S) Officer (if required).
- If required, refine the Site Development Plan.
- Preparation of a 'staff procurement policy' to encourage the use of local labour/ staff.

The **construction** of the poultry facilities will include the following primary activities:

- The establishment of a construction yard/ office on the application site in non-environmentally sensitive area(s), to be ratified on-site by the ECO.
- Site clearance, at the identified pre-delineated 6 poultry sites.
- Site preparation by the Applicant/ Developer's contractor(s), including creation of building platforms on the development site, and installation of services infrastructure.
- Training for members of the project team, contractors, and subcontractors in accordance with the provisions of the EMPr and the implementation of all safety measures in accordance with the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), as amended (OHSA).
- The appointed ECO is to undertake site inspections at the frequency stipulated in the EMPr.

The **operational** phase of the proposed poultry facility will include the following primary activities:

1. Daily Feeding & Storage

Ensure consistent feed supply and proper storage.

- Store feed in silos or sealed bins to prevent contamination
- Schedule automated or manual feeding twice daily
- Monitor feed conversion ratios for broilers and layers

2. Water Provision

Maintain clean and reliable water supply.

- Use nipple drinkers or bell drinkers with filtration
- Check water pressure and flow daily
- Provide backup tanks or borehole supply

3. Heating & Ventilation

Control house climate for bird health.

- Use heaters or brooders for chicks
- Install fans and curtain systems for airflow

- Monitor temperature (18–24 °C) and humidity

4. Waste Management

Handle manure and litter responsibly.

- Collect manure via conveyor or deep-pit systems
- Compost or apply to land under permit
- Prevent runoff into watercourses

5. Mortality Management

Dispose of dead birds safely and legally.

- Collect mortalities daily
- Use incineration, composting, or rendering facilities
- Record mortality rates for biosecurity

6. Egg Collection & Transport

Ensure efficient handling of eggs from layer houses.

- Automated belts or manual collection twice daily
- Grade and pack eggs in storage rooms
- Transport to markets in refrigerated vehicles

7. Broiler Harvest & Transport

Manage broiler removal and delivery to abattoirs.

- Schedule catching teams at 5–7 weeks
- Load birds into crates with minimal stress
- Transport under welfare-compliant conditions

8. Biosecurity & Health Monitoring

Prevent disease outbreaks and ensure flock health.

- Restrict visitor access and disinfect entry points
- Vaccinate according to veterinary schedule
- Monitor for signs of respiratory or digestive issues

9. Record Keeping & Compliance

Maintain operational and regulatory documentation.

- Track feed, water, and production data
- Record waste disposal and mortality logs
- Ensure compliance with environmental and animal welfare legislation

2.2 Legal Requirements

The provisions of the EMPr are binding on the Applicant and all Contractors during the life of the project and the lives of all contracts. If any conflict occurs between the terms of the EMPr and the project specifications, or pending Environmental Authorisation, the terms in the EMPr shall be subordinate.

The EMPr is a dynamic document subject to similar influences and changes as are wrought by variations to the provisions of the project specification. Any substantial changes must be submitted to the relevant authorities in writing for approval, in accordance with the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended (NEMA), and the Environmental Impact Assessment (EIA) Regulations (2014), as amended.

The construction and operational phase aspects of this development must be undertaken according to best industry practice, as identified in the EMPr and any relevant project documentation. This EMPr, which forms an integral (**and compulsory**) part of all Contract Documents, informs the Contractors/ Responsible Persons as to his/ her/ their duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of potential negative environmental impacts caused by the activities associated with the project.

All Contractors must note that obligations imposed by the EMPr are legally binding in terms of environmental statutory legislation. If any rights and obligations contained in this document contradict those specified in the standards or project specifications, then the latter will prevail.

2.2.1 Statutory and other applicable legislation

It is expected that the Contractor(s) is conversant with all environmental legislation pertaining to the project. In addition, the Contractor must also take cognizance of Provincial and Local Government Ordinances and by-laws, which may be applicable to the project.

2.3 Impact Management Outcomes and Impact Management Actions

Impact management outcomes, and proposed impact management actions to achieve these outcomes, have been determined for the project based on the impact assessment undertaken and recommendations made by the EAP and specialist practitioners. The impact management actions include measures to avoid, manage and/or mitigate the identified impacts.

2.4 Fundamental Principles of the EMPr

The EMPr is based on fundamental principles derived from applicable government policy statements contained in various government documents and legislation (e.g., NEMA). The following principles contained in these documents and laws will be used in the EMPr to guide the various phases of the proposed development, namely:

- Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural, and social interests equitably.
- Development must be socially, environmentally, and economically sustainable, i.e., meet the “triple bottom line” criteria for development.
- Sustainable development requires the consideration of all relevant factors including the following:
  - that the disturbance of ecosystems and loss of biological diversity are avoided, are minimised and remedied;
  - that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;
  - that the development, use and exploitation of renewable resources and the ecosystems of which they are a part do not exceed the level beyond which their integrity is jeopardised;
  - that a risk-averse and cautious approach is applied (also called the Precautionary Approach), which takes into account the limits of current knowledge about the consequences of decisions and actions;
- Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.
- Community well-being and Empowerment (e.g., of the construction personnel) must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.
- Capacity building and education: The EMPr must play a dynamic role in developing the understanding, skills, and capacity of the Employees (e.g., construction personnel) in order to promote sustainable development.
- Consider all alternatives: Considering all alternatives results in making the best decisions. The BAR and EMPr must therefore ensure that all alternatives are considered in all decision-making. Developmental and

environmental planning, problem solving, and decision-making is often complex. Possible consequences of conflicting interest as well as the consequences of not acting need careful consideration.

- Co-ordination: Various concerns and issues cut across the key sectors and functions in the area. Sustainability and integrated planning and management (including monitoring) therefore will depend on co-ordination and integration of the relevant role players in the construction and operational phases of the proposed development.
- Due process: Due process must be applied in all integrated management activities. This includes adherence to the provisions in the Constitution and statutes dealing with just administration and public participation in regional and local governance.
- Duty of care: Every person (e.g., the Applicant and the contract workers) associated with the development and its associated infrastructure has a duty to act with due care to avoid damage to the environment, or pollution of the environment or waste a precious resource. Also called the Environmental Responsibility Principle.
- Equity: The EMPr is to ensure equitable access to natural resources, benefits, and services to meet basic needs and ensure human wellbeing. Each generation has a duty to avoid impairing the ability of future generations to ensure their wellbeing.
- Full cost accounting: Decisions must be based on an assessment of the full social and environmental costs.
- Good governance: Good governance depends on mutual trust and reciprocal relations between the various groups and sectors of the area and the controlling officials. This must be based on the fulfilment of constitutional, legislative, and executive obligations, and the maintenance of transparency and accountability.
- Prevention: The EMPr must be flexible enough to be adapted to take into account any potential problems that may arise in the future and thereby prevent any negative impacts on the environment, and on people's rights.
- Polluter Pays: Those responsible for environmental damage must pay the repair costs both to the environment and human health and must carry the costs of preventative measures to reduce or prevent further pollution or degradation.
- Subsidiary: Regulatory responsibilities belong at the most local level at which the tasks can be carried out effectively. Environmental management structures must match the ecological scale of the managed resource.
- Waste management: Waste management must minimise and avoid the creation of waste at source. The EMPr is to encourage waste recycling, separation at source and safe disposal of unavoidable waste.

3 GENERAL SITE MANAGEMENT

3.1 Project and Environmental Management Team

The Project Management Team will consist of the Applicant (Developer), Project/ Site Manager, Environmental Control Officer (ECO), External Environmental Auditor, Health and Safety Officer, Contractors and associated sub-contractors.

The specific names and contact details of the persons responsible within these positions and the sub-contractors involved are tabulated below.

The daily on-site activities will be controlled by the Project/ Site Manager.

Table 2: Site Management Contact Details

Designation	Name	Contact Details
Applicant / Developer / Holder of EA	Arbor Acres SA	Mr. Arno van der Nat arno@arboracres.co.za
Project / Construction Site Manager / Principal Agent	To be appointed	
Environmental Control Officer (ECO)	To be appointed	
External Environmental Auditor	To be appointed	
Occupational Health and Safety Officer	To be appointed	
Contractor(s)	To be appointed	

3.2 Communication, Responsibilities and Complaints Management

3.2.1 General Public

It is the responsibility of the **Applicant** to facilitate interaction with the public. This responsibility includes:

- Informing the neighbouring residents (farm owners) of the intent to commence with the activities and in doing so provide background information as to the duration of the project, the working hours, and necessary contact details;
- Responding to all public complaints or queries whether such complaints are received by the Project/Site Manager, ECO and/or the appointed Contractors;
- Develop and maintain a register of all public complaints/ queries, as well as the Applicant's response to these complaints and queries; and

3.2.2 Duty of Care

The Applicant, Project Manager and Contractors have a *Duty of Care* towards the environment in terms of Section 28 of NEMA. Section 28 states that "E*very person who causes, has caused, or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by Law or cannot reasonably be avoided or stopped, to minimise and rectify pollution or degradation of the environment*."

The EMPr requires all involved with the development to act in the spirit of "Duty of Care" throughout the various phases of the project.

3.2.3 Contractors

It is the responsibility of the Contractor(s) to:

- Undertake all work on site in accordance with the requirements of the EMPr and Environmental Authorisation;
- Undertake all work on site in accordance with the requirements of the applicable legislation, including the Basic Conditions of Employment Act, 1997 (Act No. 75 of 1997), as amended and the OHSA.
- Undertake regular (at least weekly) "tool-box talks" with personnel, the contents of which must include reference to the EMPr (with a focus on any issues raised by the ECO). Personnel to be made aware of the dangers associated with the work and that they have the right to refuse work that is harmful to human health or the environment;
- Liaise directly with the Applicant, Project/ Site Manager regarding any queries concerning the EMPr or complaints received from the public;
- Liaise directly with the Project/ Site Manager should any environmental problems be identified or actions in breach of the objectives set, take place e.g., littering, oil spill;
- Keep on file proof of safe/ lawful disposal of all wastes generated during the construction phase
- Carry out instructions issued by the Project/ Site Manager; and
- Implementation of / Adherence to the Procurement Strategy.

3.2.4 Project Applicant / Holder of the Environmental Authorisation

The Project Applicant's (Holder of the Environmental Authorisation) responsibilities include the following:

- Attain all necessary approvals and ensure that they are acted on within their validity period and that the conditions of approval are adhered to;
- Appoint a project team capable of implementing the requirements of the EMPr and EA, including an ECO and Landscape Architect (if necessary);
- Fulfil all public relations responsibilities in conjunction with the Municipality;
- Inform the relevant authorities of any site-related problems that may occur during the various phases of the project;
- Attend site meetings when appropriate;
- Liaise with the Project/ Site Manager regarding environmental management on site; and
- Assist the Project/ Site Manager in making decisions and finding solutions to environmental problems that may arise during the operation and closure phases.

NOTE: The Holder of the Environmental Authorisation is ultimately **responsible for ensuring compliance** with the conditions of authorisation by any person acting on its behalf, including, but not limited to, an agent, sub-contractor, employee, or any person rendering a service to the holder of the authorization.

3.2.5 Local Authority

The Local Authority's responsibilities include the following:

- Attend site meetings when appropriate;
- Liaise with the Project/ Site Manager regarding environmental management on site; and
- Assist the Applicant, Project / Site Manager, in making decisions and finding solutions to environmental problems that may arise.

3.2.6 Project (Construction) Site Manager / Principal Agent

The Project/ Site Manager's responsibilities include the following:

- Oversee the day-to-day activities on the site and keep an up-to-date diary of site activities;
- Ensure that the requirements as set out in the EMPr and the conditions of EA are adhered to throughout the lifecycle of the project;
- Direct the Contractors, whenever necessary, to comply with the conditions of the EMPr and EA and recommend corrective action where there is non-compliance with the EMPr;
- The Project/ Site Manager must attend site meetings where required to be able to report on, and respond to any environmental issues, and be issued with copies of minutes of such meetings;
- The Project/ Site Manager must obtain, examine, and approve method statements where applicable;
- Advise the project team on environmental issues within the defined work and surrounding areas;
- Collect and record all waste manifest data sheets;
- Maintain the public complaints register on the site; and
- Review the results of the ECO site visits (Reports) and facilitate any corrective actions that may be necessary.

The Project/ Site Manager has the authority to **stop works** if in his/ her opinion there is a serious threat to, or impact on the natural and/or social environment because of construction activities. This authority is to be limited to emergency situations where consultation with the applicant and/or contractor is not immediately possible. In all such work stoppage situations the Project/ Site Manager is to inform the applicant and contractor of the reasons for the stoppage as soon as possible. The necessary instructions should be issued verbally and followed up with written instruction (e.g., via email).

Upon failure by the contractor to show adequate consideration to the environmental aspects of this contract, the Project/ Site Manager may recommend having the contractor's representative or any employee(s) removed from the site or suspend work until the matter is remedied. No extension of time will be considered in the case of such suspensions, and all costs will be borne by the responsible contractor.

3.2.7 Environmental Control Officer

The Environmental Control Officer's (ECO) responsibilities (if required by the Environmental Authorisation conditions) include the following:

- The ECO must submit written notification of the commencement of work on site to the competent authority;
- The ECO must monitor and report on the level of compliance by the Applicant, Project Manager and Contractors with the approved EMPr and the conditions stipulated in the Environmental Authorisation for the proposed development at the frequency(ies) as stipulated in Section 3.2.7.2 below;
- The ECO must meet with the Project Manager and Contractor(s) before construction begins to present the environmental education training and to go through the contents of the EMPr and EA. The ECO must explain to the Contractors, their environmental responsibilities whilst employed on the site, in particular their Duty of Care towards the environment;
- The ECO will issue an ECO Report/ Checklist after each site visit (or at a minimum once per month) which provides a summary of project progress in general and the findings of the site visit and the level of compliance with the EMPr and EA. The ECO Report must be circulated to the DEA&DP and the Municipality.
- The ECO must be contacted to attend to environmental problems, should they arise on site, and shall recommend corrective action where there is partial- or non-compliance with the EMPr and/or EA;
- The ECO must attend site meetings where required to be able to report on, and respond to, any environmental issues, and be issued with copies of minutes of such meetings;
- The ECO must obtain, examine, and approve method statements where applicable;
- The ECO must manage and keep an up-to-date diary of site activities and a detailed photo record of all site visits;
- The ECO must advise the applicant, Project/ Site manager and Contractors on environmental issues within the defined work areas;
- The ECO shall liaise with the local authority's environmental officer on, and as required basis.

The ECO has the authority to **stop works** if in his/ her opinion there is a serious threat to or impact on the environment because of construction activities. This authority is to be limited to emergency situations where consultation with the Project/ Site Manager or Applicant is not immediately available. In all such work stoppage situations the ECO is to inform the Project/ Site Manager and Applicant of the reasons for the stoppage as soon as possible. The necessary instructions should be issued verbally and followed with written instructions (e.g., via email).

Upon failure by the Contractor or his employee to show adequate consideration to the environmental aspects of this contract, the ECO may recommend to the Project/ Site Manager to have the Contractor's representative, or any employee(s) removed from the site or work suspended until the matter is remedied No extension of time will be considered in the case of such suspensions, and all costs will be borne by the responsible Contractor.

3.2.7.1 Level and Type of Competency of ECO

A suitably experienced environmental practitioner(s), with at least 3 years relevant site supervision experience, will need to act as the ECO.

3.2.7.2 Frequency of ECO Site Visits

The frequency of ECO site visits during the construction phase of civils infrastructure should be as follows:

- Once during the first month of the construction works.
- Thereafter once per month for the duration of the construction phase, based on the level of compliance with the EMPr and EA.

The monthly site visits should, as far as possible, coincide with the monthly site meetings [with the Project Manager and contractor(s)].

An ECO checklist must be completed once per month and must be forwarded to the Project Manager, Contractor(s) and Applicant (developer) within 5 days of the site visit and meeting. *Any environmental problems noted during a site inspection should, however, be brought to the attention of the Project Manager and Contractor as soon as reasonably possible.*

The ECO should undertake *ad hoc* site inspections should environmental problems arise during the construction phases, or when certain milestones have been reached.

The ECO will carry out a final site inspection at the end of the civils construction phase, to undertake an environmental 'close-out' inspection/ audit, to assess compliance with the EA, EMPr and the construction guidelines, and to ensure that satisfactory rehabilitation of any disturbed areas and access roads around the construction sites have been carried out.

Should any environmental problems arise during the construction phase, the RE and/or contractor must immediately inform the ECO to undertake a site visit to assess and attend to the potential environmental problem(s). All works where problems exist are to be stopped until the ECO has been to site and assessed the situation and rectified the problem(s).

3.2.7.3 Report on Compliance

The ECO is required to report on compliance in writing to the Project Manager, Applicant, and relevant authorities monthly during the construction phase.

Refer to **Section 3.3** with respect to external auditing requirements.

3.2.8 Communication and Record Keeping Procedures on Site

All records related to the implementation of this EMPr (e.g., site instruction book, Site Manager Diary, method statements, environmental authorisation) must be kept together on site where it is safe and can be retrieved easily. These records should be kept for submission to the relevant authorities, if requested.

3.2.8.1 Site Instruction Entries

An instruction book/ file should be kept on site by the appointed Contractor for the purposes of recording specific important site instructions that need immediate attention. The site instruction book will also be used for issuing "stop work" orders for the purposes of immediately stopping any activities on site due to the environmental risk or impact that may result.

Site inspections will be conducted by an ECO appointed by Applicant/ Developer. The ECO Checklists will serve as a general record of compliances and non-compliances in accordance with the content of the EMPr and EA that need to be addressed during the construction or operational phases of the development. The Project Manager must give immediate attention to any environmental issues that need to be dealt with.

3.2.8.2 Environmental Incidents and External Complaints Register

A register should be maintained by the Project Manager for all environmental incidents occurring on site. The register should record the following information for each incident: date, time, type of incident, person responsible for the incident, corrective action required, immediate corrective action implemented, and whether the incident was reported to the ECO and/or other parties. A register should also be maintained for any complaints and/or comments received from external parties (such as from neighbours and members of the surrounding community or staff of the proposed development site). The register should record the following information for each complaint and/or comment received: date, time, details of the person who lodged the complaint/ comment, details of the complaint/ comment, action required, immediate action implemented, whether the complaint/ comment was reported to the ECO and/or other parties.

3.2.8.3 Minutes of the Site Meetings

The Minutes of each monthly site meeting must be forwarded to the ECO, Contractor, and the Applicant within one week of the meeting taking place. The minutes of the meeting must record any environmental issues that have been raised by the ECO, and that need to be addressed or rectified.

3.2.8.4 Photographs

It is recommended that photographs are taken of the site regularly by the Project Manager and during site visits by the ECO as a visual reference. These photographs should be filed with other records related to this EMPr.

3.2.8.5 Method Statements

Method Statements

Written submissions by the Contractor(s) must be prepared prior to any activity occurring on site if requested by the Applicant, Project/ Site Manager or ECO, or for activities not addressed in this EMPr. The submission will include the plant or equipment to be used as well as materials, labour, and methods to be used to undertake the activity.

The method statement must be completed in such detail that the Project/ Site Manager is enabled to assess whether the Contractor's proposal is in accordance with the environmental objectives set. The format for such a method statement should follow the following format and include the following information:

What? A brief description of the project;
How? A detailed description of the process of work, methods and materials; and where material will be stored;
Where? A description/sketch map of the locality of work (if applicable); and compliance/ noncompliance with the specifications;
When? The sequencing of actions with due commencement and completion date estimates (duration of the activity);
Who? The names of the person/s or companies who are going to undertake the work; and
Why? An explanation of the reason why the work needs to be carried out.

Copies of all approved Method Statement must be kept on site as required in **Section 3.2.8** above.

3.3 External Auditing Requirements

Auditing of compliance with the EA and EMPr needs to be undertaken in accordance with Section 34 of the EIA Regulations 2014 (as amended from time to time). Audit Reports need to meet the objectives and content requirements as laid out in Appendix 7 to the EIA Regulations 2014 (GNR326) (as amended from time to time). The Authorizing Authority is likely to include conditions relating to auditing in the EA.

3.4 Environmental Awareness

All Contractor teams involved in work on the development are to be briefed on their obligations towards environmental controls and methodologies in terms of this EMPr and conditions of the EA prior to work commencing.

3.5 Financing of Environmental Control

Financing all control measures is the direct responsibility of the Applicant, or each contractor appointed by the Applicant. It is therefore accepted that the costs incurred for implementing the required environmental controls to ensure compliance with local authority By-laws, Provincial and National legislation, the EA and the objectives or requirements specified in this EMPr would be provided for in the specific tender documents.

All responsibilities not defined in the EMPr, or which fall outside of the tender specifications will be the responsibility of the Applicant.

4. ENVIRONMENTAL MANAGEMENT: PRE-CONSTRUCTION PHASE

4.2 Description of the Impact Management Outcomes for the Pre- Construction Phase

The impact management outcomes for the pre-construction phase include the following:

- To ensure that the recommended plans and strategies are prepared and implemented timeously to maximise the benefits of the proposed development and manage the anticipated negative impacts prior to the construction phase commencing.

4.3 Environmental Specifications: Pre-Construction

Prepare Recommended Plans and Strategies

Responsible Entity: The Applicant must take responsibility for ensuring that the required plans and strategies as recommended by the specialist practitioners are timeously prepared and implemented.

The appointed **ECO** is to monitor compliance with the required actions below.

NOTE: The required actions below must be prepared **prior to** commencement of construction.

Required Actions:

- Guidelines should be prepared, where relevant, for the implementation of a Procurement and Communication Strategy that includes the following:
- Initiate the activity during the first phase of the development after which the implementation of the strategy becomes the responsibility of the contractor(s) collectively under the guidance of the developer;
- Develop a database of local contractors who are competitive and possess the required skills and capacity to obtain contracts; and
- Local contractors are invited to tender for work in the context of the terms and conditions that should be included in Request for Proposal (RFP) documentation.
- Inform local people that enquire about employment opportunities of the procurement strategy and the terms of conditions that are applicable to procurement and employment.
- Define/ determine the performance criteria for the project and institute a monitoring programme of construction performance.

5. ENVIRONMENTAL MANAGEMENT: CONSTRUCTION PHASE

5.2 Description of the Impact Management Outcomes for the Construction Phase

The impact management outcomes for the construction phase include the following:

- To control all aspects of the construction phase by implementing the necessary impact management actions and recommendations to manage any temporary or permanent negative environmental impacts.
- To ensure the conservation of the natural resource base on the site, and institute measures to prevent the degradation of the natural resource base from taking place, including:
- To protect and conserve animal life, including birds and snakes which may occur within the development area.
- To prevent fires from arising from the construction site.
- To ensure the conservation and sustainable use of scarce water resources by instituting measures to minimise water use during the construction phase of the project.
- To ensure waste minimisation and recycling of all waste at source and ensure that recyclables enter the waste stream by engendering an ethic of waste management amongst construction staff.
- To ensure that no stormwater is discharged to the working areas and further to ensure that the stormwater leaving the footprint of the proposed development area is not contaminated by any substance.
- To prevent any impacts on air quality, such as dust and smoke pollution, that could result during the construction phase of the project.
- To minimise the visual (aesthetic) impact of the development, during the construction phase, on the surrounding environment.
- To ensure the conservation of the archaeological and heritage resources on the site, by checking for such resources in any excavations undertaken.
- To optimise the social benefits of the development, local builders and contractors should enjoy preferential appointments to install infrastructure.
- To maintain and/or enhance security levels around the development site, during the construction phase of the development.

5.3 Environmental Specifications: Construction

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
E.1 GENERAL CONSTRUCTION MANAGEMENT				
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E.1.1 Establish appropriate partnerships and good relationships with local authorities, local community (including adjacent landowners), and contractors**				
Potential Impact: Poor relations with project stakeholders and the negative implications for project support, such as *developer interest*, and for project implementation, such as *authority approval*. **Target Outcome:** Appropriate partnerships and good relationships with local authorities, the local community (including adjacent landowners) and contractors established for the duration of the project life-span.	1. Ensure appropriate communication with all local authorities, local communities, and contractors.	To be undertaken by professional team and ECO, project manager (consulting engineer and/or site agent) as an ongoing process.	The **Project Manager** must take responsibility for establishing good relations.	The appointed **ECO** is to monitor environmental contractual obligations of contractors on an ongoing basis and must undertake the required environmental inductions and training of contractors. **Monitoring Frequency**: Monthly ECO Checklists
	2. Contractors to be fully informed by the ECO as to their environmental contractual obligations.	ECO to monitor environmental contractual obligations of contractors on an ongoing basis.		
	3. The ECO to give a presentation to contractor and site staff to familiarise them with the environmental aspects of the contract. The Contractor and staff must attend this meeting.	ECO to meet with Contractor and staff before construction commences to initiate the EMPr.		
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E.1.2 Set-up of construction site and site offices:**				
Potential Impact: Deterioration of environment surrounding construction sites. **Target Outcome:** Undertake construction works without adversely affecting the environment through the implementation of appropriate management measures.	1. Communicate with Contractor to ensure that all the environmental specifications are understood and carried out.	To be undertaken by ECO and site agent before construction commences.	The **Project Manager** must take responsibility for the setting up of the construction site and site offices and must ensure that construction activities are undertaken in such a manner as not to adversely affect the environment.	The appointed **ECO** is to ratify the areas designated for the below uses and must monitor compliance with the required actions.

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
	2. The Contractor must point out and demarcate the construction sites and site offices. This area is to be fenced off and must be locked outside working hours.	To be sanctioned by the site agent before construction commences.		**Monitoring Frequency**: Monthly ECO Checklists
	3. Control all construction in terms of the EMPr.	ECO to inform and educate the construction staff of the *Construction Guidelines* and the *Recommendations for Clearing of Invasive Alien Vegetation* prior to commencement of construction. ECO to monitor compliance.		
	4. Construction material (concrete and raw materials) must be stored in designated areas in a neat and orderly manner.	Area for construction material to be designated by the ECO and to be in a secure area. ECO to monitor compliance.		
	5. Contractor to store building rubble in a suitable designated area, with rubble removed from the site on a weekly basis (if not to be used as fill).	Area for building rubble storage to be designated by the ECO. Contractor to remove builder's rubble on a weekly basis. ECO to monitor compliance.		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
	6. The Contractor must indicate the storage area for all spoil from the site. Trucks removing spoil must remain on designated access road/s. Access Road/s must be well maintained.	ECO assesses spoil storage areas and to monitor the condition of the road.		
	7. All other solid waste is to be kept in appropriate containers with lids and removed from the site on a weekly basis to a licensed waste disposal facility. The burning of solid waste and paper on site will not be allowed. Recyclable waste (e.g., paper, glass, tin, plastic) should be recycled if possible.	Contractor to remove the solid waste on a weekly basis. ECO to monitor compliance.		
	8. Only one refuelling area should be provided at the stores/site office. A bunded pit (large enough to contain 110% of the fuel volume to be stored) must be built beneath the fuel container. A concrete apron must be cast on the outside of the bunded area to contain diesel spills and drips. A sand layer, ± 150 mm thick, can be placed on top of the floor of the bunded pit. The sand layer must be replenished from time to time according to the degree of contamination. The contaminated soil must be removed to a licensed waste disposal facility that accepts such toxic waste.	ECO to supervise and monitor. Contractor to report all fuel and oil spills to the ECO immediately and to remove contaminated soil to a licensed waste disposal facility.		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
	9. Concrete mixing must be restricted to a designated area on site and cement residues to be removed from site as soon as possible. Two wastewater catch pits must be constructed in series for the capture of cement residues from cleaning of the cement mixer. Residues are to be removed from site from time to time.	ECO to monitor compliance. Contractor to remove cement residues from site as directed or at the end of contract.		
	10. Prevent cement spills or clear such accidental spills on any exposed soil on/near the site as soon as possible as cement powder has a high alkalinity pH rating that can contaminate and affect both soil and water pH dramatically. This will have negative impacts on surrounding vegetation.	Contractor to remove any spilt cement on exposed soil as soon as possible.		
	11. All parked mechanical vehicles must have a drip tray present to prevent spillage of oils and fuels. Used oil (from servicing of vehicles) should be recycled or disposed of at a hazardous waste disposal facility. All spills are to be addressed immediately to prevent seeping into the ground.	ECO to monitor compliance. Contractor to recycle or dispose of used oils at hazardous WDF. Contractor is also to dispose of contaminated soil at a hazardous waste disposal site and to ensure that spillage of hazardous substances on site is addressed immediately and appropriately.		
	12. All spills are to be addressed immediately to prevent seeping into the ground.	Safety, Health & Environmental Officer to monitor the generation of any dust and advise the Contractor to mitigate accordingly.		
	13. A hydrocarbon spill kit must be provided on-site, and personnel must be trained in its use.			
	14. Disturbed areas where dust can arise should be kept moist by spraying with water from a bowser or by using other suitable means such as straw stabilisation. Water use for wetting of roads should not be potable water. It can be obtained from dams or the use of treated effluent.			

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E.1.3 Prevent possible negative impacts of construction personnel on the environment**				
Potential Impact: Deterioration of environment surrounding construction sites. **Target Outcome:** Preserve conditions of surrounding natural environment.	1. Contractors will be responsible for the conduct of their personnel on site, as it pertains to trespassing, littering, and unacceptable social behaviour.	Contractor responsible for social management. ECO to monitor for duration of contract.	The **Project Manager** and responsible **Contractor(s)** must take responsibility for regular Staff training and education regarding the environmental implications of construction activities to prevent / minimise the impacts of construction activities on the environment.	The **appointed ECO** is to monitor compliance with the required actions below for the duration of the contract(s). ECO must inform construction personnel of environmental rules, which apply during the construction period. This includes informing personnel of the environmental sensitivities of the receiving environment as well as how they should conduct themselves on site. **Monitoring Frequency**: Monthly ECO Checklists
	2. ECO must inform construction personnel of environmental rules to apply during construction period.	ECO to meet with Contractor prior to commencement of construction in new areas to inform workers of the sensitivities of the site and how they should conduct themselves.		
	3. Maintain strict supervision over all construction activities.	ECO to monitor construction activities and if any adverse impacts occur, he must inform the Site Agent, RE and client of such conduct on an ongoing basis.		
	4. All construction workers must stay within the development area demarcation, and no personnel will be allowed beyond the demarcated area.	Contractor responsible for ensuring that personnel do not move beyond the demarcated areas of the site. ECO to monitor for duration of contract.		
	5. The contractor must provide temporary chemical toilet facilities at the stores/ site office area, and work sites, where possible.	Contractor responsible for the functionality of the toilet facilities on site. ECO to monitor		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
	A minimum of one toilet and one handwash basin shall be provided per 15 persons at each working area or as stipulated by the local authority. In addition, at least one urinal should be provided for every 40 males on site or as stipulated by the local authority. The toilets and urinal(s) must be kept in a clean and sanitary condition and must be regularly serviced (on at least a weekly basis).	Condition of such facilities.		
	6. Contractors must be informed of the efficient energy (electricity) use during construction. When not in use lights, angle grinders, motors etc. must be switched off.	Contractor to ensure energy used on site is conserved wherever possible.		
	7. Designated eating areas must be provided for staff. Lidded bins must be provided for any waste.	Contractor to indicate areas suitable for eating on/off site. Safety, Health & Environmental Officer to monitor cleanliness of such area/s.		
	8. Construction staff will not be allowed to stay on site and must be bussed to site each day.	ECO to monitor for duration of contract.		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E.1.4 Ensure that the construction phase meets the required performance criteria**				
Potential Impact: Sub-standard contractor work during the construction work could lead to several negative impacts, such as delayed deadlines, financial implications and unnecessary harm to the natural environment and/or surrounding the site. **Target Outcome:** Contractor compliance with the EMPr and hence, minimal environmental damage due to construction works.	1. Inform all contractors and their staff of the performance criteria.	To be undertaken by ECO prior to Commencement of construction.	The **Project Manager** must ensure that the construction phase meets the required performance criteria and inform the Client of any time delays or non-performance during the contract period.	The appointed **ECO** is to monitor compliance with the required actions below for the duration of the contract(s). **Monitoring Frequency**: Monthly ECO Checklists
	2. Institute and maintain a monitoring programme of construction performance.	Site Agent to supervise worker behavior on a daily basis and to be monitored by ECO.		
	3. Monitor construction work.	Project Engineer to monitor progress and impacts and inform client of any time delays or non-performance during contract period.		
	4. Ensure that contractors adhere to the guidelines in respect of littering, sanitation, spills of toxic substances and general behaviour.	ECO to monitor significant impacts.		

E2 BIOPHYSICAL MANAGEMENT PROGRAMMES				
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E2.1 Fauna and Flora**				
E2.1.1 Alien plant management				
CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
Potential Impact: Alien vegetation infestation on the site and ecosystem implications thereof. **Target Outcome:** Effective management of terrestrial habitat and vegetation present on the site.	1. Any alien vegetation present on the site must be removed by appropriate means according to national legislation requirement.	Alien plant management is a long- term commitment and must be continued by the holder of the EA.	The **Project Manager** and **Contractor(s)** must ensure that the terrestrial habitat and vegetation present on and around the development site is effectively managed.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists
E2.1.2 Fire Management Plan				
Potential Impact: Fire outbreak due to construction activity. **Target Outcome:** No incidents of fire outbreak on site due to effective fire management.	1. Utmost caution must be taken not to make any fires on the site (e.g., burning of removed brushwood or for heating of food), especially during summer.	Contractor to reduce fire risk on site. ECO to monitor for duration of contract	The **Project Manager** and **Contractor(s)** must take the necessary measures to reduce the risk of fire on the property. The **Project Manager** must ensure that the required insurance(s) is in place.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists
	2. The contractor(s) must have the appropriate insurance for fires caused by their personnel.	Contractors to ensure that insurance against fire outbreaks due to activity of their construction personnel on site are established, to ensure recovery can be undertaken in the aftermath of any fire outbreak.		
	3. Fire safety equipment (fire beaters and extinguishers) should be kept on site, and fire training should be provided for personnel.	Contractor to provide fire safety equipment on site. ECO to monitor for duration of the contract.		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
E2.1.3 Minimise disturbance to fauna				
Potential Impact: Disturbance to and displacement of fauna on and/or surrounding site and/or poor handling of such instances. **Target Outcome:** Minimise incidents of fauna disturbance/displacement and/or surrounding site due to construction works and appropriate intervention where such cases occur.	1. Contractors must not harm or disturb any wildlife, especially snakes, tortoises, lizards, and birds.	ECO/Contractor to monitor. The Contractor must report all incidents of harm to any fauna to the ECO who will report such incidents to the authorities.	The **Project Manager** and **Contractor(s)** must ensure that harm to fauna and avifauna is prevented, and disturbance is minimised. All incidents must be recorded and reported to the ECO on an ongoing basis.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists
	2. Snakes, tortoises, and other animals must be physically removed from the construction site without harming them and taken to an appropriate location (e.g., a nature reserve). Only competent snake handlers must be Employed to move snakes, should it be necessary.	ECO/Contractor to monitor on a going basis.		
	3. Care must be taken when driving on site to not accidentally drive over tortoises or other animals.	ECO/Contractor to monitor. The Contractor must report all incidents of harm to any fauna to the ECO who will report such incidents to the authorities.		

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): E2.2 Water				
E2.2.1 Institute measures to minimise potable water use during construction phases of project				
CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
Potential Impact: Wastage of potable water during the construction phase. **Target Outcome:** Ensure that the necessary measures to reduce potable water use are undertaken during the construction phase, where possible.	1. No abstraction of any use of surface water or groundwater may be done without prior authorisation from the Department of Water and Sanitation unless it is a Schedule 1 Use or an Existing Lawful Use.	Project Manager to take note. ECO to monitor if any water is extracted from any surface- or ground-water source.	The **Project Manager** and **Contractor(s)** must institute the necessary measures to minimise the use of water during the construction phase of the project.	The appointed **ECO** is to monitor compliance with the required actions below throughout the construction period. **Monitoring Frequency**: Monthly ECO Checklists
	2. No pollution of surface or ground water may occur due to any activity on the property. The relevant requirements of the National Water Act, 1998 (Act No. 36 of 1998), as amended (NWA) must be complied with at all times.	The ECO or Project Engineer to monitor use of water during construction and advise accordingly. Appropriate training of staff in water management will be given by the ECO. No potable water is to be used for wetting of roads. Water from dams or treated sewerage effluent should be used.		
	3. Contractors must use water sparingly during the construction phase (e.g., for mixing of concrete and washing of equipment). Should dust become a nuisance to surrounding industries, efficient use of non-potable water to wet dusty surfaces should be employed.			
	4. The necessary ablution facilities must be provided (one chemical toilet per 15 workers), if not already existing on site and available for use by construction personnel.	Project Manager to provide necessary amount of toilet facilities on site, if not already existing and available. ECO to monitor for duration of contract.		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E2.4. Waste and Effluent Management**				
E2.3.4 Institute measures to reduce waste and effluent management				
Potential Impact: Pollution of the surrounding environment due to poor waste and effluent management. **Target Outcome:** Appropriate waste and effluent management.	1. An integrated waste management approach must be used that is based on waste minimisation and must include reduction, recycling, re-use, and disposal where appropriate. Recycled waste (cement packets, paper, and cardboard) should be separately stored for inclusion into the waste stream.	ECO to advise on the integrated waste management approach undertaken and the implementation thereof for the duration of the contract.	The **Project Manager** and **Contractor(s)** must institute measures to minimise the generation of waste and to implement the sorting (at source) or recyclables materials out of the waste stream.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists
	2. Solid waste must be properly disposed of at a licensed waste disposal facility and must comply with the relevant legislation.	Solid waste to be removed from the site to a licensed WDF on a regular basis to be determined in consultation with the ECO, for the different phases of construction.		
	3. Waste bins must be used on site. The bins must have lids and an external closing mechanism to prevent scavenging and/or the contents from blowing out. Access to the temporary storage area should be controlled.	ECO to monitor the maintenance of the waste bins and the conditions of the temporary storage area on site for duration of contract.		

	4. All waste must be deposited in the waste bins for removal. The bins must not be used for any other purpose than waste collection and must be emptied on a regular basis by the contractor at a suitably licensed waste disposal facility. Proof of disposal slips must be kept on site.	Site Agent to ensure that waste is correctly deposited into the waste bins on site and that all waste disposal slips are kept on file. ECO to monitor for duration of contract.		
	5. No domestic waste should be stored on site for longer than two (2) weeks.	Site Agent to ensure that domestic waste is removed from site regularly, as and when needed – but no longer than two weeks.		
	6. No solid waste is to be burnt on site.	Site Agent to ensure that personnel are aware that no solid waste is to be burnt on site.		
	7. Portable toilets to be placed further than 15 m from the closest industry, if not already existing on site and available for use by construction personnel.	ECO to advise on placement of portable toilets, if necessary, with Site Agent and to monitor the placement and condition of these toilets for duration of contract.		
	8. Building rubble generated during the construction phase should be diverted from landfill where possible for re-use in the construction of internal roads or taken to the nearest drop-off facility for crushing.	Site Agent should attempt to reduce waste sent to landfill through the re-purposing of builder's rubble in road construction for the site, where possible. ECO to advise Site Agent on rubble disposal where relevant for duration of contract.		
	9. All general and hazardous waste generated, during all project phases must be recorded and records of applicable documentation are to be filed and kept on-site including safe disposal certificates from a registered service provider. The service provider must dispose of all general and hazardous waste at a registered waste disposal facility. All records of waste generated, and any waste related complaints must be kept on site.	ECO to monitor the record of waste generated and disposed of kept on site for all phases of construction, and throughout the duration of contract.		

	10. Waste storage must comply with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), as amended (NEM:WA), National Norms and Standards for Storage of Waste, 2013, if the storage of general waste exceeds 100 m^3 or that of hazardous waste exceeds 80 m^3.	Site Agent to be aware of the relevant waste legislation applicable to waste storage for the construction phase. ECO to monitor the compliance of waste storage on site with the relevant legislation for duration of contract.		

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): E2.5 Traffic Management Plan				
E2.3.5 Institute measures to reduce traffic				
Potential Impact: Increased traffic for existing motorist movement in the surrounding areas due to the influx of vehicle movement on and off site for the duration of the construction period and during peak traffic hours. **Target Outcome:** Minimise risk of construction related traffic on existing motorists within the vicinity of the site, specifically along the R 64 road.	1. Road construction signs to be erected along appropriate roads, warning motorists of construction related activities and heavy vehicles. The use of flagmen should be considered, if necessary.	Site Agent to institute measures such as signs and other traffic signals to assist and notify existing motorists of construction activity around the site. ECO to assess the appropriateness of attempts by the Site Agent to warn motorists of construction activity.	The **Project Manager** and **Contractor(s)** must institute measures to minimise the risk of construction related activities on motorists using the roads in the vicinity of the site.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists
	2. Large construction vehicles and trucks must travel outside of typical weekday peak hours in the vicinity of the site.	Contractors to be instructed by Site Agent to ensure large construction vehicles travel during off-peak traffic hours.		
	3. Promote carpooling among construction staff to reduce the number of individual vehicles on the road.	Contractors must encourage personnel to carpool to site daily to reduce pressure placed on existing traffic.		
	4. Structural damage to roads in the vicinity of the construction site must immediately be repaired by the contractor responsible (in accordance with Provincial/ Municipal Road standards).	Site Agent to liaise and communicate responsibility for structural road damage with Contractors. Project Manager to hold Contractors responsible for any structural road damage caused. ECO to monitor response to structural road damage caused by construction vehicles for duration of contract		
	5. Roads must be kept clear of sediment due to construction activities.	Site Agent to commission personnel to sweep the adjacent roads off-site where they are affected by sediment deposition due to construction		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
		work. ECO to monitor the condition of adjacent off-site roads for duration of contract.		
	6. Store construction materials and equipment in a way that minimizes interference with traffic flow.	Site Agent to ensure that construction materials storage does not hinder traffic flow. ECO to monitor for duration of contract.		
	7. Continuously monitor traffic patterns and adjust mitigation measures as needed to address any changing conditions and issues that arise.	ECO to communicate with Site Agent regarding any regarding any changing conditions in surrounding traffic that demands a change in the current traffic management plan approach.		
	8. Store construction materials and equipment in a way that minimizes interference with traffic flow.	Site Agent to ensure that construction materials storage does not hinder traffic flow. ECO to monitor for duration of contract.		
	9. Continuously monitor traffic patterns and adjust mitigation measures as needed to address any changing conditions and issues that arise.	ECO to communicate with Site Agent regarding any regarding any changing conditions in surrounding traffic that demands a change in the current traffic management plan approach.		

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): E2.7.1. Dust and Air Quality Management				
E2.7.1. Prevent Dust and other Air Quality impacts through effective management				
Potential Impact: Increased dust and air pollution due to poor management of dust on and off site caused by construction activities. **Target Outcome:** Minimise dust pollution during the construction phase of the project.	1. Any stored building material from which dust could be generated, such as stockpiled building sand, should be covered or kept moist during windy periods to prevent dust from being generated.	Site Agent to source covering material/methods for exposed stockpiles on site during windy periods and when not in use. ECO to monitor provision and use of Stockpile covering material, particularly during windy periods.	The **Project Manager** and **Contractor(s)** must institute measures to minimise dust pollution during the construction phase of the project.	The appointed **ECO** is to monitor compliance with the required actions.
	2. The excavation, handling and transport of erodible materials must be avoided under high wind conditions.	Contractors should avoid the movement of erodible materials during windy conditions unless absolutely necessary. Site Agent to commission personnel to address any sediment deposition post- movement. ECO to monitor measures undertaken to reduce dust by Contractors.		
	3. Dust generated from the construction activities must comply with the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004), as amended (NEM:AQA), National Dust Control Regulation (GN No. R. 827) of 1 November 2013. These regulations prohibit a person from conducting any activity in such a way as to give rise to dust i such quantities and concentrations that the dust, or dust fall, has a detrimental effect on the environment and nearby receptors.	Contractors and Site Agent to take note of applicable dust legislation and to ensure compliance with such for duration of contract - ECO to monitor.		
	4. Staff may only be allowed to smoke within demarcated areas. Cigarette butts must be disposed of in the lidded waste bins provided.	Site Agent to demarcate dedicated smoking areas for Contractors and their personnel in consultation with the ECO. ECO to monitor smoking and signs of smoking in areas outside of this demarcated zone.		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
	5. No fires will be allowed on site. The burning of solid waste and paper on site will therefore also not be allowed.	Contractors to take note of the prohibition of fires on site. ECO to monitor the management of waste on site and to record any signs of burning of waste on site.		
	6. All vehicles and motorised equipment used on site must be maintained in a good condition to prevent and/or minimise excessive diesel fumes from such vehicles and equipment.	Contractors to ensure construction vehicles are regularly serviced and in good-working order. ECO to record any construction equipment or vehicles spewing excessive diesel fumes and to address the relevant vehicles' service requirements with Contractors.		
	7. Use dust suppression techniques (e.g., spraying bare surfaces with non-potable water and limiting driving speeds).	Site Agent to Commission dust suppression techniques on site – such as the spraying of water on erodible material surfaces that have the potential to generate dust. Contactors to instruct personnel to limit driving speeds so as to reduce dust creation.		

E.3 SOCIO-ENVIRONMENTAL MANAGEMENT PROGRAMMES				
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E3.1 Noise Management Plan**				
E.3.1.1 Institute measures to minimise noise pollution during construction phase of the project				
Potential Impact: Increased noise pollution developing a nuisance for the surrounding communities and/or affecting the workable conditions for neighbours. **Target Outcome:** Minimise noise pollution from construction activity wherever possible.	1. All plant equipment, including vehicles, must be properly maintained to minimise noise generation.	Contractors to ensure all plant equipment is in good working order and are fitted with silencers, where necessary.	The **Project Manager** and **Contractor(s)** must institute measures to minimise noise pollution during the construction phase of the project.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists
	2. Any complaints regarding noise must be investigated, sources identified, and mitigation measures implemented. Feedback on resolution of the issue must be provided to the complainant and the noise control officer of the Local Authority.	Site Agent to ensure a complaints register is kept on file and the ECO is liaised with regarding noise complaints and the addressal of these with the complainant and the Local Authority.		
	3. Limit working hours to daylight hours.	Contractors to ensure work only takes place after daylight hours if absolutely necessary and communicates such after-hour intentions with the ECO before-hand so as to ensure such works are managed for noise generation.		
	4. Ensure silencers are installed on all vehicles.	Contractors to install silencers on all vehicles – ECO to monitor sound generation from vehicles on site.		

CONSTRUCTION PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
	5. Cover exposed waste daily to limit odours.	Site Agent to ensure that covering materials are available on site to cover exposed waste. ECO to monitor the covering of exposed waste and the significance of odours from waste on site.		
	6. Noise generated from construction activity(ies) must comply with the Western Cape Noise Control Regulations P.N. 200/2013.	Contractors and Site Agent to take note of relevant noise legislation applicable to construction work. ECO to ensure construction work compliance with relevant noise legislation.		
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E3.1 Archaeological and Heritage Resources**				
E.3.1.1 Conserve all archaeological settings and artefacts				
Potential Impact: Damage and/or the loss of valuable archaeological settings and artefacts. **Target Outcome:** All archaeological settings and artefacts are reported and conserved.	1. If any unmarked human remains are uncovered or exposed during construction activities, these must immediately be reported to HWC.	ECO to monitor excavated materials and inform HWC of any finds.	The **Project Manager** and **Contractor(s)** must ensure that all archaeological settings and artefacts are reported and conserved.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): E3.2 Aesthetics (Visual) Impacts				
E.3.2.1 Institute measures to minimise the visual impacts of the development.				
Potential Impact: Change in visual character of the site from a predominantly open area to a developed industrial area. **Target Outcome:** No negative effect on the character of the landscape and enhanced scenic experience.	1. For security and operational lighting to result in minimal visual impact to the immediate context, the Contractor should use lighting only where necessary, and lighting should be positioned at a lower level i.e., bollard height.	Contractors to reduce lighting exposure where possible. ECO to monitor how Contractors have Minimized light exposure for the construction works.	The **Project Manager** and **Contractor(s)** must institute measures to minimise the visual impacts of the development.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists
	2. For the reduction of potential negative impacts during the construction phase, the following management procedures should be implemented: • Reduce the construction period through proper planning and management, in addition to the productive implementation of resources; • Restrict the activities and movement of construction workers and vehicles to the immediate construction site as much as possible; Ensure that rubble, litter, and disused construction materials are managed and removed regularly; • Ensure that all infrastructure and the site are maintained in a neat manner; • Reduce and control construction dust using approved dust suppression techniques; Rehabilitate all disturbed and construction areas to acceptable visual standards.	ECO to monitor the visual condition of the site due to construction activity to ensure that measures have been instituted to reduce visual impacts where possible.		

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): E3.2 Socio-Economic Benefits of the Development: Procurement Strategy (Job Opportunities)				
E.3.2.1 Institute measures to ensure a fair procurement strategy is maintained				
Potential Impact: Employment opportunity for locals through the construction phase of the project would be lost. **Target Outcome:** Maintenance of a fair procurement policy and the empowerment of local/surrounding communities through employment.	1. Contractors need to show a commitment to employ people from the immediate area whenever possible.	Contractors to ensure compliance with and monitor the local Procurement strategy.	The **Project Manager** and **Contractor(s)** must institute measures to ensure a fair procurement strategy is maintained. The **Applicant** or **Project Manager** is to report on compliance with the respective strategies.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists
	2. Implementation of the Procurement Strategy. The temporary job opportunities during the construction phase should be allocated to persons from the local community (e.g., Worcester Municipal Area) as far as possible.	ECO to include the Procurement and Communication Strategies in the induction session with Contractors.		

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): E3.4 Security				
E.3.4.1 Minimise security risk during the construction phase				
Potential Impact: Theft and damage to construction site and/or equipment and vehicles as well as harm to any persons on site due to poor security on site and misconduct of personnel. **Target Outcome:** Minimise security risk on site during the construction phase.	1. The Contractor(s) will be responsible for the security of their builder's site and the conduct of their personnel for the duration of the services and building contracts.	The Contractor and developer will need to monitor security issues.	The Project Manager and Contractor(s) must institute measures to minimise security risk during the construction phase. **Contractor(s)** is responsible for the behaviour of their personnel on site and is to assume financial and functional responsibility for any theft undertaken by their personnel.	The appointed **ECO** is to monitor compliance with the required actions. **Monitoring Frequency**: Monthly ECO Checklists

6. ENVIRONMENTAL MANAGEMENT: OPERATIONAL PHASE

6.2 Description of the Impact Management Outcomes for the Operational Phase

The impact management outcomes for the operational phase include the following:

- To control all aspects of the operational phase of the development by implementing the necessary impact management actions and recommendations to prevent any temporary or permanent negative environmental impacts from occurring in the future.

6.3 Environmental Specifications: Operation

OPERATIONAL PHASE MANAGEMENT				
POTENTIAL IMPACT	**REQUIRED ACTIONS**	**SPECIFIC TARGETS AND RESPONSIBILITY**	**RESPONSIBLE ENTITY (TO IMPLEMENT REQUIRED ACTIONS/MITIGATION)**	**MONITORING: RESPONSIBLE PARTY, ACTION AND FREQUENCY**
E.1 GENERAL OPERATIONAL MANAGEMENT				
ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E.1.1 Terrestrial Habitat Offsite**				
Potential Impact: The potential facilitation of alien vegetation invasion and the disturbance of the terrestrial habitat off-site due to the operation of the site. **Target Outcome:** Reduce risk of terrestrial habitat alien and invasive vegetation infestation.	1. Removal of listed alien invasive species on the site according to national legislation requirement, where applicable. 2. Ensure no exotic species spread into the surrounding vegetation.	To be undertaken by Applicant / project manager (consulting engineer and/or site agent), also referred to as the 'Management Entity', on an ongoing process.	The **Management Entity** of the site must ensure that the edge effects of the poultry facilities on the various biological aspects are effectively managed.	**Management Entity** to monitor on an ongoing basis.

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): **E.1.3 Water Use and Prevention of Water Pollution**				
Potential Impact: Wastage of water resources and the pollution of surface and groundwater through poor water management practices. During the operational phase. **Target Outcome:** Wise and efficient water use and the prevention of water pollution, especially groundwater sources.	1. Water conservation measures must be implemented within the site. Ensure that water is sparingly used during the operational phase.	The Management Entity should ensure that water points are effective and not leaking.	The **Management Entity** must engender an ethic of responsible water use on site.	Management Entity to monitor on an ongoing basis.
	2. No pollution of surface or ground water may occur due to operational waste generation and diesel storage.	The Management Entity must take note that a no pollution tolerance should be tolerated with regards to surface and ground water pollution from any activity on site, and in such cases, appropriate measures should be taken to rectify the pollution.		

ENVIRONMENTAL ASPECTS (PROJECT ACTIVITY): E3.5 Archaeological and Heritage Resources				
E.3.5.1 Conserve all archaeological settings and artefacts				
Potential Impact: Damage and/or the loss of valuable archaeological settings and artefacts. **Target Outcome:** All archaeological settings and artefacts are reported and conserved.	1. Under no circumstances must the Management Entity, his/ her employees, his/ her subcontractors, or his/ her sub-contractors' employees remove, destroy or interfere with archaeological artefacts. Any person who causes intentional damage to Archaeological or historical sites and/or artefacts could be penalised or legally prosecuted in terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), as amended (NHRA).	The Management Entity must furthermore ensure that all developers and/or buyers within the operational industrial site are made aware, during the contractual process, of the legislative seriousness of the damage to any heritage resource found on site.	Should the **Management Entity** of the site find any archaeological objects of any nature (including fossils, graves, or remains of structures), the Management Entity must notify the appointed ECO. South African Heritage Resources Agency (SAHRA) must be consulted for further investigation and clarification.	Management Entity to monitor on an ongoing basis.

7. MONITORING AND MANAGEMENT MEASURES

In keeping with current environmental and associated legislation, all environmental management procedures and actions should be reviewed and refined on an on-going basis. This is in accordance with the dynamic nature of environmental management and allows for the timeous identification and mitigation of issues as they come to light. The process of review and refinement, built into the requirements of the EMPr, is known as Monitoring and Auditing.

7.1 Monitoring Procedures

Environmental Monitoring is the continuous evaluation of the status and condition of environmental elements. Its purpose is to detect changes that take place in the environment over time and involves measuring and recording of physical, social, and economic variables associated with development impacts.

To these ends, the ECO will monitor the site for compliance (i.e., Compliance Monitoring) with the EMPr and EA. Many techniques for Environmental Monitoring have been proposed, each detailing a specific protocol. Regardless of which technique is used, the aim is that each environmental management specification (and associated impact management actions) be checked by means of a system in which a score may be allocated for:

- Full compliance;
- Satisfactory performance;
- Unsatisfactory performance; and,
- No action.

Monitoring will take place regularly (to coincide with safety inspections, where relevant). Completed ECO Monitoring Reports will be submitted to the Project Manager and Contractor(s), who will attend to issues/ rectify non-compliances and report back to the ECO. These ECO reports must be kept on record and be made available upon request by the Applicant and the Competent Authority.

The EMPr and EA conditions of authorisation apply as follows:

- All persons employed by the Applicant, Contractor(s) and/or Management Entity must abide by the requirements of these EMPr and EA conditions as they apply to the site.
- Any employees of the Applicant, Contractor(s) and/or Management Entity found to be in breach of any of the Environmental Specifications may be ordered to leave the site forthwith. The order may be given orally or in writing by the Project Manager or ECO. Confirmation of an oral order will be given as soon as practicable but lack of confirmation in writing shall not be a cause for the offender to remain on site.
- Supervisory staff of the Applicant, Contractor(s) and/or Management Entity may not direct any person to undertake any activities that would place such person in contravention of the environmental management specifications.

The Applicant, Contractor(s), Project Manager, and/or Management Entity are deemed not to have complied with the Performance Specifications if:

- There is evidence of willful or accidental contravention of any specification included in the EMPr and EA.
- There is evidence of the Applicant, Contractor(s), Project Manager and/or Management Entity carrying out activities not permitted in terms of the Specification.
- There is evidence of environmental negligence and/or mismanagement resulting in negative impacts on the environment.

The Applicant, Project Manager, Contractor(s) and/or Management Entity will be informed via ECO Reports as well as by means of direct instruction as to what corrective actions are required in terms of Environmental Compliance:

- Disregard for instruction, and failure to respond adequately to complaints from the public will be construed as non-compliance.
- Non-compliance may lead to the Contractor(s) and/or Management Entity Employee(s) being blacklisted, or, in more serious cases, the Contractor(s) and/or Management Entity Employee(s) may be evicted from site. Only the Project Manager may issue such instruction, claiming any costs required to remedy situations perpetuated by environmental negligence, mismanagement and / or non-compliance.

7.2 Document Control

The EMPr is a basic planning framework, guiding the various phases of the project. It is important for the EMPr to be revised (improved), if need be, by documenting all actions and management results in a structured format, and especially in accordance with the results of any external audits. It will be important for the EMPr and its supporting documents to be accessible to all the implementing and management members responsible for implementing its actions.

The content and results of the ECO checklist to be submitted after each site meeting can be used for compiling audits and making the necessary changes to the EMPr.

A dated photographic record of site works must be kept by the ECO and Site Agent/ RE.

7.3 Management Review

The EMPr should be a **dynamic document**, which depends on continual revision to maintain its relevance. It is therefore imperative for the EMPr to be updated and revised in accordance with information and data that emerges from the monitoring processes (such as ECO checklists), and any new management techniques and technology that may become available in the future.

To maintain continual revision, appropriateness, and effectiveness of the EMPr, and thereby enhance its performance, the ECO/ Auditor (as appropriate) should review and evaluate the EMPr at defined intervals. The reviews should include the following:

- review the results of the monitoring undertaken during ECO site inspections and audits;
- review the extent to which the impact management outcomes originally set in the EMPr have been met;
- review the applicability of the EMPr in relation to changing conditions, circumstances, and information; and
- obtain and review any concerns amongst relevant I&APs, property owners and relevant authorities that may arise during the construction phase and operational phase in the future.

8. ENVIRONMENTAL AWARENESS AND TRAINING

Site training must be provided for all Contractors and Workers/ Personnel/ Employees in accordance with the provisions of this document.

Ensure that the relevant Environmental Awareness training is presented before the commencement of activities. Ensure that a Health and Safety Officer (compulsory) are appointed before the commencement of activities.

The Contractor must arrange that all of his/her employees receive a degree of environmental training during orientation. Such training should be compulsory for all employees, structured in accordance with their relevant rank, level and responsibility, in order that these employees:

- acquire a basic understanding of the environment and the environmental features pertaining to the site and its environs;
- are familiar with the requirements of the EMPr and EA as they apply to the site.

8.1 Environmental Awareness Plan

The following training programmes will be presented:

- Occupational Health and Safety (OHS) – Done internally by Health Officer;
- Personal Protection Equipment (PPE) – Done internally by Safety Officer; and
- Environmental training - Done internally by ECO.

The training is done either annually or bi-annually depending on the need identified by management of the development, as well as training for any new personnel. The environmental training and awareness will be implemented as close as possible to the commencement of the works on site and the training materials will be provided to the Contractor/ Project Manager for environmental induction of new staff.

The Environmental Awareness Plan will serve as the basis for the induction of all new employees (as well as contractors pending the nature of their work on site) on matters as described herein. The Plan will also be used to hone awareness for all employees on a continuous basis.

Specific environmental awareness performance criteria will also form part of the job descriptions of employees, to ensure diligence and full responsibility at all levels of the organizational work force.

8.1 Fostering Environmental Awareness

General environmental awareness will be fostered among the project's workforce to encourage the implementation of environmentally sound practices throughout its duration. This will ensure that environmental accidents are minimised and environmental compliance maximised.

Environmental awareness will be fostered in the following manner:

- Induction course for all workers on site, before commencing work on site;
- Refresher courses as and when required.

8.2 Training and environmental awareness

The Applicant/ Management Entity accepts that environmental awareness training is critical for the workforce to understand how they can play a role in achieving the objectives specified in the EMPr and ensure that the actions specified in the EMPr are implemented effectively and efficiently. Training needs will be identified based on the available and existing capacity of site and project personnel to undertake the required EMPr management actions and monitoring activities. Environmental awareness training, conducted by the ECO prior to construction, will be in addition to any specific detailed training required to implementing the EMPr. It is vital that all personnel are adequately trained to perform their designated tasks to an acceptable standard.

8.2.1 The environmental awareness training course

All employees should attend the course, regardless of position, status, or level of responsibility. With a background of basic environmental awareness and an understanding of basic environmental issues and sensitivities, personnel may be motivated and empowered to do their share in helping to maintain the integrity of the environment on the site through environmental impact management. The goal of this course is therefore to enable a shared understanding and common vision of the environment, the impact of the development on the environment (and why this is important) and the role of personnel in terms of environmental management and compliance. The induction course will comprise of the following steps:

- The first step will include background discussion of the environment concept: of what it comprises and how we interact with it;
- The second step will be a description of the components and phases of the operation;
- The third step will be a general account of how the operation and its associated activities can affect the environment, giving rise to what we call Environmental Impacts;
- The fourth and most important step will be a discussion of what staff can do in order to help prevent the negative environmental impacts from degrading our environment. This is known as Environmental Impact Management.
- Lastly the consequences of non-compliance will be explained.

8.2.2 Course content

The following can be seen as draft course content as it will be building on as specific needs as it arises and will be supplemented with the handout of reading material and extracts of the EMPr on which the course will be based.

8.2.2.1 The Environment

The environment consists essentially of the living environment, the non-living environment, and the man- made environment.

The living environment consists of our plant and animal resources. The non-living environment includes the soil, water, and geological resources.

The man-made environment comprises our infrastructure, social, cultural, and archaeological resources.

These aspects of the living and man-made environment depend on one another, and man depends on them all for his survival. Damage to one will be felt by others so an effort must be made to try and protect the environment as well as their interactions with one another as they occur in nature. When undertaking an operation or any other form of development this concept must be kept in mind. Development must be implemented in such a way that we benefit today without compromising the ability of future generations to benefit as well. Employees should understand this concept of sustainability and sustainable development. The specific environment should also be explained as part of the induction course.

8.2.2.2 Description of the components and phases of the operation

The project description as set out in the BAR should be explained as part of induction together with the main components or activities that can affect the environment, giving rise to what we call Environmental Impacts. The operation consists of several different components including the following:

Atmospheric Emissions Management;
Hazardous Risk Management;
Waste Management; and,
Security.

8.2.2.3 Description of Environmental impacts

A general account of how the operation and its associated activities can affect the environment must be explained. This is basically a description of the concept of environmental impacts.

a) What is an Environmental impact?

An environmental impact is the result, either good or bad of man's actions on the natural environment This results in one or many changes in the environment and may also affect the availability of resources and the environment's capacity to function.

Impacts can occur either because of:

- The use of a resource;
- Or the pollution of a resource.

In addition, impacts can be categorised as the following:

- Foreseen: such as the necessary clearing of the vegetation before works on site begin; or
- Unforeseen: such as the flooding of an area following heavy rains;
- Avoidable: such as the unnecessary spillage of diesel or oil;
- Unavoidable: such as the disturbance created during works;
- Simple: such as litter untidying the site; or
- Cumulative: such as the pollution of water upstream, which then makes downstream users sick.

b) Types of Environmental Impacts

Typical environmental impacts anticipated include the following:

- The loss of indigenous plants;
- The loss of animals;
- Dust liberation;
- Soil compaction and erosion;
- Litter and waste;
- Fire;
- Water pollution.

c) Causes of environmental impacts

These environmental impacts are caused primarily by inadequate planning and not adhering to the EMPr Specifications, e.g.:

- The injudicious removal / disturbance of vegetation and habitat;
- The unnecessary loss of soil;
- Uncontrolled vehicular movement and circulation;
- The haphazard storage of vehicles, equipment and material;
- The uncontrolled servicing, repair and refuelling of vehicles;
- Unclear policy on solid waste management;
- Unclear policy on waste water;
- The uninformed use, storage and disposal of hazardous material;
- The erosive power of storm water and runoff;
- Unintentional and/or uncontrolled fires.

The specific significant impacts of the operation as described in the BAR must be explained.

8.2.2.4 Description of Environmental Mitigation

The fourth and most important step of an induction course will be a discussion of what staff can do to help prevent the negative environmental impacts from degrading their environment. This is known as Environmental Impact Management and is described in the EMPr. The course discussion should also include general environmental code of conduct practices that are not listed as a significant impact or as a mitigation measure such as:

Impact management: Health & Safety (general)

- Always use the toilet and hand washing facilities provided;
- Only use the water provided on site - do not collect water from or dispose water into a natural water course;
- Make use of the specified protective gear for noisy and dusty conditions;
- Always wear proper protective head and foot gear while on site;
- Know where to find a list of emergency numbers in the event of one;
- Report accidents, injuries and unsafe site conditions to the Project Manager or Safety Officer;
- Adhere to the posted speed limits of construction vehicles whilst driving on the access roads.

Impact management: Storage of vehicles, equipment, and materials (general)

- Store machinery, vehicles and materials only in demarcated areas, and within drip trays;
- Do not leave machinery and equipment standing around if not in use;
- Only park vehicles in designated areas;
- Do not park heavy vehicles or store equipment under or near trees;
- Do not store machinery, vehicles, or materials in undisturbed or rehabilitating areas.

Impact management: Servicing, repair and refuelling of vehicles (general)

- No machinery and vehicles will be serviced on site;
- Regularly check your vehicle for fuel and oil leaks;
- Inform the foreman/ environmental manager of leaking vehicles and machinery so that it can be scheduled for repairs;
- Immediately clean any accidental fuel and oil spills using a hydrocarbon spill kit – do not hose spills into the natural environment;
- Dispose of contaminated soil as hazardous waste in the correct location on site;
- Explain the negative consequences of oil and diesel pollution.

Impact management: Solid waste management (general)

- Do not litter – make use of refuse bins provided;
- Do not hose spills into the natural environment – inform the foreman / project manager of spills you are unable to clean yourself;
- Do not bury, hide or burn any waste of any nature;
- Inform the foreman / project manager of any illegal litter or dumping site that you encounter.

Impact management: Waste water management (general)

- Do not use any natural watercourse to wash machinery, vehicles or equipment;
- Only wash machinery, vehicles or equipment in designated areas;
- Conserve water and report any leaks and overflow to the foreman / project manager.

Impact management: Management of hazardous material (general)

- Make sure that you know how to handle all hazardous substances;
- Do not access stores for hazardous substances without permission;
- Immediately clean any minor accidental spills and leaks using an appropriate hydrocarbon spill kit;
- Do not hose any leaks or spills into the natural environment;
- Dispose of all hazardous waste in specified storage areas - if in doubt, ask;
- Immediately report any major leaks and spills to the foreman / project manager.

Impact management: Fire management (general)

- Do not make open fires except in permitted areas and at permitted times;
- Do not leave any fires unattended. Extinguish fires before you leave the area;
- All cooking is to be done on gas / electric stoves and only in the areas provided;
- No burning of waste;
- Smoking only allowed in designated areas and cigarette butts must be disposed of in a bin;
- Ensure that you know where firefighting equipment is located.

Impact management: Wildlife Management (general)

- Any wildlife encountered during earthworks and construction must not be harmed;

- Snakes especially must be treated with care and should be left alone to escape from the construction area. If they do not escape by themselves, a competent person should remove them to a safe area;
- Snares may not be set to catch hares and small buck;
- Tortoises, lizards and other wildlife may not be harmed or collected and must be removed from the construction area or be allowed to escape from the construction area.

Impact management: Soil Erosion (general)

- Prevent erosion from diversion, restriction or increase in stormwater;
- Rainwater should be appropriately channelled to prevent erosion or flooding;
- If erosion or any damage caused by construction vehicles occurs (e.g. on access roads and tracks), appropriate measures will need to be undertaken to prevent erosion, and to rehabilitate any damage caused.

Impact management: Dust Abatement (general)

- Reasonable measures to minimise the generation of dust should be undertaken (e.g., removal of the bare minimum of vegetation);
- Areas where earth is moved should be kept wet with water in order to reduce dust.

Impact management: Pollution (general)

- Engender an ethic of waste pollution management and how plastic bags and paper waste cause, not only visual pollution, but can lead to animal deaths if ingested by them;
- All solid waste must be stored in wind – proof bins to prevent waste being blown around the site;
- Explain also that burning of waste, especially PVC can cause toxic air pollution that is harmful to man, and unsupervised fires can lead to run-away fires;
- The importance of the use of chemical or other toilets will also be emphasised.

8.2.2.5 Consequences of non-compliance

- Explain the consequences of not complying with the conditions of approval and the content of the EMPr, which can include the issuing of fines and/or a stop works order and/or result in dismissal.

9. DETAILS OF EAP

DETAILS OF PERSON PREPAIRING THE SCOPING REPORT

REPORT PREPARED BY:	Danie Krynauw
CONTACT DETAILS:	Email: danie@green-box.co.za
ENVIRONMENTAL CONSULTING COMPANY:	Green Box Consulting P.O. Box 37738 Langenhovenpark Tel: 082 435 2108
QUALIFICATIONS OF EAPs:	Danie Krynauw has a master's degree in Town and Regional Planning (UFS) and completing his dissertation to obtain a master's degree in Environmental Management (UFS). D. Krynauw has over 25 years' experience in the environmental management field. He is registered with EAPASA (2019/1348) and is a member of the International Association of Impact Assessments South Africa.

CURRICULUM VITAE – DANIE KRYNAUW

1. Family name:	Krynauw
2. First name:	Daniël
3. Date of birth:	14/12/1971
4. Nationality:	South African
5. Contacts:	Cell: 082 435 2108 Email: danie@green-box.co.za

6. Education:

Institution	Degree(s) or Diploma(s) obtained
University of the Free State 2001 – 2002	Master in Environmental Management – Dissertation pending
University of the Free State 1996 – 1998	Masters in Urban and Regional Planning
University of the Free State 1993 – 1995	BA Geography and Sociology

7. Membership of professional bodies:
- EAPASA – 2019/1348
- International Association of Impact Assessment South Africa (IAIAsa)

8. Present position:
- Environmental Scientist / Director – Green-Box Consulting

9. Current Responsibilities:
- Liaising with clients in both the private and public sectors.
- Conduct Environmental Impact Assessments and other Environmental Technical Investigations.
- Apply and obtain waste licenses, water licenses, mining permits and environmental authorisations for clients.
- Use different GIS datasets in order to create new information or investigate patterns for projects.
- Conduct environmental compliance and other environmental audits.
- Provide technical-level support for environmental remediation and mitigation projects, including remediation system design and determination of regulatory applicability for incoming projects.

- Collaborate with other environmental scientists, planners, engineers, and other specialists, and experts in law and business etc. to address environmental problems for clients.
- Conduct Environmental training.

10. Years within the organization:
    - 16 years

11. Other skills (e.g. computer literacy, etc.):
    - All suits of Microsoft Office, Arc View, ReGIS, and Project Professional.

12. Professional experience:

Date	2011 – Current
Organisation	Green-Box Consulting (Environmental Consultants)
Position	Environmental Scientist (Owner and Director)

Date	2009 – 2016
Organisation	Terra Works Environmental Consultants
Position	Senior Environmental Scientist and COO

Date	2001 – 2009
Organisation	Department of Economic Development, Tourism and Environmental Affairs, Free State
Position	Principal Environmental Officer
Description of duties	• Review Environmental Impact Assessments • Review Environmental Management Programmes • Issuing Environmental Authorisations

APPENDIX A to the EMP GENERIC CONSTRUCTION GUIDELINES

1. INTRODUCTION

Construction is potentially one of the most destructive phases of the development process that can harm the environment permanently if it is not appropriately planned and the necessary mitigation correctly applied and managed.

Construction implies certain inevitable levels of change to the affected environment or 'place'. A certain degree of change to the environment, within acceptable environmental norms, nevertheless has to be accepted. It is, however, important for such inevitable change to be limited within confined boundaries, so as to protect ecological, social, and cultural characteristics (i.e. the 'sense of place') of the affected environment, by pursuing the best practicable environmental option(s) or practices.

A primary environmental objective is, therefore, to limit the unavoidable disturbance or fragmentation of the environment to the *'limits of acceptable change'*.

The EMP, together with these Construction Guidelines, is to form part of the construction contractual documentation, i.e. the appointed contracts must be fully aware of the environmental management programmes that need to be carried out as part of the construction programmes.

The construction programme is to be implemented by the appointed contractors, on behalf of the Implementing Agent, in accordance with the EMPs and these Construction Guidelines.

Compliance with the Construction Guidelines will be monitored by the ECO (Environmental Control Officer), to be appointed, who will also monitor compliance of the conditions of contract and conditions of approval (Environmental Authorisation).

This Construction Guideline document forms part of the Contractor's contractual documentation entered into between the Developer and the Contractor and must be signed by the appointed Contractor as acknowledgement of its content.

2. PRE-CONSTRUCTION PHASE

This phase is to be based on the following principles and guidelines:

- A construction contract must be established between the Implementing Agent and the appointed Contractor(s). The contract should include a penalty clause for both environmental and construction transgressions.
- The construction site office, stores, temporary storage of diesel and concrete batching equipment is to be located on an appropriate, non-environmentally sensitive site and must be accessible to large trucks and be large enough for the secure storage of equipment, pipes and fittings, and mechanical machinery and the delivery of raw materials.
- Construction personnel should not be housed on the site and will need to be transported to work on a daily basis. Only security personnel may live on site to maintain a security presence, should this be necessary.
- The Contractor should provide the necessary training of staff to fill certain construction jobs on site. The Contractor will also be obliged to apply a Stellenbosch first policy when employing staff.
- The ECO must inform all contractors and their personnel in respect of the environmental code of conduct prior to the commencement of any construction work.

- The Contractor must demarcate the boundaries of the construction sites with danger tape or fencing. Construction workers must remain in close proximity to the construction site.

- If a mobile fuel bowser is to be used it must be checked for leaks and efficient operation and must have a drip tray under it when parked. All oils diesel and release oils used in the construction process must be kept within the bunded area. Access to the bunded area must be controlled at all times and must be locked at all times.

- The parking and service area (if required) for construction vehicles should be well-compacted earth or concrete to prevent oil and diesel spills contaminating the soils of the site. Should oil or diesel spills occur, they should be treated with a suitable hydrocarbon absorption or remediation product. Absorbent spill mop-up products need to be on hand - Products to be investigated should include sunsorb absorbents.

- A suitable leak proof container for the storage of oiled equipment (filters, drip tray contents and oil changes etc.) must be provided if servicing of vehicles takes place at stores/site office. Fuels and oils must be safely located out of harms way from the elements (preferably within the bunded area) and safety and fire prevention must be strictly adhered to. The necessary fire hydrants should be on site.

- Alien vegetation should be cleared according to the directives contained in the EMP and MMP.

- Felled alien plant material must be removed from the property by appropriate means to reduce fire risk.

- Any removed topsoil is to be temporarily stockpiled in suitable designated areas for later use in the rehabilitation of the sites, if needed. It may be necessary for the Contractor to stabilise the exposed sandy areas to prevent erosion and dust by spreading straw or chipped vegetation (removed from the site) over the surface or by covering the stockpile with shade cloth. All soil stockpiles shall not exceed 2m in height. The access roads may also require wetting to suppress dust.

- The Contractor must provide temporary chemical toilet facilities at the stores/site office area. A minimum of **one toilet shall be provided per 15 persons at each working area** or as stipulated by the local authority. The toilets must be kept in a clean and sanitary condition, and must be regularly serviced (at least once per week). Toilet paper and potable water (for washing hands) is to be provided by the Contractor.

3. CONSTRUCTION PHASE

This phase is to be undertaken in accordance with the following principles and guidelines:

- The construction area must be clearly demarcated and no construction activity will be allowed outside of this area. All linear alignments of infrastructure must be appropriately demarcated.

- Construction and delivery vehicles must not be allowed to leave the demarcated areas and should only use the existing access road/s in and out of the construction area. All

temporary access points to the river must be ratified by the ECO and rehabilitated after use).

- Any cultural-historic artefacts unearthed during excavations/ earth works must be reported to the ECO as soon as possible and all earthworks should be curtailed in those areas until such time as the ECO and/or a consulting archaeologist has surveyed the site(s) and made his/her recommendations. SAHRA must immediately be informed if the consulting archaeologist deems the finds to be significant. All vehicles, equipment, fuel and petroleum services and tanks must be maintained in a good condition that prevents leakage and possible contamination of soil or ground water supplies.
- All emergency servicing of vehicles must be conducted over a drip tray present to prevent accidental spillage of oils and fuels. Used oil should be recycled or disposed of at a hazardous waste disposal facility.
- All fuel/ oil spills must be reported to the ECO.
- Construction material must be stored in areas designated by the Site Agent and in a neat and orderly manner.
- The Contractor must store any building rubble in a suitable area designated by the ECO and should ideally be removed from site on a weekly basis (if not to be used as fill). The crushing of building rubble must be undertaken at a suitable site. Should dust become a problem, spraying of a water mist may be required. Stormwater controls may be required for diverting stormwater away from sensitive areas where erosion can take place.
- All other solid waste must be kept in appropriate containers and must be removed from the site by the Contractor on a weekly basis to a licensed waste disposal facility. The **burning of solid waste and paper will not be allowed on site**. Recyclable waste should be recycled if at all possible (metal, paper, cardboard, bottles, tins and plastic).
- Concrete mixing and the subsequent cement residues must be restricted to a designated area on the site. Such residues are to be removed from the site within one week of completing each phase of the construction period.
- **Used cement bags are to be stored in a wind and rainproof container for disposal**. Used bags may not lie around on site nor may they be burnt on site.
- Excess or spilled concrete should be confined within the works area and then removed to a waste site.
- Cement powder has a high alkalinity pH rating that can contaminate and affect both soil and water pH dramatically. Cement spills must therefore be prevented or cleared as soon after the spill as possible.
- All excavations (especially within deep unconsolidated sand) deeper than 1.5m must be shored up to prevent collapse of the sides and possible injury to workers or even loss of life.
- All open excavations must be protected with danger tape / danger fencing.

- The seeding or planting of indigenous grass or fynbos species may be considered over exposed soil surfaces to act as a quick binder of the soil in order to speed up the rehabilitation process of disturbed areas.
- Disturbed areas around the building sites, where dust can arise, may need to be kept moist by spraying with water from a water bowser or other suitable means, or alternatively straw can be worked into the surface to bind the soil and prevent windblown dust.
- The Contractor will be responsible for security on the site of works and will ensure that his staff do not trespass onto other properties.
- The Contractor must provide dedicated eating areas for staff. Waste bins with lids must be provided at such areas. Such eating areas are to be maintained in a neat condition.
- No fires will be permitted within the project area.
- The ECO/RE must monitor the contractors' compliance with the construction and progress in terms of the above environmental guidelines on a regular basis. The ECO will issue an ECO Checklist within 5 days after each site visit to provide a record of instructions given to the Contractor/Site Agent for environmental work that needs to be done or where problems have been noted.

4. POST-CONSTRUCTION PHASE

This phase is to be undertaken in accordance with the following principles and guidelines:

- All temporary structures must be removed from the site within three weeks after completion of a particular phase of the project.
- The Contractor must remove all oil and cement spills as soon as possible. Alternatively spills may be picked up and stored in appropriate containers/waste skips prior to removal.
- All rubble and other forms of waste must be removed from the site, within one week after completing a particular phase.
- The Contractor must repair disturbed areas (e.g. ripping of deep tracks left by construction vehicles) within one week after completing each phase of the project.
- The rehabilitation/landscaping of disturbed areas can commence as soon as disturbed areas become available and once climatic conditions allow for it.
- Topsoil and and/or wood chips/straw are to be evenly spread over disturbed areas to facilitate the rehabilitation.
- The ECO must make sure that all the environmental stipulations put forward in the construction contracts and/or ECO Checklists have been complied with, and must advise the Developer/RE if the penalty clause needs to be applied for any environmental impacts that may have occurred.

The Contractor must accept the above Construction Guidelines. **It is expected that the Contractor sign this document as part of the main contract with the Implementing Agent.** The main Contractor will also be solely responsible for the conduct of all subcontractors that may be used in this contract.

Signed by: _____ on behalf of:_____

Name: _____

Signed by: _____on behalf of: _____

Name: _____

Witness: _____

Name: _____

Date: _____

Appendix H: Details of EAP and expertise

DETAILS OF PERSON PREPAIRING THE BAR AND EMP

REPORT PREPARED BY:	Danie Krynauw
CONTACT DETAILS:	Email: danie@green-box.co.za
ENVIRONMENTAL CONSULTING COMPANY:	Green Box Consulting P.O. Box 37738 Langenhovenpark Tel: 082 435 2108
QUALIFICATIONS OF EAPs:	Danie Krynauw has a master's degree in Town and Regional Planning (UFS) and completing his dissertation to obtain a master's degree in Environmental Management (UFS). D. Krynauw has over 25 years' experience in the environmental management field. He is registered with EAPASA (2019/1348) and is a member of the International Association of Impact Assessments South Africa.

CURRICULUM VITAE – DANIE KRYNAUW

1. Family name: Krynauw
2. First name: Daniël
3. Date of birth: 14/12/1971
4. Nationality: South African
5. Contacts: Cell: 082 435 2108
   Email: danie@green-box.co.za

6. Education:

Institution	Degree(s) or Diploma(s) obtained
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- Collaborate with other environmental scientists, planners, engineers, and other specialists, and experts in law and business etc. to address environmental problems for clients.
- Conduct Environmental training.

10. Years within the organization:
    - 16 years

11. Other skills (e.g. computer literacy, etc.):
    - All suits of Microsoft Office, Arc View, ReGIS, and Project Professional.

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Date	2011 – Current
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Date	2009 – 2016
Organisation	Terra Works Environmental Consultants
Position	Senior Environmental Scientist and COO

Date	2001 – 2009
Organisation	Department of Economic Development, Tourism and Environmental Affairs, Free State
Position	Principal Environmental Officer
Description of duties	• Review Environmental Impact Assessments • Review Environmental Management Programmes • Issuing Environmental Authorisations

Appendix I: Specialist declaration of interest

Appendix J: Additional Information

1. DFFE Screening Tool Report