



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

Enquiries: Lekgothoane NM Tel: 015 290 7154 Fax: 015 295 5015 E-mail: lekgothoanenm@ledet.gov.za Reference: 12/1/9/1-W125

Humphries Boerdery (Pty) Ltd
P O Box 431
BELA-BELA
0480

Attention: Mr Kobus Humphries

Fax: 086 651 7543

**ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED DEVELOPMENT OF A PIGGERY FACILITY
ON THE REMAINING EXTENT OF PORTION 50 OF THE FARM TWEEFONTEIN 463 KR WITHIN BELA-
BELA LOCAL MUNICIPALITY OF WATERBERG DISTRICT**

With reference to the above-mentioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation and reasons for the decision are attached herewith.

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations of 2014, you are instructed to notify all registered interested and affected parties, in writing and within 14 (fourteen) calendar days, of the date of the Department's decision in respect of your application as well as the provisions regarding the lodgement of appeals as provided for in the National Appeals Regulations of 2014.

Should you wish to appeal any aspect of the decision, you must, inter alia, submit an appeal to the MEC for Economic Development, Environment and Tourism, within 20 days from the date of this notification, by means of one of the following methods:

By facsimile : (015) 295 5015

By post : P O Box 55464, POLOKWANE, 0700

By hand : Environmental Affairs Offices, Corner Suid and Dorp Streets, POLOKWANE, 0699

Should you decide to appeal, you must serve a copy of your appeal to all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection.

Yours faithfully,

DIRECTOR
ENVIRONMENTAL IMPACT MANAGEMENT

DATE: 31/03/2017

Cc: Shangoni Management Services (Pty) Ltd

Attention: Karien Venter

Fax: 012 807 1014



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

**DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM
ENVIRONMENTAL AUTHORISATION**

Authorisation reference number: 12/1/9/1-W125

Last amended: First issue

Holder of authorisation: Humphries Boerdery (Pty) Ltd

Location of activity: The proposed development site is located on the remaining extent of portion 50 of the farm Tweefontein KR within Bela-Bela Local Municipality of Waterberg District.

DECISION

ACRONYMS

1. **NEMA:** The National Environmental Management Act, 1998 (Act 107 of 1998), as amended.
2. **EIA:** Environmental Impact Assessment.
3. **Regulations:** EIA Regulations of 14 December 2014 in terms of Chapter 5 of NEMA.
4. **Department:** Department of Economic Development, Environment and Tourism.
5. **EA:** Environmental Authorisation.
6. **EMPr:** Environmental Management Programme

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this EA, that the applicant should be authorised to undertake the activity specified below.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

ACTIVITIES AUTHORISED

By virtue of the powers conferred on it by the NEMA and the EIA Regulations, 2014, the Department hereby authorises Humphries Boerdery (Pty) Ltd (herein referred to as holder of EA) with the following contact details –

Mr Kobus Humphries
P O Box 431
Bela-Bela
0480

Tel: 014 740 0098

Fax: 086 651 7543

Department of Economic Development, Environment and Tourism
Environmental Authorisation Reference Number: 12/1/9/1-W125

to undertake the following activities (hereafter referred to as the activities):

Listed in the EIA Regulations R. 983 of 2014 as:-

Activity 4(ii)(b) - "The development and related operation of facilities or infrastructure for the concentration of animals for the purpose of commercial production in densities that exceed 8 square meters per small stock unit and; more than 250 pigs per facility excluding piglets that are not yet weaned";

Activity 27 - "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 the undertaking of a linear activity; or maintenance purpose undertaken in accordance with a maintenance management plan";

as described in the Basic Assessment Report (BAR) received by the Department on 27 January 2017, at:

Alternative S1	Latitude	Longitude
The remaining extent of portion 50 of the farm Tweefontein 463 KR	24° 50' 36.36" South	28° 23' 6.90" East

The proposed development entails the development of a piggery facility located on the remaining extent of portion 50 of the farm Tweefontein 463 KR, within Bela-Bela Local Municipality of Waterberg District in the Limpopo Province, hereafter referred to as "the property". The proposed development will consist of the following:

- Wean-to-finish unit where weaner piglets are grown until they are ready for slaughter;
- The piggery facility will consist of seven (7) wean to finish houses, that will accommodate a total of 5670 pigs;
- The total footprint of all the wean-to-finish platforms is 0.567 ha;
- The total development footprint including the platforms and open space between and surrounding the platforms is 2.05 ha in extent;
- The construction of an office block that will include a store room and ablution facilities, the office block will measure 50m² in extent;
- Weaner piglets will be delivered to the wean-to-finish unit at three weeks of age. Each fourth week, 810 weaner piglets will be delivered and at 21 - 24 weeks old, the pigs will be collected and taken to an abattoir for slaughter; and
- A concrete sump will be constructed under the piggery houses for the collection of wastewater. A paddle system will be used to mix the wastewater generated in the pig house and the wastewater will be channelled to the existing bio-digester on site.

The granting of this EA is subject to the conditions set out below and in Annexure 2 (Departmental standard conditions) and Annexure 3 (Standard Conditions for Piggery).

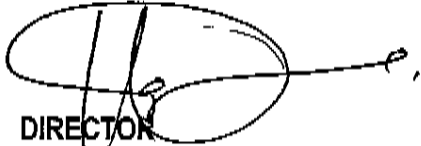
The EMPr attached as Appendix F to the BAR for the above development and submitted as part of the application for an EA is hereby approved and must be adhered to throughout the life cycle of the activity.

This activity must commence within a period of ten (10) years from the date when the EA was issued. If commencement of the activity does not occur within that period, the EA lapses and a new application for EA must be made in order for the activity to be undertaken. Any request for extension of the validity period of the EA must be lodged with the Department at least three (3) months before the expiry date of the EA.

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EA CONDITIONS

1. The invasive exotic vegetation (*Eucalyptus spp.*, *Jacaranda mimosifolia* and *lantana camara* identified within the proposed development site must be controlled as agreed upon with the Department of Agriculture, Forestry and Fisheries (DAFF) must be undertaken.
2. Should bedrock be exposed during excavations, a qualified palaeontologist must be appointed to inspect the excavations as the sediments within the proposed development site are highly significant for fossil remains of vertebrates.



DIRECTOR
ENVIRONMENTAL IMPACT MANAGEMENT

DATE: 31/05/2017

ANNEXURE 1: REASONS FOR THE DECISION

1. Background

The application from Humphries Boerdery (Pty) Ltd is for an EA for activities listed in the EIA Regulations R. 983 of 2014 as:

Listed in the EIA Regulations R. 983 of 2014 as:-

Activity 4(ii)(b) - "The development and related operation of facilities or infrastructure for the concentration of animals for the purpose of commercial production in densities that exceed 8 square meters per small stock unit and; more than 250 pigs per facility excluding piglets that are not yet weaned".

Activity 27 - "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 the undertaking of a linear activity; or maintenance purpose undertaken in accordance with a maintenance management plan".

The proposed development entails the development of a piggery facility located on the remaining extent of portion 50 of the farm Tweefontein 463 KR, within Bela-Bela Local Municipality of Waterberg District in the Limpopo Province, hereafter referred to as "the property". The proposed development will consist of the following:

- Wean-to-finish unit where weaner piglets are grown until they are ready for slaughter;
- The piggery facility will consist of seven (7) wean to finish houses, that will accommodate a total of 5670 pigs;
- The total footprint of all the wean-to-finish platforms is 0.567 ha;
- The total development footprint, including the platforms and open space between and surrounding the platforms is 2.05 ha in extent;
- The construction of an office block that will include a store room and ablution facilities, the office block will measure 50m² in extent;
- Weaner piglets will be delivered to the wean-to-finish unit at three weeks of age. Each fourth week, 810 weaner piglets will be delivered and at 21 - 24 weeks old, the pigs will be collected and taken to an abattoir for slaughter; and
- A concrete sump will be constructed under the piggery houses for the collection of wastewater. A paddle system will be used to mix the wastewater generated in the pig house and the wastewater will be channelled to the existing bio-digester on site.

Humphries Boerdery (Pty) Ltd appointed Karien Venter of Shangoni Environmental Consultant in terms of Regulation 12 of the EIA Regulations of 2014 to undertake the Basic Assessment process.

2. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the amended application form received by the Department on 11 November 2016;
- b) The information contained in the Basic Assessment Report received by the Department on 27 January 2017;

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- c) The objectives and requirements of relevant legislation; policies and guidelines, including section 2 of the National Environmental Management Act and Regulations 41 of the EIA Regulations R. 982 of 2014;
- d) A sufficient Public Participation Process (PPP) was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations R. 982 of 2014 for public involvement;
- e) The Vegetation Impact Assessment, dated November 2015, compiled by Lorainmari den Boogert of Dimela Eco Consulting and attached to the BAR as Appendix D-1;
- f) The Assessment of Vertebrate Species and their Habitats, dated October 2015, compiled by IL Rautenbach, AC Kemp and JCP van Wyk and attached to the BAR as Appendix D-2;
- g) The Wetland/Riparian Delineation and Functional Assessment, dated November 2015, compiled by Antoinette Bootsma of Limosella Consulting and attached to the BAR as Appendix D-3;
- h) The Phase 1 Archaeological Impact Assessment, dated November 2015, compiled by AJ Pelser of APelsers Archaeological Consulting cc and attached to the BAR as Appendix D-4;
- i) The Palaeontological Desktop Assessment, dated 19 October 2015, compiled by Gideon Groenewald of Gideon Groenewald Geoconsultant and attached to the BAR as Appendix D-5;
- j) An agreement letter between Mr Albert Willers that they will utilise dead pigs to feed Crocodiles, dated 13 December 2016 and attached to the BAR under Appendix G;
- k) The proof of water registration from the Department of Water Affairs and Forestry dated 08 August 2007 and attached under Appendix G; and
- l) The findings of site visit conducted on 22 November 2016 by Ms Lekgothoane MN and Ms Mogashoa MS of this Department.

3. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) Details provided of the qualifications of the EAP indicate that the EAP is competent to carry out the Environmental Impact Assessment procedures;
- b) A sufficient Public Participation Process (PPP) was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations R. 982 of 2014 for public involvement; and
- c) The environmental impacts associated with the proposed activity will be addressed by the implementation of proposed mitigation measures outlined in the BAR compiled by Karien Venter of Shangoni Environmental Consultant.

4. Findings

After consideration of the information and factors listed above, the Department made the following findings –

- a) All environmental issues identified and commitments to sound environmental management which are incorporated in the EMPr compiled by Karien Venter of Shangoni Environmental Consultant can be used to avoid potential negative impacts.
- b) The potential impacts on the proposed site were clearly investigated and mitigation measures outlined.
- c) A sufficient Public Participation Process (PPP) was undertaken and the applicant has satisfied the minimum requirements as prescribed in the Chapter 6 of the EIA Regulations R.982 of 2014 for public involvement:
 - A newspaper advertisement was placed in the local newspaper “*The post*” on 29 July 2016;
 - Site notices were placed at the project site;
 - Notices were sent to all key stakeholders and the registered interested and affected parties; and
 - Objections were received from the interested and affected parties and were addressed adequately.
- d) The findings of site visit conducted on 22 November 2016 by Ms Lekgothoane MN and Ms Mogashoa MS of this Department are as follows:
 - The surrounding land uses includes agricultural activities in a form of crop cultivation;
 - The site can be accessed using the R101 Road from Modimole to Bela-Bela;
 - The dominant flora of site is Marula tree (*Sclerocarya birrea*);
 - Fauna species observed within the proposed development site are Buffalos; and
 - No heritage features were observed within the proposed development site.
- e) According to the Vegetation Impact Assessment, the major vegetation groups, secondary bushveld, sandy bushveld and transformed areas were identified within the six hectares surrounding the two alternative sites. The transformed areas have a low sensitivity to the proposed piggery, while the secondary bushveld were classified as being of a low medium sensitivity. Both these vegetation groups, occurring on alternative 1, are considered suitable for the proposed development. Alternative 2 had a higher sensitivity score, considered more natural and therefore not supported for the proposed development.
- f) According to the Assessment of Vertebrate Species and their Habitats, there is no concern for any threatened vertebrate species, even though the impacts of the proposed development will be somewhat different for each group of vertebrates. The piggery development will not jeopardise the regional conservation status of any of the 45 mammals species recorded (25) or expected (20) on the site. Protection and offset in the surrounding bushveld habitats on portions 40 and 50 would compensate for the loss of sensitive habitat on the site, while management of the bushveld can also improve by eliminating invasive exotic vegetation in particular *lantana* and *jacaranda*.

- g) The Wetland/Riparian Delineation and Functional Assessment concluded that there are no wetlands recorded on the proposed site. A wetland area was however recorded north of the study site, but this wetland is however further than 500 meters from the study site and is thus unlikely to be impacted by the proposed development. The wetland has also been canalised and the hydrology of the wetland has thus been significantly altered and care should thus be taken to prevent any possible negative impacts on the wetland during construction as well as during operational phase.
- h) According to the Phase 1 Archaeological Assessment Report, the development should be allowed to continue, however should any archaeological, historical sites, features or objects be uncovered during the development process, an Archaeologist should be called in to investigate and recommend on the best wayforward.
- i) The Paleontological Desktop Assessment has concluded that the development area is underlain by Triassic aged Aeolian sand stone of the Clarens formation, the area is covered in deep sandy soils and it is unlikely that fossils will be observed unless bedrock is exposed during excavation for foundation. It is recommended that the EAP and the ECO for this project must be made aware of the fact that the Clarens formation sediments is highly significant for fossil remains of vertebrates including dinosaurs and if excavation will not expose bedrock, no further mitigation for paleontological heritage is recommended.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the EA, the proposed activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the NEMA and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The authorisation is accordingly granted.

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ANNEXURE 2

DEPARTMENTAL STANDARD CONDITIONS

1. SCOPE OF AUTHORISATION

- 1.1 The holder of the EA shall be responsible for ensuring compliance with the conditions contained in this EA. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the EA.
- 1.2 Any changes to, or deviations from, the project description set out in this EA must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may further request additional information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the EA to apply for further authorisation in terms of the Regulations.
- 1.3 The activity, which is authorised, may only be carried out at the property indicated in the EA.
- 1.4 The holder of the EA will be held liable for any damages to the environment and associated costs, which results from any activity related to the construction and/or operation of the proposed project.
- 1.5 Where any of the holder of the EA's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the holder of the EA must in writing notify the Department as soon as the new details become known to the holder of the EA.
- 1.6 The Department reserves the right to monitor and audit the development throughout its full life cycle.
- 1.7 This EA does not negate the holder of the EA's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

2. APPEAL OF AUTHORISATION

- 2.1 The holder of the EA must notify all registered interested and affected party, in writing and within 14 (fourteen) calendar days, of receiving notice of the Department's decision.
- 2.2 The notification referred must:
 - 2.2.1 specify the date on which the EA was issued;
 - 2.2.2 inform all the interested and affected party of the appeal procedure provided for in the National Appeals Regulations, 2014;

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2.2.3 advise all the interested and affected party that a copy of the EA will be furnished on request; and

2.2.4 give the reasons for the decision.

3. COMMENCEMENT OF THE DEVELOPMENT

3.1 In order to ensure their safety, all employees must be given the necessary personal protective equipment.

3.2 This EA must be provided to the site operator and the requirements thereof must be made fully known to him/her.

3.3 Appropriate notification signs must be erected at the construction site, warning the public (residents, visitors etc) about the hazards around the construction site and presence of heavy vehicles and machinery.

3.4 Hauling routes for construction vehicles and machinery must be clearly marked and appropriate signalling must be posted to that effect. Further, movement of construction vehicles and machinery must be restricted to areas outside of the drainage line/wet area.

3.5 Construction must include appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of stormwater run-off.

3.6 Vegetation clearing must be kept to an absolute minimum. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species.

3.7 The holder of the EA must note that in terms of the National Forests Act (Act No. 84 of 1998); protected plant species (also listed in Limpopo Environmental Management Act, 2003 (Act No. 7 of 2003) must not be cut, disturbed, damaged, destroyed, and their product must not be possessed, collected, removed, transported, exported, donated, purchased or sold unless permission is granted by the Department of Agriculture, Forestry and Fisheries.

3.8 All construction areas (e. g. material lay down area), topsoil and sub-soils must be protected from contamination or pollution and stockpiling must not take place in drainage lines or where it would impede surface water run-off.

3.9 If any soil contamination is noted during the construction and operational phase of the proposed activities, the contaminated soil must be removed to a suitable waste disposal facility and the site must be rehabilitated to the satisfaction of this Department and Department of Water and Sanitation (DWS). The opportunity for the on-site remediation and re-use of contaminated soil must be investigated prior to disposal and this Department must be informed in this regard.

3.10 Should infill material be required for any purpose, the use of borrow pits must comply with the provisions of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) administered by the Department of Mineral Resources (DMR).

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- 3.11 An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate avoidance, reduction, recycling, re-use and disposal where appropriate. Uncontaminated builders' rubble generated during the construction can be re-used as back filling material on site. Ensure that no refuse or builders rubble generated on the premises is placed, dumped or deposited on adjacent properties or public places and open spaces during or after construction.
- 3.12 Section 28 of the NEMA places a duty of care on the holder of the EA to ensure that reasonable measures are taken to prevent pollution or degradation of the environment from occurring, continuing or recurring. Should any environmental damage result from this development or the operation thereof, the holder of the EA, must within 14 days of the damage being caused, rectify the situation at his/her own expense.
- 3.13 Movement of construction vehicles and machinery must be restricted to areas outside of the drainage lines/wet area.
- 3.14 Construction vehicles must be serviced and maintained in a manner whereby excessive smoke and noise production is reduced to acceptable levels, and to prevent oil leaks. Contaminated soil must be remediated on site or removed to an appropriately authorised landfill site.
- 3.15 Dust and nuisance must be minimised through damping down of unsurfaced areas.
- 3.16 Residents (if any) on the property and surrounding area must be informed if any unusually noisy activities are planned. Noise impacts must be reduced over distance at a rate of 1db (decibel) per 13 metres.
- 3.17 Chemical sanitation facilities or systems such as "toilets" that do not rely on seepage of liquids must be provided with a ratio of one for every 15 workers. These must be placed such that they prevent spills or leaks to the environment and must be maintained according to operating instructions and the contents thereof must be disposed of at an authorised waste water treatment works.
- 3.18 Mixing of cement, concrete, paints, solvents, sealants and adhesive must be done in specified areas on concrete aprons or on protected plastic linings to contain spillage or overflows onto soil to avoid contamination to underground water and environmental damage.
- 3.19 Construction activities must be suspended and a representative of the South African Heritage Resources Agency (SAHRA) and/ or Limpopo Heritage Resources Agency (LIHRA) be contacted immediately in the event of finding or uncovering any subterranean (middens, graves, etc.).
- 3.20 Care must be taken to ensure that the material and excavated soil required for backfilling are free of contamination from hydrocarbons.
- 3.21 The hydraulic fluids or chemicals required during construction must be stored in a concrete lined surface with bund walls and shall be designed in such a manner that any spillage can be contained and reclaimed without any impact on the surrounding environment. Should any spills occur it should be cleaned immediately by removing the spillage together with the polluted solid and dispose it in an authorised disposal site permitted to dispose of such waste. The Regional

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Office of the DWS must be notified within 24 hours of an incident that may pollute surface and ground water.

4. MANAGEMENT OF THE ACTIVITY

- 4.1 A copy of this EA must be kept at the property / on-site office where the activity (ies) will be undertaken. The EA must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the EA who works or undertakes work at the property.
- 4.2 The contents of the EMPr and its objectives must be made known to all contractors, subcontractors, agents and other people working on the site, and any updates or amendments to the EMPr must be submitted to the Department for approval.
- 4.3 Regular monitoring and maintenance of storm water drainage facilities must be conducted at all times and repaired, if damaged, as directed by this Department or any other relevant authority.
- 4.4 The holder of the EA shall note that in terms of Section 19(1) of the National Water Act, 1998 (Act No. 36 of 1998), "An owner of the land, a person in control of land or a person who occupies or uses the land on which- (a) any activity or process is or was performed or undertaken; or (b) any other situation exists, which caused or is likely to cause pollution of a water source must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring". Therefore any pollution incident(s) associated with the proposed project shall be reported to the relevant Regional Office of the DWS within 24 hours.

5. REPORTING TO THE DEPARTMENT

- 5.1 The holder of the EA must notify the Department, in writing and within 48 (forty eight) hours, if any condition of this EA cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance. Non-compliance with a condition of this EA may result in criminal prosecution or other actions provided for in NEMA and the Regulations.
- 5.2 Fourteen (14) days written notice must be given to the Director: Environmental Compliance and Enforcement that the activity's operational phase will commence. Commencement for the purposes of this condition includes site preparation.
- 5.3 Any complaints received from the registered interested and affected parties (I&APs) during the construction and operational phase of the activity must be attended to as soon as possible and addressed to the satisfaction of all concerned I&APs.
- 5.4 The holder of the authorisation must ensure that an up to date emergency register is kept during the construction and operation of the project. This register must be made available upon request by the Department.
- 5.5 The holder of the EA must notify the Director: Environmental Compliance and Enforcement within thirty (30) days after the completion of the construction activities.

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6. SITE CLOSURE AND DECOMMISSIONING

- 6.1 Should the activity ever cease or become redundant, the holder of EA shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

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ANNEXURE 3:

STANDARD CONDITION FOR PIGGERY

1. The storage and treatment of animal manure, with a capacity to store in excess of one ton per day and the re-use of wastewater for irrigation purposes are both waste management listed activities under Category A and Category B in terms of the National Environmental Management: Waste Act no 59 of 2008, therefore requires a Waste Management License (WML). As such, WML must be obtained should either of these listed activities be triggered by the proposed development.
2. The piggery units /or houses must be adequately ventilated to avoid the build up of ammonia.
3. Concrete must be laid in correct levels to avoid stagnant water pools and all internal walls and surfaces must be built in a way that they can be easily cleaned by water blasting.
4. The feed storage space (feedlot pens) must be constructed according to specifications of pen area per size/mass class, ground surface and climatic conditions, and the criteria to determine the minimum pen space per pig. The feedlot must be situated on a ground which has a mild slope sufficient to ensure the rapid run-off of rain water to prevent the pens from becoming excessive waterlogged or muddy.
5. Open drains must be avoided as they can be a source and cause of infection and erosion.
6. The design of a footbath must be in a way that facilitates easy drainage and cleaning.
7. Clean water must be diverted from contact with feedlots and holding pens, animal manure and /or manure storing systems.
8. Effluent dams should be properly designed, installed and maintained to agricultural engineering specifications. Adequate design of the structure and spillway capacity will prevent inundation or rupture of the dam.
9. Seepage to ground and surface water must be prevented by ensuring that buildings, collection systems, conveyance systems and storage facilities are designed and maintained appropriately.
10. Records of quantities of manure produced and its utilisation or disposal methods (including land application) must be kept. Appropriate authorisation (s) in terms of legislation regulating utilisation or disposal must be obtained thereof.
11. Effluent loading must not exceed the design capacity of the pond(s) system and ponds must be covered with supporting straw and permeable polypropylene in order to reduce emissions.
12. All ponds must be underlined by an impermeable layer to prevent leaching of waste effluent into the underground water resources.
13. Slurry irrigated pastures must be regularly altered and monitored for nutrients build up in the soil.
14. Surface ponding and effluent irrigation must be avoided during prolonged wet periods.

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15. Groundwater quality must be monitored every six (6) months from boreholes upstream and downstream of the flow of ground water. This should include taking water samples from production boreholes and analysis for microbiological and macro elements, and analysis must be conducted by an accredited water laboratory.
16. Mortality pits that may be constructed for dead pigs must be completely lined with concrete to avoid impacts on the surrounding environment and groundwater pollution. Furthermore, carcasses must be covered with a layer of soil immediately after placement in the mortality pit.
17. Lagoons must be properly managed to mitigate problems such as bad odour, rapid slurry and the build up of heavy metals in the lagoon sludge.
18. All domestic and related solid waste such as feedbags must be placed in container(s) which can be sealed and therefore removed to a licensed landfill or another facility approved by the Department.
19. The provisions of Section 3 of the Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947) must be complied with in making use of piggery manure as a compost.
20. The holder of the authorisation must ensure that the necessary measures are taken in order to mitigate the effect of bad odours on adjacent properties. Such measures must, *inter alia*, include the following:
 - 20.1 Daily cleaning of the piggery units; and
 - 20.2 Daily removal and collection of piggery manure.
21. A quality assurance and biosecurity programme must be developed and implemented for the continuous operation of the facility.
22. An environmental control officer (ECO) must be appointed or designated to ensure that daily inspections are performed during construction for the implementation of mitigation and management measures. Furthermore, an ECO must monitor the holder of the EA's compliance with all the conditions of this authorisation. This audit report must be included in the annual audit report which must be kept on record and made available on request.
23. The appointed ECO must prepare compliance monitoring/ environmental audit reports every six (6) months from the date of commencement. These reports must indicate the holder of the EA's compliance status with regards to the conditions of the Environmental Authorisation and the reasons for non-compliance as well as the proposed remedial steps. These reports must be submitted to the Department within fourteen (14) days after the lapse of six (6) months. This report must be kept on record and made available to the Department on request. The audit must include but not be limited to the following:
 - 23.1 Specifically state whether the conditions of this authorisation are being adhered to or not; and
 - 23.2 The recommendations regarding non-compliance or potential non-compliance and must specify target dates for the implementation of recommendations.