

DC29/0016/2017

**FINAL BASIC ASSESSMENT REPORT
FOR THE
MACCORKINDALE POULTRY FARM EXPANSION**

Johan Bodenstein
PrSciNat



July 2016

BASIC ASSESSMENT REPORT



edtea

Department :
Economic Development, Tourism and
Environmental Affairs

PROVINCE OF KWAZULU-NATAL

(For official use only)

EIA File Reference Number:

NEAS Reference Number:

Waste Management Licence Number:
(if applicable)

Date Received:

BASIC ASSESSMENT REPORT

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

This template may be used for the following applications:

- **Environmental Authorization** subject to basic assessment for an activity that is listed in Listing Notices 1 or 3, 2014 (Government Notices No. R 983 or No. R 985 dated 8 December 2014); or
- **Waste Management Licence** for an activity that is listed in terms of section 20(b) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) for which a basic assessment processes stipulated in the EIA Regulations must be conducted as part of the application (refer to the schedule of waste management activities in Category A of Government Notice No. 718 dated 03 July 2009).

Kindly note that:

1. This **basic assessment report** meets the requirements of the EIA Regulations, 2014 and is meant to streamline applications. This report is the format prescribed by the KZN Department of Economic Development, Tourism and Environmental Affairs. Please make sure that this is the latest version.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not 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 text.
3. Where required, place a cross in the box you select.
4. An incomplete report will be returned to the applicant for revision.
5. 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 will result in the rejection of the application as provided for in the regulations.
6. No faxed or e-mailed reports will be accepted.
7. The report must be compiled by an independent environmental assessment practitioner ("EAP").
8. 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.
9. The KZN Department of Economic Development, Tourism and Environmental Affairs may require that for specified types of activities in defined situations only parts of this report need to be completed.
10. The EAP must submit this basic assessment report for comment to all relevant State departments that administer a law relating to a matter affecting the environment. This provision is in accordance with Section 24 O (2) of the National Environmental Management Act 1998 (Act 107 of 1998) and such comments must be submitted within 40 days of such a request.
11. **Please note that this report must be handed in or posted to the District Office of the KZN Department of, Economic Development, Tourism and Environmental Affairs to which the application has been allocated (please refer to the details provided in the letter of acknowledgement for this application).**

BASIC ASSESSMENT REPORT

DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	DC29/0016/2017
File reference number (Waste Management Licence):	

DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER AND SPECIALISTS

1. NAME AND CONTACT DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Name and contact details of the EAP who prepared this report:

Business name of EAP:	Indiflora cc Environmental Services		
Physical address:	25 Helston Road Manor Gardens		
Postal address:	P.O Box 30657, Mayville		
Postal code:	4001	Cell:	082 577 0898
Telephone:	031 2611 265	Fax:	0867592840
E-mail:	johan@indiflora.co.za		

2. NAMES AND EXPERTISE OF REPRESENTATIVES OF THE EAP

Names and details of the expertise of each representative of the EAP involved in the preparation of this report:

Name of representative of the EAP	Education qualifications	Professional affiliations	Experience at environmental assessments (yrs)
Johan Bodenstein	ND Horticulture, ND Nature Conservation, B Tech Nature Conservation	IAIAsaKZN SACNASP GSSA	13yrs
Ronel Niemann	BSc (Honours) Environmental Science	IAIAsa	4yrs

3. NAMES AND EXPERTISE OF SPECIALISTS

Names and details of the expertise of each specialist that has contributed to this report:

Name of specialist	Education qualifications	Field of expertise	Section/ s contributed to in this basic assessment report	Title of specialist report/ s as attached in Appendix D
Vijay Ori	Masters Diploma in Technology: Civil Engineering	Civil Engineering	Layout plans Stormwater management	Stormwater management plan and Foul water disposal plan for new and Existing chicken

BASIC ASSESSMENT REPORT

	ECSA: Pr. Tech. Eng. Reg No. 9470055 40yrs work exp.			houses
Rowena Harrison	MSc Soil Science (UKZN)	Wetland specialist		Proposed Mac Corkindale Poultry Farm Expansion on the Farm Rencken No 17436 and Portion 11 of the Farm MacCorkindale's Grant No 1810, KwaDukuza Local Municipality, KwaZulu-Natal

SECTION A: ACTIVITY INFORMATION

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 the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

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

The owner of the existing Emeraldene Poultry Farm, Mr Kurt Rencken, who is also the landowner of Portion 11 of the Farm MacCorkindale's Grant No 1810 (hereinafter referred to as MacCork), 4,3240 Ha in extent, comprising of four rearing houses and ancillary activities is proposing to develop two additional rearing houses on Portion 11 of the Farm MacCorkindale's Grant No 1810, with associated infrastructural services on the applicant site.

The Emeraldene Poultry Farm properties known as The Farm Rencken No 17364 (previously known as Rem of Lot W No 2891), 4,2313Ha in extent, and Portion 11 of the Farm MacCorkindale's Grant No 1810, 4,3240Ha in extent, are situated on agricultural land outside of the existing Nkwazi (Zinkwazi)Town Planning Scheme.

The applicant site, rearing farm situated on Portion 11 of the Farm MacCorkindale's Grant No 1810 is located west of the N2 and immediately south of District Road P111 approximately 1km from the R102/P111 intersection. The Farm Rencken No 17364, is located east of the N2 (from Durban to Richards Bay). The site is situated immediately south of and adjacent the P403 to Zinkwazi approximately 2km from the town.

Historically layers were hatched and grown at Emeraldene with the improvement of technology and the expansion of the operation it became necessary to separate the rearing flock and the laying flock to minimise the risk of disease and contamination which resulted in the farm at MacCork being purchased in 2006.

In 2005 two new European style 'Closed' poultry houses at an investment of R26 million were established at Emeraldene to streamline the operation and provide the best bio-security possible and an egg packaging facility was introduced.

There are presently four rearing houses located at MacCork which supply 13000 chickens on a 6 weekly rotation to the laying houses at Emeraldene where there is capacity for 100 000 chickens.

The farm is managed according to veterinary health, environmental health, best farm management practice, staff welfare and on sound economical, marketing and financial principles. The farm is visited monthly by a registered vet who certifies the farm operation. Certification includes that the flocks are run according to strict control programmes designed to detect, control and prevent infectious diseases. In addition the farm is inspected by officials of the National Department of agriculture under the Agricultural Products Standards Act 119 of 1990 who have commented that the farm has continually improved on the quality management systems ensuring compliance within regulatory parameters of the government legislation. This department is in support of the proposed expansion.

Eggs, a basic food source to the population, are distributed along the central KZN Coast from Umlazi to Mkuze. Retired layers provide a chicken meat supply to local buyers who purchase directly from the farm.

Presently maize is delivered 3 -4 times a week in 30 ton lorries.

Water is supplied to the poultry farm by means of boreholes (in the process of being registered with the Department of Water and Sanitation in terms of the National Water Act). The farms are serviced by, reticulated electricity (Eskom), an engineered stormwater control system, septic tanks for the disposal of domestic sewage and gravel access roads. Manure/chicken litter from the operations is utilised for composting by contractors off site and compost supply to nurseries.

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

Describe each listed activity in Listing Notice 1 (GNR 983, 8 December 2014), Listing Notice 3 (GNR 985, 8 December 2014) which is being applied for as per the project description:	Description of project activity
<i>GN 327 Item 40): The expansion and related operation of facilities for the concentration of poultry, excluding chicks younger than 20 days, where the capacity of the facility will be increased by-</i> <i>(i) more than 1 000 poultry where the facility is situated within an urban area; or</i>	<i>The existing poultry operation is to be expanded by constructing two new rearing houses where chicks younger than 20 days will be kept until they are ready to lay eggs, where more than 5 000 poultry per facility will be situated outside an urban area.</i>

BASIC ASSESSMENT REPORT

<i>(ii) more than 5 000 poultry per facility situated outside an urban area</i>	
--	--

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), Regulation 2014. 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 development of two new rearing houses on Portion 11 of the Farm MacCorkindale’s Grant No 1810	29°15’21.722”	31°23’16.50”
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
The development of two new rearing houses on Farm Rencken No 17364	29°16’39.29”	31°24’49.60”
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

BASIC ASSESSMENT REPORT

In the case of linear activities:

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)
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternative 1 (preferred alternative)

BASIC ASSESSMENT REPORT

Alternative 2
Alternative 3

e) No-go alternative

The no-go alternative will entails not upgrading the Emeraldene Poultry Farm at MacCorkindale by adding two new rearing houses. By not adding the additional rearing houses there will be a shortage in layer hens for the production of eggs.

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:

Alternative A1¹ (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Size of the activity:

2000m²
2000m²
m ²

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Length of the activity:

m
m
m

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

Alternative:

Alternative A1 (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Size of the site/servitude:

43430.83m²
45621.93m²
m ²

4. SITE ACCESS

Does ready access to the site exist?

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

YES	
m	

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

Describe the type of access road planned:

The access road in the case of both alternatives is an existing gravel road ($\pm 50-100\text{m}$) off the existing provincial tar road P111 for MacCork and P403 for Emeraldene. The access is typical for agricultural activities and it is planned to continue use of the road as is. The marginal increase in traffic to and from the farm as a result of the expansion of the operation is not anticipated to result in any negative impact on the access road.

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):

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

There is a need to expand the rearing of layer hen operation at MacCorkindale to meet the requirement of additional layer hens at the egg laying farm Emeraldene. The growth in the regional customer base and the increased demand for fresh eggs has put the current set-up under strain. It is necessary to expand this operation to remain competitive in the market place as this is a well-established operation which has been in existence for several years with an established supply network and providing an essential food source to local and regional retailers. Increased demand for more eggs requires additional layer chickens. The laying hen accommodation was recently expanded on Emeraldene Farm with the addition of a new laying house. Environmental authorisation is in place for a fourth laying house at Emeraldene Farm. To stock the houses with new layer hens every six weeks there must be a place to rear the hens. Hence the need to expand the rearing house set-up at MacCorkindale Farm. It is an agricultural activity on agricultural land with a limited footprint 'state of the art' technology on already transformed land, and it is located within good proximity to transport networks. The demand has been created by 4-5 new retailers having been established within the existing supply chain who are requesting product (eggs) and existing retailers who are requesting additional supply.

BASIC ASSESSMENT REPORT

Indicate any benefits that the activity will have for society in general:

The proposed expansion of the poultry farm operation will provide additional layer hens to produce the number of eggs required by the local and regional market. Chicken litter, as a by-product, is in demand by the agricultural industry and the landscape or garden maintenance industry as an organic fertiliser.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

Temporary employment opportunities will be created during the construction phase of the project. An additional 5 employment opportunities will be created in the operational phase. The local communities will have ready access to purchase spent layers as a basic food source, and the agricultural and horticultural industry will be able to utilize the chicken litter as an organic compost additive.

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 (NEMA) & The National Environmental Management Amendment Act	The upgrading of the poultry farm triggers activities listed under NEMA	Department of Economic Development Tourism and Environmental Affairs	Act 107 of 1998 & Act 8 of 2004
National Environmental Management: Biodiversity Act (NEMBA)	All landowners have an obligation to remove alien invasive plant species on their property.	eZemveloKZN Wildlife	Act 10 of 2004
National Environmental Management: Air Quality Act	There will be a limited amount of air pollution during the construction and operational phase	Directorate: Air Quality Management (DEAT)	Act 39 of 2004
Natal Nature Conservation Ordinance	For the conservation of any protected plants on site	eZemveloKZN Wildlife	Act 15 of 1974
National Water Act (NWA)	Water is supplied to the poultry farm by means of boreholes, a WULA will be needed.	Department of Water and Sanitation	Act 36 of 1998
Subdivision of Agricultural Land Act (70 of 70)		National Department of Agriculture	Act 70 of 1970
Conservation of Agricultural Resources Act (CARA)	All landowners have an obligation to remove alien invasive plant species on their property.	Department of Water and Sanitation	Act 43 of 1983
National Heritage Resources Act	There is an historical building on site.	South African Heritage Resources Agency	Act 25 of 1999
KwaZulu Natal Heritage Act	There is an historical building on site.	AMAFA aKwaZulu-Natali	Act 10 of 1997
Labour Relations Act	During the construction and operational phase there will be new employment opportunities.	Department of Labour	Act 66 of 1995

BASIC ASSESSMENT REPORT

Basic Conditions of Employment Act	During the construction and operational phase there will be new employment opportunities.	Department of Labour	Act 75 of 1997
Occupational Health and Safety Act	This establishment must comply with the Occupational Health and Safety Act during the construction and operational phase.	Department of Labour	Act 85 of 1993
Hazardous Substances Act	Hazardous substances will be used during the construction phase	Department of Health, Welfare and Pensions	Act 15 of 1973

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?

15m³

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

The construction solid waste will be stored on site in skips then loaded into a truck and taken to the registered New Guelderland landfill in accordance with the requirements of the Environmental Management Plan for the Construction phase (CEMPr)

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

New Guelderland landfill

Will the activity produce solid waste during its operational phase?

YES

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

180m³

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

The solid waste generated by the poultry farm activity is primarily chicken litter which will be pelletized and bagged to be sold as organic fertiliser. The waste will be converted into a raw product rendering the need for waste disposal to nil.

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

New Guelderland landfill

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

The solid waste (chicken litter) will be sold as a product and will no longer be deemed to be waste.

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.

BASIC ASSESSMENT REPORT

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

	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?

	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?

	NO
--	-----------

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

	m ³
--	----------------

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

YES	
------------	--

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.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES	
------------	--

If YES, provide the particulars of the facility:

Facility name:	Umhlali Treatment Works	
Contact person:		
Postal address:		
Postal code:		
Telephone:	Cell:	
E-mail:	Fax:	

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

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

YES	
------------	--

 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:

Dust will be produced during the construction phase as well as emissions from construction vehicles. These emissions will comprise primarily of CO² and will be of a low concentration. Dust reduction measures if required will be implemented throughout construction activities and this will be controlled by an EMPr.

BASIC ASSESSMENT REPORT

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	NO
-----	----

If YES, is it controlled by any legislation of any sphere of government?

NO

Describe the noise in terms of type and level:

The proposed activity will generate noise during the construction phase from construction vehicles and equipment. Noise levels during construction is not expected to exceed 85dBa. Noise suppressors are recommended for machinery and workers will be trained on how to minimise noise on site to prevent unnecessary disturbance during construction hours (07h00 to 17h00). Work should not continue on weekends, after hours or public holidays, if necessary then due notification should be given to the surrounding communities.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
-----------	-------------	-------------	----------------------------	-------	---------------------------------

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:

1100 kilo litres

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

YES	NO
-----	----

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

Application was made to DWAF in 2009 but General Authorisation was not given. An application for a WULA will be submitted to the Department of Water and Sanitation.

14. ENERGY EFFICIENCY

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

'State of the Art' technology from Germany is used in closed poultry houses which maximizes efficiency in respect of all aspects of the activity

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

BASIC ASSESSMENT REPORT

The possibility of incorporating solar water heating and lighting into farm is under consideration

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- 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):

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

- 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	KwaZulu-Natal
District Municipality	iLembe Municipality
Local Municipality	KwaDukuza Municipality
Ward Number(s)	
Farm name and number	Site 1: Farm MacCorkindale's Grant No 1810 Site 2: The Farm Rencken No 17364
Portion number	Site 1: Portion 11
SG Code	Site 1: NOFU00000000181000000 Site 2: NOFU000000001736400000

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**

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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 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	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input checked="" type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

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

BASIC ASSESSMENT REPORT

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

One wetland system was identified on site and categorised into a single hydrogeomorphic (HGM) unit. One seepage wetland was identified and delineated.

There have been major modifications to the vegetation community and soil profile associated with this wetland as a result of sugar cane cultivation within its boundary. This has affected the hydrological flow both into and through the wetland, having a knock on effect on the geomorphologic process which govern this system. Further to this a number of drains have been dug into the wetland to desiccate the soil in order to successfully grow sugar cane in this area. These drains have resulted in varying degrees of soil erosion and the deposition of sediment into the 'B' Section channel and associated riparian zone downstream.

The disturbance of the wetlands has resulted in widespread encroachment by alien invasive species. This has not only modified the vegetation composition of the wetlands but has also had a negative effect on the conservation and proliferation of biodiversity within the surrounding landscape.

Two 'B' Section channel were within the 500m buffer surrounding around the development site. 'B' Section channels are categorised as channels that occasionally have baseflow, dependant on rainfall events and are therefore non-perennial. The B Section channels are in contact with the zone of saturation often enough to have vegetation associated with saturated conditions as well as gleyed soil within the channel confines. B Section channels are considered hydrologically sensitive as they are associated with riparian habitats.

Further to this, a single 'A' Section channel was identified approximately 170m to the east of the proposed development site and flows in asouth-easterly direction. 'A' Section Channels convey surface runoff immediately after a storm event and are not associated with a riparian zone. This 'A' Section channel has been completely transformed by sugar cane cultivation.

See Wetland Impact Assessment in 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:

	Dam or reservoir	
Low density residential		
		Agriculture
		River, stream or wetland
	Railway line ^N	
		Historical building

BASIC ASSESSMENT REPORT

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:

The Railway line will not be impacted on by this development

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:

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:

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

Uncertain

100yr old house/school building present on site used as staff quarters

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

BASIC ASSESSMENT REPORT

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 employment profile of KwaDukuza Municipality indicates that the employed population from the economically active accounts for 66%. The remaining 34% of the population are unemployed.

Economic profile of local municipality:

The economy of this region is dominated by agriculture (primarily sugarcane), light industry (engineering, wood products, paper and packaging) and tourism

Level of education:

Approximately 26% of the population in KwaDukuza Municipality have a Standard 10/Grade 12 or Higher Education Qualification. Eighty percent (80%) of the population of KwaDukuza has some form of schooling between the primary and tertiary education levels.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R10-12 million
What is the expected yearly income that will be generated by or as a result of the activity?	R2.5 million
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
What is the expected value of the employment opportunities during the development and construction phase?	R10 000 – R15 000
What percentage of this will accrue to previously disadvantaged individuals?	100%
How many permanent new employment opportunities will be created during the operational phase of the activity?	10
What is the expected current value of the employment opportunities during the first 10 years?	R120 000 p/a escalated at 10% p/a R1.9 million
What percentage of this will accrue to previously disadvantaged individuals?	100%

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 A 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)	
				ONA and NNR (site 1 and 2)

- 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
Near Natural (includes areas with low to moderate level of alien invasive plants)	%	0
Degraded (includes areas heavily invaded by alien plants)	%	0
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	%	100

BASIC ASSESSMENT REPORT

- 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)	Critical	Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)	Estuary		Coastline	
			YES			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)

The vegetation type in the study area is classified as Critically Endangered. However, there is no natural areas on both site 1 and 2

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	The North Coast Courier
Date published	3 June 2016
Site notice Date placed	5 July 2016

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

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 733.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Mava Ntanta	Stakeholder	mavan@kwadukkuza.gov.za
David Clewlow	Affiliation	dclewlow@nashuaisp.co.za
Jane Hayemann	Affiliation	bethany@iafrica.com

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E. 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

This is the Draft BAR all comments will be included in the Final BAR.

Summary of main issues raised by I&APs	Summary of response from EAP
Waste Management and Stormwater Management	See the Stormwater Management Plan in Appendix D
Process flow	At the end of the production cycle the chickens will be sold to the community

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 E.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders: **See I&AP register attached in Appendix E**

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address

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

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 E.

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

SECTION D: IMPACT ASSESSMENT

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

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.

ALTERNATIVE S1 (PREFERRED ALTERNATIVE) 2 X POULTRY HOUSES AT MACCORKINDALE

DIRECT IMPACTS:

1. Increase in area covered by poultry houses.
2. Increased storm water run-off.
3. Increased volume of chicken litter.
4. Use water from a borehole.
5. Increase in waste water to treat.
6. Increased demand for poultry food.

INDIRECT IMPACTS:

1. Land is transformed permanently.
2. Increase in stormwater to manage.
3. Increase in raw material to process.
4. There will be a perceived change in the groundwater levels.
5. Increase in capacity of treatment facility required.
6. The need for the feed mill at Emeraldene Farm increases.

CUMULATIVE IMPACTS:

1. The agricultural land becomes more developed.
2. Increased surface area to harvest rainwater from.
3. Increased volume of another marketable commodity.
4. A WULA will be required.
5. Greater volume of waste water to be reused.
6. Producing own food also open the opportunity to sell poultry food.

ALTERNATIVE S2 (IF ANY) 2 X POULTRY HOUSES AT EMERALDENE POULTRY FARM

DIRECT IMPACTS:

1. Increase in area covered by poultry houses on already congested land.
2. Increased storm water run-off.
3. Increased volume of chicken litter and greater risk of poultry disease outbreak.
4. Use water from a borehole.

BASIC ASSESSMENT REPORT

5. Increase in waste water to treat.
6. Increased demand for poultry food.

INDIRECT IMPACTS:

1. More land is transformed permanently.
2. Increased stormwater flow to manage.
3. Increase in raw material to process.
4. There will be a probable change in the groundwater levels.
5. Increase in capacity of treatment facility required.
6. The need for the feed mill at Emeraldene Farm increases.

CUMULATIVE IMPACTS:

1. More agricultural land becomes developed.
2. Increased surface area to harvest rainwater from.
3. Increased volume of another marketable commodity.
4. A WULA will be required.
5. Great volume of waste water to be reused on limited space.
6. Producing own food also open the opportunity to sell poultry food

NO-GO ALTERNATIVE (COMPULSORY)

DIRECT IMPACTS:

1. No increase in land covered.
2. There is no increase in stormwater run-off.
3. No increase in chicken litter to process and sell.
4. There no need for more water from the borehole.
5. No increase in waste water to treat.
6. No increase in demand for poultry feed.

INDIRECT IMPACTS:

1. No more land is permanently transformed.
2. No new attenuation facility required.
3. No increase in visual impact.
4. No need for additional storage capacity.
5. No new waste water treatment facility required.
6. No need for a new feed mill at Emeraldene Farm.

CUMULATIVE IMPACTS:

1. The area remains undeveloped.
2. Agricultural land does not become more developed.
3. Reduced earning potential.
4. Water capacity in the borehole remains unchanged.
5. Less treated water to reuse on the farm.
6. Loss of an economic opportunity.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

1. Ensure that correct procedures are followed to get approval for the development of agricultural land for agricultural purposes.
2.
 - a) Ensure the proposed development makes provision for run-off control.

Alternative S2

1. Ensure that correct procedures are followed to get approval for the development of agricultural land for agricultural purposes.
2.
 - a) Ensure the proposed development makes provision for run-off control.

BASIC ASSESSMENT REPORT

<p>b) Ensure the storm water is harvested in Jojo tanks to reduce the need for borehole water.</p> <p>3. Process chicken litter on-site to pellitised organic fertiliser as a new product.</p> <p>4.</p> <p>a) Harvest rainwater and use grey water to reduce the need for borehole water.</p> <p>b) Maintain the Borehole Licence valid at all times.</p> <p>5. Pre-treat the waste water in a septic tank and reuse the grey water for irrigation and washing.</p> <p>6. Put the feedmill previously approved into operation</p>	<p>b) Ensure the storm water is harvested in Jojo tanks to reduce the need for borehole water.</p> <p>3. Process chicken litter on-site to pellitised organic fertiliser as a new product.</p> <p>4.</p> <p>a) Harvest rainwater and use grey water to reduce the need for borehole water.</p> <p>b) Maintain the Borehole Licence valid at all times.</p> <p>5. Pre-treat the waste water in a septic tank and reuse the grey water for irrigation and washing.</p> <p>6. Put the feedmill previously approved into operation.</p>
--	---

a. Process, technology, layout or other alternatives

List the impacts associated with any process, technology, layout or other alternatives that are likely to occur during the planning and design phase (please list impacts associated with each alternative separately):

ALTERNATIVE A1 (PREFERRED ALTERNATIVE): WASTE WATER TREATMENT BY SEPTIC TANK AND CONSERVANCY TANK

DIRECT IMPACTS:

1. Treatment occurs on-site.
2. Treated grey water can be reused for irrigation and washing.
3. Water is reused.

INDIRECT IMPACTS:

1. No external treatment required
2. Other aspects of management benefit from the water source.
3. Water is not wasted.

CUMULATIVE IMPACTS:

1. Less pressure on municipal treatment facility.
2. The groundcover on the remainder of the farm will improve.
3. Water is used wisely.

ALTERNATIVE A2 (IF ANY): WASTE WATER TREATMENT BY CONSERVANCY TANK

DIRECT IMPACTS:

1. Treatment occurs off-site.
2. There is no grey water to be reused for irrigation and washing.
3. Water is lost.

INDIRECT IMPACTS:

1. Treatment is required to occur externally at a municipal treatment works.
2. Management has to pay for the water resource for maintenance and use clean water for it.
3. Water is wasted.

CUMULATIVE IMPACTS:

1. Increased pressure on municipal treatment facility.
2. The groundcover on the remainder of the farm will remain poor.
3. Water is not used wisely.

BASIC ASSESSMENT REPORT

NO-GO ALTERNATIVE (COMPULSORY): NO TREATMENT FACILITY

DIRECT IMPACTS:

1. No need for any additional treatment.
2. No treated grey water to be reused for irrigation and washing.
3. Water is not reused.

INDIRECT IMPACTS:

1. No treatment required
2. Other aspects of management has to pay for the water resource for maintenance and use clean water for it.
3. Water is not wasted.

CUMULATIVE IMPACTS:

1. No additional pressure on municipal treatment facility.
2. The groundcover on the remainder of the farm will not benefit from an available water source.
3. Water is not used.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:

1. Link the water in the conservancy tanks to a separate aqua duct system to be able to use this water for washing and irrigation.
2. Connect an ultraviolet sterilisation light to the uptake point to ensure the water is safe to use.
3. Consider treating this water further to feed it back into the potable water system.

Alternative A2:

1. Take the accumulated waste water in the conservancy tank for treatment at the municipal works and bring treated water back in return to have treated grey water on hand for washing and irrigation.

1.1. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the construction phase:

ALTERNATIVE S1 (PREFERRED ALTERNATIVE) 2 X POULTRY HOUSES AT MACCORKINDALE

DIRECT IMPACTS:

1. Presence of construction workers.
 - Construction workers gathering outside the poultry farm gate waiting to gain entry or seeking employment.
2. Dust Nuisance Generation
 - Increase in dust generated due to construction activities.
3. Increase in traffic
 - Increase in vehicles travelling along Road P111 towards and from the site.
4. Increase in stormwater runoff
 - Improper stormwater management on site can result in an increase in erosion on site.

5. Noise generation

- Increase in noise generation due to construction activities.

6. Generation of waste materials

- Construction activity results in the generation of additional waste material such as solid, refuse and rubble material. This needs to be temporarily stored and disposed of in an environmentally responsible manner.

INDIRECT IMPACTS:

1. Presence of construction workers.

- Increased potential for crime.

2. Dust Nuisance Generation

- Dust settles on Road P111 which is a gravel road.

3. Increase in traffic

- Increased slow traffic.

4. Increase in stormwater runoff

- Eroded sediments deposited on the Road P111.

5. Noise generation

- Noise travels beyond the site boundaries.

6. Generation of waste materials

- Increase for potential for pollution.

CUMULATIVE IMPACTS:

1. Presence of construction workers.

- Loitering job seekers along road P111 become a nuisance.

2. Dust Nuisance Generation

- Dust generation impact on the cane fields nearest the site.

3. Increase in traffic

- Road P111 users experience the road as dusty.

4. Increase in stormwater runoff

- Stormwater drainage system receives more storm water.

5. Noise generation

- Ambient noise level rises.

6. Generation of waste materials

- Overall increase in waste volume generated exerts a greater demand on capacity of local landfill site to absorb increases in waste.

ALTERNATIVE S2 (IF ANY) 2 X POULTRY HOUSES AT EMERALDENE POULTRY FARM

DIRECT IMPACTS:

1. Presence of construction workers.

- Construction workers gathering at the farm gate seeking temporary employment.

2. Dust Nuisance Generation

- Increase in dust generated due to construction activities.

3. Increase in traffic

- Increase in vehicles travelling along Road P403 and onto the access road to the site.

4. Increase in stormwater runoff

- Improper stormwater management on site can result in an increase in erosion on site.

5. Noise generation

- Increase in noise generation due to construction activities.

6. Generation of waste materials

- Construction activity results in the generation of additional waste material such as solid, refuse and rubble material. This needs to be temporarily stored and disposed of in an environmentally responsible manner.

INDIRECT IMPACTS:

1. Presence of construction workers.

- Increased potential for crime.

2. Dust Nuisance Generation

- Dust settles on a busy public road.

3. Increase in traffic

- Increased slow traffic.

4. Increase in stormwater runoff

- Eroded sediments deposited in low lying areas.

5. Noise generation

- Noise generation is audible beyond the site boundaries.

6. Generation of waste materials

- The generation of additional waste material such as solid, refuse and rubble material detracts from the appearance of the site.

CUMULATIVE IMPACTS:

1. Presence of construction workers.

- Loitering job seekers pose a road hazard.

2. Dust Nuisance Generation

- Dust generated settles in the vicinity of the site.

3. Increase in traffic

- Entry into and egress from Zinkwazi takes longer than normal.

4. Increase in stormwater runoff

- Stormwater drainage system receives more storm water.

5. Noise generation

- Noise becomes a nuisance.

6. Generation of waste materials

- Overall increase in waste volume generated exerts a greater demand on capacity of local landfill site to absorb increases in waste.

NO-GO ALTERNATIVE (COMPULSORY)

DIRECT IMPACTS:

1. Presence of construction workers.

- No increase in construction workers moving through the town.

2. Dust Nuisance Generation

- No dust generation resulting in pollution and nuisance.

3. Increase in traffic

- The traffic volume along roads remains as per pre-development levels.

4. Increase in stormwater runoff

- No increase in erosion occurs on site.

5. Noise generation

- No noise nuisance due to construction activities.

6. Generation of waste materials

- Construction activity results in the generation of additional waste material such as solid, refuse and rubble material. This needs to be temporarily stored and disposed of in an environmentally responsible manner.

INDIRECT IMPACTS:

1. Presence of construction workers.

- No increase in potential for crime.

2. Dust Nuisance Generation

- No dusty road.

3. Increase in traffic

- The potential for accidents remains unchanged.

4. Increase in stormwater runoff

- No disturbance of existing stormwater drainage occurs.

5. Noise generation.

- Ambient noise levels remain as before.

6. Generation of waste materials

- No increase for potential of pollution.

CUMULATIVE IMPACTS:

1. Presence of construction workers.

- Job seekers will continue to seek employment elsewhere.

2. Dust Nuisance Generation

- Road remains clean.

3. Increase in traffic

- Traffic movement remains unchanged.

4. Increase in stormwater runoff

- Existing stormwater drainage system remains unstressed.

5. Noise generation

BASIC ASSESSMENT REPORT

- The current sound levels persist.
- 6. Generation of waste materials**
- Overall increase in waste volume generated exerts a greater demand on capacity of local landfill site to absorb increases in waste.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Alternative S2

1. Presence of construction workers.

- Building Contractor and Sub-contractor must ensure that their workers are transported to and from the site.

1. Presence of construction workers.

- Building Contractor and Sub-contractor must ensure that their workers are transported to and from the site.

2. Dust Nuisance Generation

- Ensure that the access road to the site is monitored and dampened on a daily basis when necessary with water and soilbinding chemicals to minimise and prevent dust generation on site.

2. Dust Nuisance Generation

- Ensure that the access road to the site is monitored and dampened on a daily basis when necessary with water and soilbinding chemicals to minimise and prevent dust generation on site.

3. Increase in traffic

- Ensure that the route to the site is manned with flagmen and necessary signage indicating construction activities in progress.

3. Increase in traffic

- Ensure that the route to the site is be manned with flagmen and necessary signage indicating construction activities in progress.

4. Increase in stormwater runoff

- a) Ensure that necessary soil erosion prevention measures are in place on site i.e. sandbag/diversion berms; soil curtains; cut-off trenches and retention ponds.
- b) Ensure that this run-off is collected in the municipal stormwater drainage reticulation system.
- c) A stormwater management plan needs to be compiled by the Principal Engineer.

4. Increase in stormwater runoff

- a) Ensure that necessary soil erosion prevention measures are in place on site i.e. sandbag/diversion berms; soil curtains; cut-off trenches and retention ponds.
- b) Ensure that this run-off is collected in the municipal stormwater drainage reticulation system.
- c) A stormwater management plan needs to be compiled by the Principal Engineer.

5. Noise generation

- a) Ensure construction noise is limited to within daytime week day working hours only.
- b) Give 24 hours notice if there will be expected excessive noise.

5. Noise generation

- a) Ensure construction noise is limited to within daytime week day working hours only.
- b) Give 24 hours notice if there will be expected excessive noise.

6. Generation of waste materials

- a) The Building Contractor is to ensure that a waste management plan is compiled and implemented on site and that collection and disposal of all waste generated i.e. solid, rubble & refuse is correctly stored and disposed of at a local registered landfill site.
- b) All waybills are to be submitted by the Building Contractor.
- c) This also includes any toilet service records for portable/chemical toilets on site.

6. Generation of waste materials

- a) The Building Contractor is to ensure that a waste management plan is compiled and implemented on site and that collection and disposal of all waste generated i.e. solid, rubble & refuse is correctly stored and disposed of at a local registered landfill site.
- b) All waybills are to be submitted by the Building Contractor.
- c) This also includes any toilet service records for portable/chemical toilets on site.

1.2. IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the operational phase:

ALTERNATIVE S1 (PREFERRED ALTERNATIVE) 2 X POULTRY HOUSES AT MACCORKINDALE

DIRECT IMPACTS:

1. Waste Generation

- Chicken litter accumulates.

2. Storm water management

- Increased run-off.

3. Waste water:

- Minor increase in waste water.

INDIRECT IMPACTS:

1. Waste Generation

- Increase in potential for vermin and disease.

2. Storm water management

- Increased potential for soil erosion.

3. Increase in waste water

- Increase in potential for soil and water contamination.

CUMULATIVE IMPACTS:

1. Waste Generation

- Increased accumulated organic waste opens an opportunity to turn it into a product to sell.

2. Storm water management

- There is a need to review the storm water drainage system.

3. Increase in waste water:

- Increased volume of waste water is a resource that should be processed for re-use.

ALTERNATIVE S2 (IF ANY) 2 X POULTRY HOUSES AT EMERALDENE POULTRY FARM

DIRECT IMPACTS:

1. Waste Generation

- Solid waste becomes accumulated.

2. Storm water management

- Increased run-off in local catchment.

3. Waste water

- Minor increase in waste water.

INDIRECT IMPACTS:

1. Waste Generation

- Increase in potential for vermin and disease.

BASIC ASSESSMENT REPORT

2. Storm water management

- Increased potential for soil erosion.

3. Increase in waste water

- Increase in potential for soil and water contamination.

CUMULATIVE IMPACTS:

1. Waste Generation

- Increased accumulated organic waste opens an opportunity to turn it into a product to sell.

2. Storm water management

- Strain exerted on overall efficiency of existing storm water drainage system.

3. Increase in waste water

- Increased volume of waste water is a resource that should be processed for re-use.

NO-GO ALTERNATIVE (COMPULSORY)

DIRECT IMPACTS:

1. Waste Generation

- No additional waste accumulated.

2. Storm water management

- No additional run-off generated.

3. Increase in waste water

- No increase in waste water.

INDIRECT IMPACTS:

1. Waste Generation

- No increase in potential for vermin and disease.

2. Storm water management

- No increased potential for soil erosion.

3. Increase in waste water

- Increase in potential for soil and water contamination.

CUMULATIVE IMPACTS:

1. Waste Generation

- Increased pressure on the local authority to manage this increased waste production.

2. Storm water management

- There is a need to review the storm water drainage system.

3. Increase in waste water

- No additional waste water as a resource to be processed for re-use.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Alternative S2

1. Waste Generation

- The applicant is to process the chicken litter as organic

1. Waste Generation

- The applicant is to process the chicken litter as organic

BASIC ASSESSMENT REPORT

<p>fertilizer and sell it as a product, and in that way reduce the need to dispose of it at the landfill site.</p> <p>2. Storm water management</p> <ol style="list-style-type: none"> a) Ensure that necessary soil erosion prevention measures are in place on site i.e. sandbag/diversion berms; soil curtains; cut-off trenches and retention ponds. b) Ensure that this run-off is collected in the municipal stormwater drainage reticulation system. c) A stormwater management plan needs to be compiled by the Principal Engineer. <p>3. Increased waste water</p> <ul style="list-style-type: none"> • Send the waste water through a three chamber septic tank and collect the grey water in conservancy tanks for reuse as irrigation water or for washing. • Sterilise the water and filter for recycling through the poultry houses. 	<p>fertilizer and sell it as a product, and in that way reduce the need to dispose of it at the landfill site.</p> <p>2. Storm water management</p> <ol style="list-style-type: none"> a) Ensure that necessary soil erosion prevention measures are in place on site i.e. sandbag/diversion berms; soil curtains; cut-off trenches and retention ponds. b) Ensure that this run-off is collected in the municipal stormwater drainage reticulation system. c) A stormwater management plan needs to be compiled by the Principal Engineer. <p>3. Increased waste water</p> <ul style="list-style-type: none"> • Send the waste water through a three chamber septic tank and collect the grey water in conservancy tanks for reuse as irrigation water or for washing. • Sterilise the water and filter for recycling through the poultry houses.
---	---

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the operational phase (please list impacts associated with each alternative separately):

ALTERNATIVE A1 (PREFERRED ALTERNATIVE): WASTE WATER TREATMENT BY SEPTIC TANK AND CONSERVANCY TANK

DIRECT IMPACTS:

1. Treatment occurs on-site.
2. Treated grey water can be reused for irrigation and washing.
3. Water is reused.

INDIRECT IMPACTS:

1. No external treatment required
2. Other aspects of management benefit from the water source.
3. Water is not wasted.

CUMULATIVE IMPACTS:

1. Less pressure on municipal treatment facility.
2. The groundcover on the remainder of the farm will improve.
3. Water is used wisely.

ALTERNATIVE A2 (IF ANY): WASTE WATER TREATMENT BY CONSERVANCY TANK

DIRECT IMPACTS:

1. Treatment occurs off-site.
2. There is no grey water to be reused for irrigation and washing.
3. Water is lost.

INDIRECT IMPACTS:

1. Treatment is required to occur externally at a municipal treatment works.
2. Management has to pay for the water resource for maintenance and use clean water for it.
3. Water is wasted.

BASIC ASSESSMENT REPORT

CUMULATIVE IMPACTS:

1. Increased pressure on municipal treatment facility.
2. The groundcover on the remainder of the farm will remain poor.
3. Water is not used wisely.

NO-GO ALTERNATIVE (COMPULSORY): NO TREATMENT FACILITY

DIRECT IMPACTS:

1. No need for any additional treatment.
2. No treated grey water to be reused for irrigation and washing.
3. Water is not reused.

INDIRECT IMPACTS:

1. No treatment required
2. Other aspects of management has to pay for the water resource for maintenance and use clean water for it.
3. Water is not wasted.

CUMULATIVE IMPACTS:

1. No additional pressure on municipal treatment facility.
2. The groundcover on the remainder of the farm will not benefit from an available water source.
3. Water is not used.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1

Alternative A2

1. Link the water in the conservancy tanks to a separate aqua duct system to be able to use this water for washing and irrigation.
2. Connect an ultraviolet sterilisation light to the uptake point to ensure the water is safe to use.
3. Consider treating this water further to feed it back into the potable water system.

1. Take the accumulated waste water in the conservancy tank for treatment at the municipal works and bring treated water back in return to have treated grey water on hand for washing and irrigation.

1.3. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING OR CLOSURE PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the decommissioning or closure phase:

ALTERNATIVE A1 (PREFERRED ALTERNATIVE): WASTE WATER TREATMENT BY SEPTIC TANK AND CONSERVANCY TANK

DIRECT IMPACTS:

1. Septic tank and conservancy tanks must be desludged.
2. Septic tank and conservancy tanks must be removed.

INDIRECT IMPACTS:

1. Potential for pollution spills

BASIC ASSESSMENT REPORT

2. De-construction waste generated

CUMULATIVE IMPACTS:

1. Decommissioning is an environmental risk.
2. More pressure on municipal landfill facility.

ALTERNATIVE A2 (IF ANY): WASTE WATER TREATMENT BY CONSERVANCY TANK

DIRECT IMPACTS:

1. Conservancy tanks must be desludged.
2. Conservancy tanks must be removed.

INDIRECT IMPACTS:

1. Potential for pollution spills
2. De-construction waste generated

CUMULATIVE IMPACTS:

1. Decommissioning is an environmental risk.
2. More pressure on municipal landfill facility.

NO-GO ALTERNATIVE (COMPULSORY)

DIRECT IMPACTS:

1. No need for the septic tank and conservancy tanks to be desludged.
2. No need for the septic tank and conservancy tanks to be removed.

INDIRECT IMPACTS:

1. No potential for pollution spills
2. No de-construction waste generated

CUMULATIVE IMPACTS:

1. No need for the decommissioning to be an environmental risk.
2. No additional pressure on municipal landfill facility.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

1. Ensure all waste water is removed from the septic tank and conservancy tank before decommissioning commences to minimise the pollution risk.
2. Recycle the decommission waste material and use it for back-fill material under floor slabs of the new construction activity.

Alternative S2

1. Ensure all waste water is removed from the conservancy tank before decommissioning commences to minimise the pollution risk.
2. Recycle the decommission waste material and use it for back-fill material under floor slabs of the new construction activity.

BASIC ASSESSMENT REPORT

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the decommissioning or closure phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1

Alternative A2

--	--

PROPOSED MONITORING AND AUDITING

For each phase of the project and for each alternative, please indicate how identified impacts and mitigation will be monitored and/or audited.

A) PLANNING AND DESIGN PHASE

Alternative S1 (preferred site)

Alternative S2

<ol style="list-style-type: none"> 1. Monitor the area covered by poultry houses. 2. Monitor the current storm water run-off. 3. Monitor the current volume of chicken litter. 4. Monitor the current level of water use from a borehole. 5. Monitor the current volume of in waste water to treat. 6. Monitor the current demand for poultry food. 	<ol style="list-style-type: none"> 1. Monitor the area covered by poultry houses. 2. Monitor the current storm water run-off. 3. Monitor the current volume of chicken litter. 4. Monitor the current water use from a borehole. 5. Monitor the current volume of waste water to treat. 6. Monitor the current demand for poultry food.
---	---

B) CONSTRUCTION PHASE

Alternative A1 (preferred alternative)

Alternative A2

<p>Presence of construction workers.</p> <ol style="list-style-type: none"> a) Audit the Building Contractor and Sub-contractors transporting their workers to and from the site. b) The Principal Agent to monitor on a weekly basis by checking the arrival and departure of the workforce through signed entries in a daily attendance register. c) The ECO is to check this register on a monthly basis. d) A complaints register is to be kept on site for the record of complaints by I&APs. e) The ECO is to check this register on a monthly basis. <p>2. Dust Nuisance Generation</p> <ol style="list-style-type: none"> a) Audit whether the Building Contractor monitors that the 	<p>Presence of construction workers.</p> <ol style="list-style-type: none"> a) Audit the Building Contractor and Sub-contractors transporting their workers to and from the site. b) The Principal Agent to monitor on a weekly basis by checking the arrival and departure of the workforce through signed entries in a daily attendance register. c) The ECO is to check this register on a monthly basis. d) A complaints register is to be kept on site for the record of complaints by I&APs. e) The ECO is to check this register on a monthly basis. <p>2. Dust Nuisance Generation</p> <ol style="list-style-type: none"> a) Audit whether the Building Contractor monitors that the
--	--

BASIC ASSESSMENT REPORT

<p>access road to the site is dampened with water and soil binding chemicals on a daily basis or when necessary to minimize & prevent dust generation. When excessive especially on windy days a water cart must be utilised for dampening purposes. Alternatively, a water hose may be used.</p> <p>b) The ECO is to check monthly.</p> <p>c) A complaints register is to be kept on site for recording of complaints.</p> <p>3. Increase in traffic volumes</p> <p>a) Audit the correct signage and traffic controls are used by the Contractor.</p> <p>b) Audit the presence of flagmen actively warning the traffic.</p> <p>4. Increase in surface runoff due to hardening of local catchment</p> <p>a) Check that stormwater controls are in place to accommodate the increase in runoff i.e. attenuation tank and connection to existing drainage system and that it is coping with the storm water and not causing adverse effects.</p> <p>5. Increase in noise generation</p> <p>a) Audit whether the Building Contractor is ensuring that all working activities are limited to within daylight working hours on week days.</p> <p>b) The Principal Agent is to monitor on a weekly basis.</p> <p>c) The ECO is to monitor on a monthly basis.</p> <p>d) A period of 24 hours notice is to be given to neighbours of expected noisy activities.</p> <ul style="list-style-type: none"> • causing adverse effects. <p>6. Increase in solid waste volumes (Not chicken litter)</p> <p>a) Audit the disposal of solid waste is implemented and is taken to the New Gelderland Landfill site.</p> <p>b) Audit that no waste is burnt on site.</p>	<p>access road to the site is dampened when necessary on a daily basis with water and soil binding chemicals to minimize & prevent dust generation. When excessive especially on windy days a water cart must be utilised for dampening purposes. Alternatively, a water hose may be used.</p> <p>b) The ECO is to check monthly.</p> <p>c) A complaints register is to be kept on site for recording of complaints.</p> <p>3. Increase in traffic volumes</p> <p>a) Audit the correct signage and traffic controls are used by the Contractor.</p> <p>b) Audit the presence of flagmen actively warning the traffic.</p> <p>4. Increase in surface runoff due to hardening of local catchment</p> <p>a) Check that stormwater controls are in place to accommodate the increase in runoff i.e. attenuation tank and connection to existing drainage system and that it is coping with the storm water and not causing adverse effects.</p> <p>5. Increase in noise generation</p> <p>a) Audit whether the Building Contractor is ensuring that all working activities are limited to within daylight working hours on week days.</p> <p>b) The Principal Agent is to monitor on a weekly basis.</p> <p>c) The ECO is to monitor on a monthly basis.</p> <p>d) A period of 24 hours notice is to be given to neighbours of expected noisy activities.</p> <ul style="list-style-type: none"> • causing adverse effects. <p>6. Increase in solid waste volumes (Not chicken litter)</p> <p>a) Audit the disposal of solid waste is implemented and is taken to the New Gelderland Landfill site.</p> <p>b) Audit that no waste is burnt on site.</p>
---	--

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 S1 (PREFERRED SITE) MACORKINDALE

<u>Impact type</u>	<u>Duration</u>	<u>Status</u>	<u>Likelihood</u>	<u>Significance</u>
1. Increase in stormwater run-off due to hardening of local catchment.	Long term	Negative	Definite	Medium
2. Increase in traffic volume.	Long term	Negative	Definite	Medium
3. Increase in volume of solid waste generation resulting in an increase in demand for landfill to absorb increased waste.	Long term	Negative	Definite	Low
4. Presence of Construction workers.	Short term	Negative	Definite	Low
5. Increase in construction dust nuisance generation.	Short term	Negative	Definite	Low
6. Increase in noise generation.	Short term	Negative	Probable	Low

ALTERNATIVE S2: EMERALDENE

<u>Impact type</u>	<u>Duration</u>	<u>Status</u>	<u>Likelihood</u>	<u>Significance</u>
1. Increase in stormwater run-off due to hardening of local catchment.	Long term	Negative	Definite	Low
2. Increase in traffic volume.	Long term	Negative	Definite	Medium
3. Increase in volume of solid waste generation resulting in an increase in demand for landfill to absorb increased waste.	Long term	Negative	Definite	Low
4. Presence of Construction workers.	Short term	Negative	Definite	Low
5. Increase in construction dust nuisance generation.	Short term	Negative	Definite	Low
6. Increase in noise generation.	Short term	Negative	Probable	Low

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	
-----	--

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).

--

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

The rearing farm MacCorkindale is separated from the laying farm Emeraldene for bio-health reasons. Should poultry disease break out in any of the poultry houses on any specific farm then the entire operation is not in jeopardy. Very strict bio-health controls are in place at MacCorkindale. To place the new rearing houses at Emeraldene Farm would completely flout the bio-health controls. The health risk for the fowl is too great if the rearing and laying operation is combined. The very reason why there are two farms is then discounted. It is strongly recommended to allow the additional two poultry houses at MacCorkindale Farm to allow this successful business to expand.

Is an EMPr attached?

YES	
-----	--

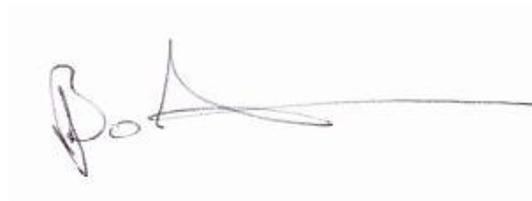
The EMPr must be attached as Appendix F.

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

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

Johan Bodenstein

NAME OF EAP



SIGNATURE OF EAP

06/07/2016

DATE

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Public Participation & Comments and responses report

Appendix F: Draft Environmental Management Programme (EMPr)

Appendix G: Other information