
REFERENCE: 16/3/3/1/A5/88/2037/21
NEAS REFERENCE: WCP/EIA/0000944/2021
DATE: 21 January 2022

The Board of Directors
Orvipax (Pty) Ltd.
P. O. Box 558
STELLENBOSCH
7599

Attention: Dr. Izak Botha

Cell.: 082 900 0100
E-mail: izak@sadcdevelopments.co.za

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED) FOR THE PROPOSED DEVELOPMENT OF A PIGGERY AND ASSOCIATED INFRASTRUCTURE ON PORTION 2 OF FARM OLYPHANTSFONTEIN NO. 935, KLIPHEUWEL.

1. With reference to the above application, this Department hereby notifies you of its decision to **grant** Environmental Authorisation, attached herewith, together with the reasons for the decision.
2. In terms of Regulation 4 of the Environmental Impact Assessment Regulations, 2014 (as amended), you are instructed to ensure, within 14 days of the date of the Environmental Authorisation, that all registered Interested and Affected Parties ("I&APs") are provided with access to and reasons for the decision, and that all registered I&APs are notified of their right to appeal.
3. Your attention is drawn to Chapter 2 of the Appeal Regulations, 2014 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarised in the attached Environmental Authorisation.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

Copied to: (1) Mr. Pieter de Villiers (Cornerstone Environmental Consultants (Pty) Ltd.) E-mail: pieter@cornerstoneenviro.co.za
(2) Mr. Morne Theron (City of Cape Town) E-mail: morne.theron@capetown.gov.za
(3) Mr. Lance McBain-Charles (DEA&DP: Waste Management) E-mail: Lance.McBain-Charles@westerncape.gov.za

ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, AS AMENDED: PROPOSED DEVELOPMENT OF A PIGGERY AND ASSOCIATED INFRASTRUCTURE ON PORTION 2 OF FARM OLYPHANTSFONTEIN NO. 935, KLIPHEUWEL.

With reference to your application for the abovementioned, find below the outcome with respect to this application.

DECISION

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended), the Competent Authority herewith **grants Environmental Authorisation** to the applicant to undertake the listed activity specified in section B below with respect to the Activity Alternative, described in the Final Basic Assessment Report ("BAR"), dated 13 September 2021.

The applicant for this Environmental Authorisation is required to comply with the conditions set out in section E below.

A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION

The Board of Directors
c/o Dr. Izak Botha
Orvipax (Pty) Ltd.
P. O. Box 558
STELLENBOSCH
7599

Cell.: 082 900 0100
E-mail: izak@sadcdevelopments.co.za

The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as "**the holder**".

B. LIST OF ACTIVITIES AUTHORISED

Listed Activity	Activity/Project Description
<p>Listing Notice 1 of the EIA Regulations, 2014 (as amended)– Activity Number: 4 Activity Description: <i>“The development and related operation of facilities or infrastructure for the concentration of animals in densities that exceed—</i> (i) <i>20 square metres per large stock unit and more than 500 units per facility;</i> (ii) <i>8 square meters per small stock unit and;</i> a. <i>more than 1 000 units per facility excluding pigs where (b) applies; or</i> b. <i>more than 250 pigs per facility excluding piglets that are not yet weaned;</i> (iii) <i>30 square metres per crocodile and more than 20 crocodiles per facility;</i> (iv) <i>3 square metres per rabbit and more than 500 rabbits per facility; or</i> (v) <i>250 square metres per ostrich or emu and more than 50 ostriches or emus per facility”.</i></p>	<p>The proposed development includes a 980-sow unit piggery where the density will exceed 8 square meters per small stock unit.</p>

The abovementioned list is hereinafter referred to as “the listed activity”.

The holder is herein authorised to undertake the following alternative that includes the listed activity relating to the development proposal:

The proposed development includes the construction of an approximate 980-sow unit piggery (when in full production) located within the central part of the Farm where composting previously took place, comprising:

- an office building area measuring approximately 335.0m²;
- early gestation building measuring approximately 1 350.0m²;
- late gestation building measuring approximately 1 556.0m²;
- farrowing building with 5 rooms each with 48 crates measuring approximately 1 400.00m²;
- weaner building with 7 rooms each with 560 weaners per room measuring approximately 1 750.0m²;
- seven finishing buildings which can hold 570 animals per building measuring approximately 7 630.0m²;
- an approximate 50 m³ slurry collection and distribution sump;
- an existing dam will be used as a waste storage lagoon/dam for liquid waste. The dam will be lined and enlarged to measure approximately 4 300m³;
- an approximate 6.5m³ concealed septic tank / conservancy facility; and
- associated new and upgraded stormwater infrastructure.

The pig houses will not exceed 4m in height.

The total output from the piggery will be approximately 5 500 pigs per year.

The facility will be implemented in a modular and phased manner, depending on markets and economical outcomes.

Existing access roads will be used.

Existing electrical connections will be used.

Water for the piggery operations will be abstracted from existing boreholes.

The facility will be fenced and access controlled.

The total development footprint will amount to approximately 4.5ha.

C. SITE DESCRIPTION AND LOCATION

The listed activity will be undertaken on Portion 2 of Farm Olyphantsfontein No. 935, Klipheuwel located within the agricultural area situated off Slent Road between the R304 and the Voor-Perdeberg Road linking the R44 with the R302.

The SG digit code is:

C04600000000093500002

The co-ordinates for the piggery are:

33° 40' 51.38" South; 18° 47' 25.84 " East

Refer to Annexure 1: Locality Plan.

Refer to Annexure 2: The Preferred Site Development Plan and Preferred Layout of the Piggery.

hereinafter referred to as "**the site**".

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Cornerstone Environmental Consultants (Pty) Ltd.
c/o Mr. Pieter de Villiers
P. O. Box 12606
Die Boord
STELLENBOSCH
7613

Cell: 083 243 0994

E-mail: pieter@cornerstoneenviro.co.za

E. CONDITIONS OF AUTHORISATION

Scope of authorisation

1. The holder is authorised to undertake the listed activity specified in Section B above in accordance with and restricted to the Activity Alternative described in the Final BAR, dated 13 September 2021 on the site as described in Section C above.
2. Authorisation of the activity is subject to compliance with the conditions set out in this Environmental Authorisation. The holder must ensure compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.
3. The holder must commence with, and conclude, the listed activity within the stipulated validity period which this Environmental Authorisation is granted for, or this Environmental Authorisation shall lapse and a new application for Environmental Authorisation must be submitted to the competent authority.

This Environmental Authorisation is granted for–

- (a) A period of five (5) years, from the date of issue, during which period the holder must commence with the authorised listed activity.
 - (b) A period of ten (10) years, from the date the holder commenced with an authorised listed activity, during which period the authorised listed activity for the construction phase, must be concluded.
4. The activity that has been authorised may only be carried out at the site described in Section C above in terms of the approved "Environmental Management Programme" ("EMPr").
 5. Any changes to, or deviations from the scope of the description set out in Section B and Condition 2 above must be accepted or approved in writing by the competent authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the competent authority may request such information to evaluate the significance and impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.

Notification of authorisation and right to appeal

6. The holder of the authorisation must in writing, within 14 (fourteen) calendar days of the date of this decision –
 - 6.1 notify all registered Interested and Affected Parties ("I&APs") of –
 - 6.1.1 the outcome of the application;
 - 6.1.2 the reasons for the decision;
 - 6.1.3 the date of the decision; and
 - 6.1.4 the date of issue of the decision;
 - 6.2 draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations, 2014 (as amended);
 - 6.3 draw the attention of all registered I&APs to the manner in which they may access the decision; and
 - 6.4 provide the registered I&APs with:
 - 6.4.1 the name of the holder (entity) of this Environmental Authorisation;
 - 6.4.2 name of the responsible person for this Environmental Authorisation;
 - 6.4.3 postal address of the holder;
 - 6.4.4 telephonic and fax details of the holder;
 - 6.4.5 e-mail address, if any; and
 - 6.4.6 the contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered I&APs in the event that an appeal is lodged in terms of the National Appeal Regulations, 2014 (as amended).

Commencement

7. The listed activity, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notified the registered I&APs of this decision.
8. In the event that an appeal is lodged with the Appeal Administrator, the effect of this Environmental Authorisation is suspended until such time as the appeal is decided. In the instance where an appeal is lodged the holder may not commence with the activity, including site preparation, until such time as the appeal has been finalised and the holder is authorised to do so.

Written notice to the competent authority

9. A minimum of seven calendar days' notice, in writing, must be given to the competent authority before commencement of construction activities. Commencement for the purpose of this condition includes site preparation.

- 9.1 The notice must make clear reference to the site details and EIA Reference number given above.
- 9.2 The notice must also include proof of compliance with the following conditions described herein:
Conditions: 6, 7, 14 and 18.

Management of activity

10. The EMPr submitted, as dated September 2021 is hereby approved and must be implemented.
11. An application for amendment of the EMPr must be submitted to the competent authority in terms of Chapter 5 of the EIA Regulations, 2014 (as amended), if any amendments are to be made to the outcomes of the EMPr and these may only be implemented once the amended EMPr has been authorised by the competent authority.
12. The EMPr must be included in all contract documentation for all phases of implementation.
13. A copy of the Environmental Authorisation and the EMPr must be kept at the site where the listed activity will be undertaken. Access to the site referred to in Section C above must be granted and the Environmental Authorisation and EMPr must be produced to any authorised official representing the competent authority who requests to see these for the purposes of assessing and/or monitoring compliance with the conditions contained herein. The Environmental Authorisation and EMPr must also be made available for inspection by any employee or agent of the applicant who works performs work at the site.

Monitoring

14. The holder must appoint a suitably experienced Environment Control Officer ("ECO"), for the duration of the construction phase and site rehabilitation phases of implementation.
The ECO must–
 - 14.1 be appointed prior to commencement of any and clearing or construction activities commencing;
 - 14.2 ensure compliance with the EMPr and the conditions contained herein; and
 - 14.3 keep record of all activities on site; problems identified; transgressions noted and a task schedule of tasks undertaken by the ECO.

Environmental audit reports

15. The holder must, for the period during which the Environmental Authorisation and EMPr remain valid –
 - 15.1 ensure that compliance with the conditions of the Environmental Authorisation and the EMPr is audited;
 - 15.2 submit at least two environmental audit reports to the relevant competent authority during the construction phase. The holder must submit one audit report three (3) months after commencement of the construction phase and another audit report six (6) months after completion of the construction phase; and
 - 15.3 submit an environmental audit report every five (5) years while the Environmental Authorisation remains valid.
16. The environmental audit report must be prepared by an independent person and must address the objectives and contain all the information set out in Appendix 7 of the EIA Regulations, 2014 (as amended).

In addition to the above, the environmental audit report, must –

- 16.1 provide verifiable findings, in a structured and systematic manner, on–

- (a) the level of compliance with the conditions of the Environmental Authorisation and the EMPr and whether this is sufficient or not; and
 - (b) the extent to which the avoidance, management and mitigation measures provided for in the EMPr achieve the objectives and outcomes of the EMPr and highlight whether this is sufficient or not;
- 16.2 identify and assess any new impacts and risks as a result of undertaking the activity;
 - 16.3 evaluate the effectiveness of the EMPr;
 - 16.4 identify shortcomings in the EMPr;
 - 16.5 identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr;
 - 16.6 indicate the date on which the construction work was commenced with and completed or in the case where the development is incomplete, the progress of the development and rehabilitation;
 - 16.7 include a photographic record of the site applicable to the audit; and
 - 16.8 be informed by the ECO reports.
17. The holder must, within 7 days of the submission of the environmental audit report to the competent authority, notify all potential and registered I&APs of the submission and make the report available to anyone on request and, where the holder has such a facility, place on a publicly accessible website.

Specific conditions

18. A Stormwater Management Plan must be compiled and submitted to the City of Cape Town for approval. A copy of the approval of the Stormwater Management Plan must be submitted to this Department prior to commencement.
19. The following measures adapted from the Soil Fertility Assessment dated 12 October 2020, must be implemented:
- 19.1 Annual soil sampling and analyses to monitor soil quality and determine additional fertilizer requirements must be implemented.
 - 19.2 Shallow groundwater (seepage) monitoring downgradient of the application areas must be monitored in terms of the load of nutrients that leach from the soil profile in order to optimise irrigation scheduling.
 - 19.3 Irrigation of lucerne must be alternated between wastewater and fresh water to ensure no accumulation of sodium (Na) in the soil profile.
20. The following measures adapted from the Final BAR dated 13 September 2021 compiled by Pieter de Villiers of Cornerstone Environmental Consultants (Pty) Ltd. and as included in the EMPr, must be implemented:
- 20.1 If there is a disease outbreak, an epidemiologist(s) or veterinarian(s) must be approached to select the most appropriate disposal method for the specific disease agent, the geographic location and the local situation.
 - 20.2 Litter, bedding, feed and feeding stuffs, hay and straw contaminated by diseased animals must be appropriately disposed of through composting, burial and/or burning.
 - 20.3 Irrigation management and soil moisture levels must be automatically controlled so that no pooling occurs on-site.
 - 20.4 A seepage trench must be installed at the lowest part of the farm.
 - 20.5 Seepage water must be collected in a newly installed manhole and the collected water must be tested and the appropriate action taken.
 - 20.6 The newly expanded dam must be equipped with a surface aerator and an odour scavenger dosed to eliminate odours that might arise.
 - 20.7 The existing natural screening rows of trees must be retained to help mitigate the visual impacts.
 - 20.8 Slope and land preparation must not result in soil erosion or potential surface runoff.

- 20.9 The pig houses and associated sludge lagoon must be designed and lined with impermeable substances.
- 20.10 The stockpile of solid sludge waste must be established on an area with an impermeable base, which was previously used for composting purposes.
- 20.11 An area of at least 40 x 50 m must be supplied with adequate drainage with leachate collection and returned to the waste handling system.
- 20.12 The solid sludge stockpile must be covered with tarpaulin during the winter months.
- 20.13 No wastewater may directly enter the stormwater system.
- 20.14 The following buffer areas must be implemented and regarded as no-go areas (as also displayed in the image below):
 - 20.14.1 an area around the irrigation dam of at least 32m;
 - 20.14.2 the area to a depth of approximately 5m from the groundwater aquifer;
 - 20.14.3 an area at a distance from approximately 200m from all existing boreholes;
 - 20.14.4 an area at a distance from approximately 500m away from existing residential dwellings.



- 20.15 Runoff of contaminated water from the existing agricultural fields must be limited and controlled through the use of *inter alia* equipment with dedicated runoff structures.
- 20.16 A Monitoring Programme, which complies with the relevant legislative requirements for Water Quality Monitoring pertaining to borehole water, waste, irrigation dam water, seepage, soils, and screened solids, must be implemented and record keeping must be in place for these aspects. The records relating to the Monitoring Programme must be made available to relevant authorities who request to access/view such information.
- 20.17 The pig housing units must be environmentally controlled to maintain adequate conditions for the pigs.
- 20.18 The pig pens must be located on fully-slatted plastic floor and no bedding (sawdust or shavings) may be used.
- 20.19 The housing units and drainage systems must be cleaned and sanitised on a scheduled basis (i.e. when pigs are moved or when loaded for slaughtering).
- 20.20 Floors must be pressure hosed and disinfected after every production cycle as well as cleaned on a regular basis.

- 20.21 Carcasses must be contained and transported in a trailer specially designed for such task while also adhering to the applicable biosecurity protocols.
 - 20.22 Hazardous biological waste must be stored in appropriate medical waste containers and disposed of as medical waste in accordance with the applicable biosecurity standards.
 - 20.23 Pipes and reservoirs containing slurry must be sealed and maintained to prevent animals from accessing the effluent.
 - 20.24 The facility must be sufficiently ventilated to keep floors and fodder as dry as possible.
 - 20.25 Excess fodder must be cleaned up regularly from under troughs and feed bins.
 - 20.26 Areas surrounding the facility must be kept free of spilled manure and litter.
 - 20.27 Weeds and grass immediately around the facilities must be mowed short, to reduce the prevalence of insects.
 - 20.28 Suitable vector control measures must be implemented to manage the proliferation of flies, pests and rodents.
 - 20.29 Local people from previously disadvantaged backgrounds, must be employed wherever possible / feasible.
 - 20.30 Local contractors and businesses must be used as far as possible.
 - 22.31 Piggery waste that contains elevated concentrations of suspended solids, organic material and nutrients, must be handled adequately by immediate disposal or stabilisation as soon as possible.
 - 20.32 Waste from the pig housing units must be pre-treated (screened) before storage and disposal as fertigation components.
 - 20.33 Any leakage or breakage of equipment used as part of the piggery must be immediately repaired.
 - 20.34 No sludge drying beds must be used.
 - 20.35 No pooling actions may be taken in order to prevent the impacts of malodours and vector attraction.
 - 20.36 Exposed surfaces which forms part of the piggery/facility must be provided with suitable cover during windy periods.
 - 20.37 Stockpiles must be protected from wind erosion.
 - 20.38 Grey water must be used to irrigate the on-site gardens, when possible.
 - 20.39 Water must be supplied through new technology drinking nozzles throughout the piggery facility.
 - 20.40 Energy saving options such as thermostats, energy saving light bulbs and the use of larger fans for cooling must be used.
 - 20.41 No incineration of waste may occur on the site.
21. An integrated waste management approach, which is based on waste minimisation and incorporates reduction, recycling, re-use and disposal, where appropriate, must be employed. Any solid waste must be disposed of at a waste disposal facility licensed in terms of the applicable legislation.
 22. Should any heritage remains be exposed during excavations or any actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape (in accordance with the applicable legislation). Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape. Heritage remains include: archaeological remains (including fossil bones and fossil shells); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artifacts and bone remains; structures and other built features; rock art and rock engravings and graves or unmarked human burials.

A qualified archaeologist must be contracted where necessary (at the expense of the applicant and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority.

23. The requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), must be adhered to.

F. GENERAL MATTERS

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activity.
2. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.
3. If the holder does not commence with the listed activity within the period referred to in Condition 2, this Environmental Authorisation shall lapse for the listed activity, and a new application for Environmental Authorisation must be submitted to the Competent Authority. If the holder wishes to extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be made to the Competent Authority prior to the expiry date of the Environmental Authorisation.
4. The holder must submit an application for amendment of the Environmental Authorisation to the Competent Authority where any detail with respect to the Environmental Authorisation must be amended, added, substituted, corrected, removed or updated. If a new holder is proposed, an application for Amendment in terms of Part 1 of the NEMA EIA Regulations, 2014 (as amended) must be submitted.

Please note that an amendment is not required if there is a change in the contact details of the holder. In this case, the Competent Authority must only be notified of such changes.

5. The manner and frequency for updating the EMPr is as follows:

Amendments to the EMPr must be done in accordance with Regulations 35 to 37 of the NEMA EIA Regulations, 2014 (as amended) or any relevant legislation that may be applicable at the time.

G. APPEALS

Appeals must comply with the provisions contained in the National Appeal Regulations, 2014 (as amended).

1. An appellant (if the holder of the decision) must, within 20 (twenty) calendar days from the date notification of the decision was sent to the holder by the competent authority -
 - 1.1 Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations, 2014 (as amended) to the Appeal Administrator; and
 - 1.2 Submit a copy of the appeal to any registered Interested and Affected Parties, any Organ of State with interest in the matter and the decision-maker *i.e.*, the competent authority that issued the decision.
2. An appellant (if NOT the holder of the decision) must, within 20 (twenty) calendar days from the date the holder of the decision sent notification of the decision to the registered Interested and Affected Parties -
 - 2.1 Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations, 2014 (as amended) to the Appeal Administrator; and
 - 2.2 Submit a copy of the appeal to the holder of the decision, any registered Interested and Affected Party, any Organ of State with interest in the matter and the decision-maker *i.e.*, the competent authority that issued the decision.

3. The holder of the decision (if not the appellant), the decision-maker that issued the decision, the registered Interested and Affected Party and the Organ of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.

4. The appeal and the responding statement must be submitted to the address listed below:

By post: Attention: Marius Venter
Western Cape Ministry of Local Government, Environmental Affairs and
Development Planning
Private Bag X9186
CAPE TOWN
8000

By facsimile: (021) 483 4174; or

By hand: Attention: Mr Marius Venter (Tel: 021 483 3721)
Room 809
8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

Note: For purposes of electronic database management, you are requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to DEADP.Appeals@westerncape.gov.za.

5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from the Appeal Authority at: Tel. (021) 483 3721, E-mail DEADP.Appeals@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

H. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this environmental authorisation shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is appreciated.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

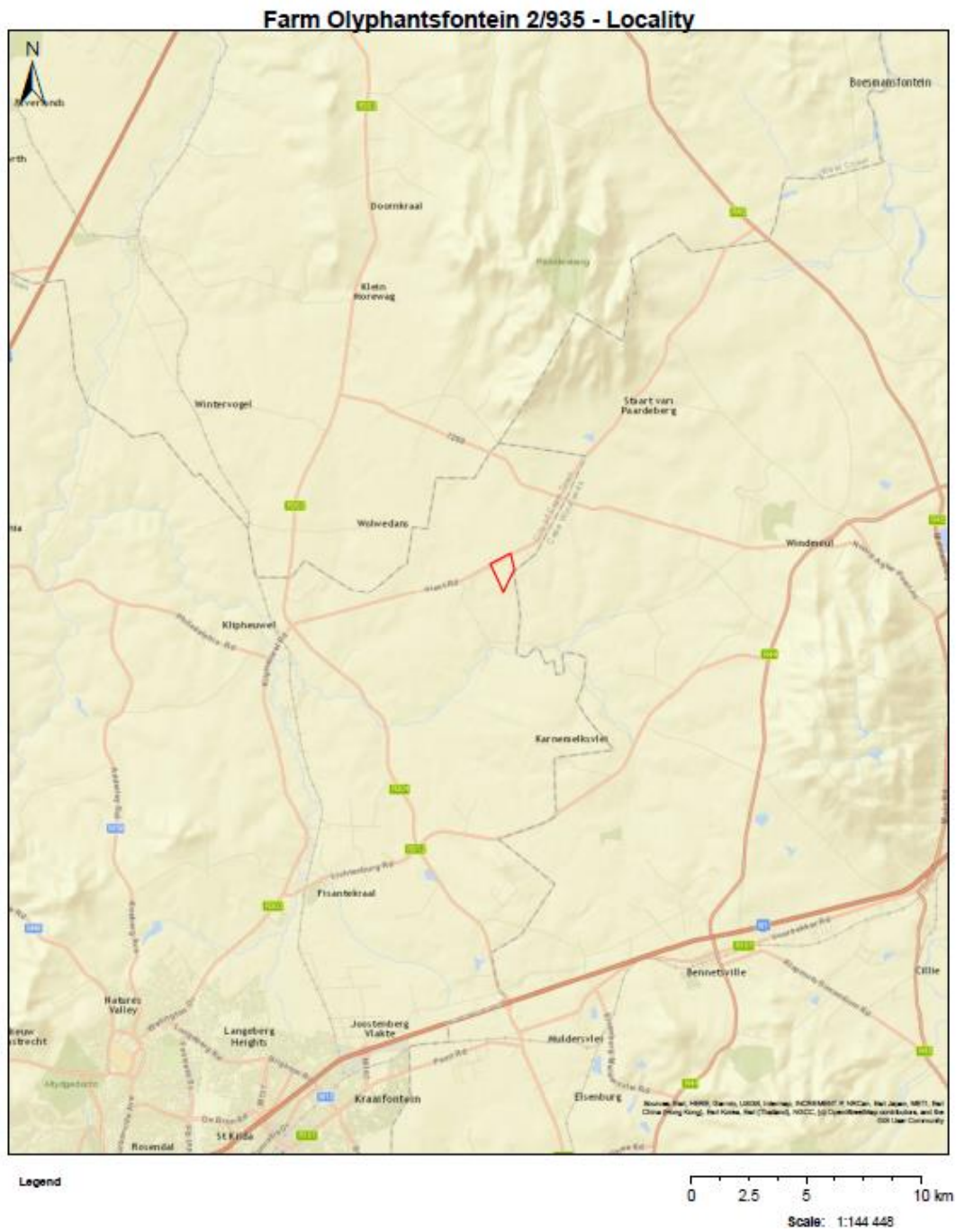
DATE OF DECISION: 21 JANUARY 2022

Copied to: (1) Mr. Pieter de Villiers (Cornerstone Environmental Consultants (Pty) Ltd.) E-mail: pieter@cornerstoneenviro.co.za
(2) Mr. Morne Theron (City of Cape Town) E-mail: morne.theron@capetown.gov.za
(3) Mr. Lance McBain-Charles (DEA&DP: Waste Management) E-mail: Lance.McBain-Charles@westerncape.gov.za

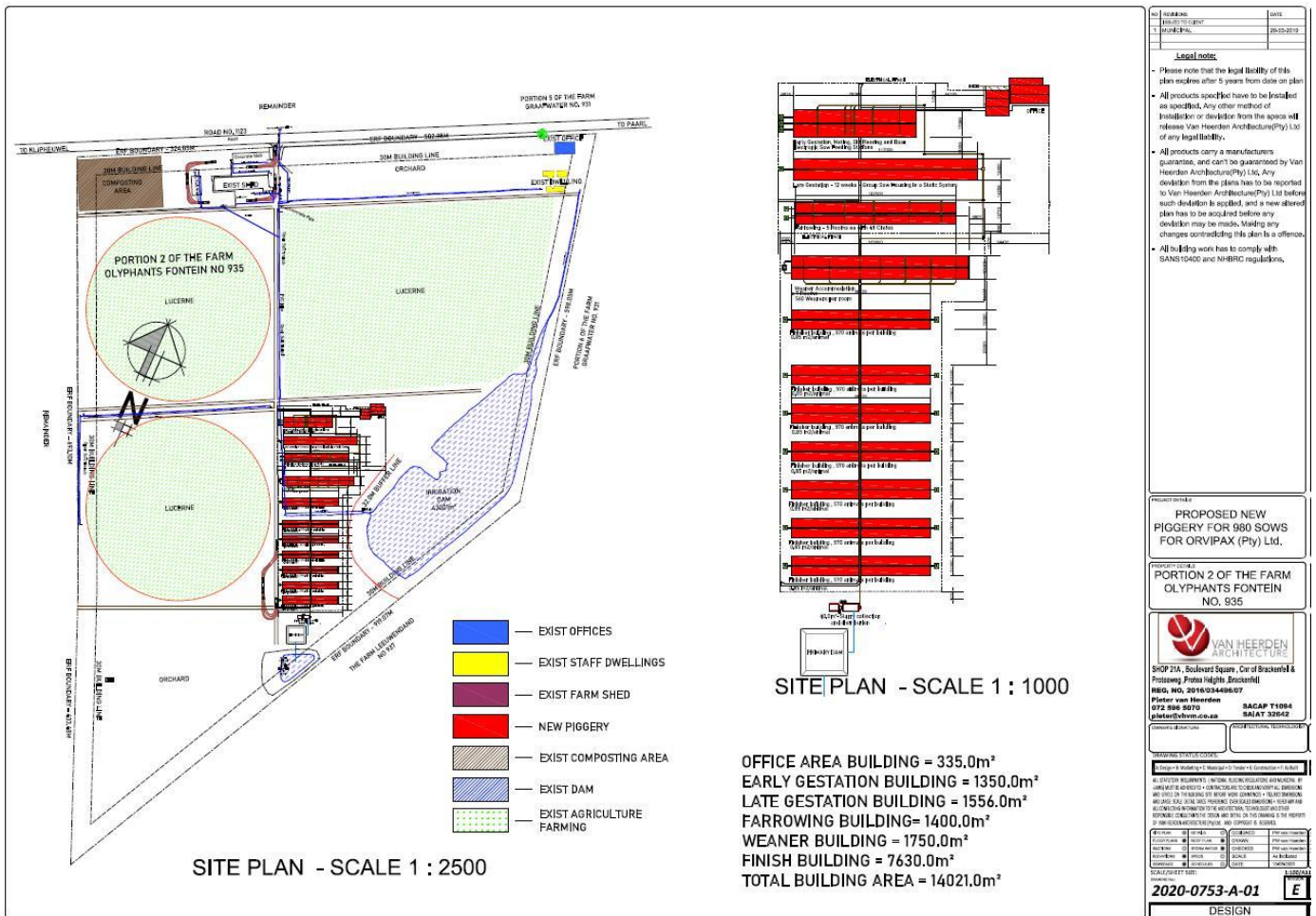
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REFERENCE: 16/3/3/1/A5/88/2037/21
NEAS REFERENCE: WCP/EIA/0000944/2021

ANNEXURE 1: LOCALITY MAP



ANNEXURE 2: THE PREFERRED SITE DEVELOPMENT PLAN



ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the Competent Authority considered, *inter alia*, the following:

- a) The information contained in the Application Form dated 8 July 2021, the Final BAR dated 13 September 2021, the EMPr dated September 2021 and the additional information received on 20 October 2021 and 9 December 2021.
- b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation, Alternatives (dated March 2013);
- c) The objectives and requirements of relevant legislation, policies and guidelines, including Section 2 of the NEMA; and
- d) The comments received from I&APs and responses to these, included in the Final BAR.

All information presented to the Competent Authority was taken into account in the consideration of the application for Environmental Authorisation. A summary of the issues that were considered to be the most significant for the decision is set out below.

1. Public Participation

The public participation process included:

- notifications were sent to I&APs on 6 April 2021;
- a notice was placed on site on 31 March 2021;
- newspaper advertisements were published in the 'Die Burger' and the 'Eikestadnuus' on 1 April 2021;
- the pre-application BAR was made available from 6 April 2021 to 10 May 2021;
- the pre-application BAR and associated information were made available for public viewing at the Paarl Public Library and also on the EAP's website: www.cornerstoneenviro.co.za; and
- the Draft BAR was made available from 12 July 2021 to 12 August 2021.

During the Public Participation Processes comments were obtained from key authorities to indicate the various statutory requirements that the piggery must adhere to. All responses as to how the piggery will meet such requirements were included in the Final BAR.

This Department is satisfied that the Public Participation Process that was followed met the minimum legal requirements.

2. Alternatives

Site Alternative (Preferred by the applicant)

The preferred site alternative is for the proposed piggery to be located on Portion 2 of Farm Olyphantsfontein 935, Klipfontein specifically located within the central part of the Farm just west of the irrigation dam. This site alternative is preferred based on the following reasons:

- the site has existing established infrastructure and boreholes;
- there are established access routes to the property;
- the property is disturbed and totally transformed due to a previous composting facility;
- the farm is surrounded by established agricultural land uses and is not located near residential areas;
- the farm is suitably located near raw product supplies, abattoirs and local markets; and
- existing trees surround the site, which will serve as a natural visual barrier.

Activity Alternative (Preferred by the applicant and herewith authorised)

The preferred activity alternative entails the construction of an approximate 980-sow unit piggery (when in full production) located within the central part of the Farm where composting took place comprising:

- an office building area measuring approximately 335.0m²;
- early gestation building measuring approximately 1 350.0m²;
- late gestation building measuring approximately 1 556.0m²;

- farrowing building with 5 rooms each with 48 crates measuring approximately 1 400.00m²;
- weaner building with 7 rooms each with 560 weaners per room measuring approximately 1 750.0m²;
- seven finishing buildings which can hold 570 animals per building measuring approximately 7 630.0m²;
- an approximate 50 m³ slurry collection and distribution sump;
- an existing dam will be used as a waste storage lagoon/dam for liquid waste. The dam will be lined and enlarged to measure approximately 4 300m³;
- an approximate 6.5m³ concealed septic tank / conservancy facility; and
- associated new and upgraded stormwater infrastructure.

The pig houses will not exceed 4m in height.

The total output from the piggery will be approximately 5 500 pigs per year.

The facility will be implemented in a modular and phased manner, depending on markets and economical outcomes.

Existing access roads will be used.

Existing electrical connections will be used.

Water for the piggery operations will be abstracted from existing boreholes.

The facility will be fenced and access controlled.

The total development footprint will amount to approximately 4.5 ha.

Waste will be managed as biodegradable industrial waste / biosolids and be used as land as a fertilizer and stockpiled screened solids will be used off site as soil conditioner / composting starter agent.

This is the only preferred activity alternative, as the applicant has opted to use the site for the specific purpose of the proposed piggery due to the suitable location, the employment opportunities it will create and helping to meet the demand for pork and related products.

In terms of waste management, the specific options, as mentioned above were preferred whereby value will be added to waste byproducts in a sustainable manner.

Design or Layout Alternative (Preferred by the applicant)

The preferred design or layout alternative entails the construction of twelve buildings parallel to one another, in the south-eastern quarter of the property. The twelve buildings are as follows:

- an office building area measuring approximately 335.0m²;
- early gestation building measuring approximately 1 350.0m²;
- late gestation building measuring approximately 1 556.0m²;
- farrowing building with 5 rooms each with 48 crates measuring approximately 1 400.00m²;
- weaner building with 7 rooms each with 560 weaners per room measuring approximately 1 750.0m²; and
- seven finishing buildings which can hold 570 animals per building measuring approximately 7 630.0m².

Additional components include the construction of:

- slurry collection and distribution tanks, with a capacity of approximately 50m³ constructed on the southern end of the piggery; and
- an existing dam to be lined and enlarged to measure approximately 4300m³.

This is the preferred layout alternative based on the following reasons:

- the layout and design of the proposed piggery was informed by the infrastructure available on the farm;

- the particular layout was necessary to avoid impacting the already established cultivated areas; and
- the layout aims to ensure minimal impact on the environment, as the piggery will be constructed on the previously disturbed and totally transformed footprint of the composting facility.

Technology Alternatives:

The technologies to be used for the piggery will be based on the standards required for intensive pig farming. Carcass disposal and waste treatment technology alternatives were investigated in the BAR.

Carcass Disposal Alternative: Composting / Crocodile Feed (preferred by the applicant)

This alternative entails the removal of non-condemned mortalities/carcasses to be disposed of at a licenced Waste Management Facility, or alternatively be taken to a facility for crocodile feed. The carcasses will be contained and transported in a trailer specially designed for such purposes.

This alternative is preferred as taking the mortalities to the crocodile farm encourages sustainable resource management by which the crocodile farm will benefit from receiving crocodile feed.

Carcass disposal Alternative: Deep burial (rejected by the applicant)

This alternative entails the use of deep burial (three to five metres deep) and depositing the carcasses into the excavated area and covering the carcasses with the removed soil so that carcasses undergo anaerobic decomposition.

This alternative is rejected based on the following reasons:

- the decomposing process is slow; and
- leachate will slowly penetrate the soil beneath the burial site and may pollute groundwater.

Carcass disposal Alternative: Burning (rejected by the applicant)

This alternative entails constructing a bed of combustible materials and placing the carcasses on the bed, adding more combustible material over the carcasses and igniting the pile.

This alternative is rejected as burning may lead to potential negative impacts on human health and the environment.

Waste Treatment Alternative: Fertigation agent (preferred by the applicant)

This preferred technology alternative entails the screening of waste from the housing units before applied as a fertigation component. Odour abatement measures (aeration and H₂S scavenging) will also be implemented.

This alternative is deemed as preferred as the nutrient content in piggery waste will make it ideal to be used as fertigation. The use of the biosolids waste will also eliminate the need for inorganic fertilizers and thereby save costs.

Waste treatment and disposal Alternative: Anaerobic treatment (rejected by the applicant)

This alternative entails the treatment of piggery waste in anaerobic ponds.

This alternative is rejected based on the following reasons:

- ponds will require large footprints of approximately 1ha;
- greater capital costs and skills during the operational phases;
- additional impacts will include odours and ammonia toxicity; and
- the statutory requirement for final effluent quality for disposal will not be achieved.

Waste treatment and disposal Alternative: Activated sludge treatment (rejected by the applicant)

This alternative entails treating piggery waste in an activated sludge treatment system.

This alternative is rejected based on the following reasons:

- high capital and energy needs;
- large amounts of sludge would be generated that needs to be dewatered and processed;

- nutrients will be lost that could otherwise have been used; and
- high-level skilled operators will be required.

Waste treatment and disposal Alternative: Liquid fertiliser in raw form (rejected by the applicant)
This alternative entails the use of waste a liquid fertiliser in its raw form.

This alternative is rejected based on the following reasons:

- the waste in its raw form comprise 98 % liquid and transportation will become costly;
- raw waste will need to be concentrated or evaporated to reduce the volume; and
- additional nuisance related impacts, including odours might be generated.

Technology Alternative: Data sensors (rejected by the applicant)

This alternative entails the use of sensors which will track animals and monitor health in real time.

Sensors will alert farmers to house ammonia levels, dust, humidity and temperature, illness concerns, heat cycles, food and water intake and anything that is critical to productivity.

This alternative is rejected due to the high costs to fit the pigs with wearable sensors to track their health.

Technology Alternative: Robotics (rejected by the applicant)

This alternative entails the use of robotic cleaning facilities to improve conditions and address environmental and societal concerns such as reducing odour, emissions and animal welfare and improve sanitation.

This alternative is rejected as robotic cleaning facilities would reduce the possible employment opportunities associated with the piggery.

Technology Alternative: Natural barriers (rejected by the applicant)

This alternative entails the use of planted windbreaks to prevent odours from traveling offsite.

The alternative is rejected as similar windbreaks already exist on the site.

Technology Alternative: Precision feeding (preferred by the applicant)

This alternative entails the use of feeding techniques that allow the proper amount of feed with the suitable composition to be supplied in a timely manner to a group of pigs.

The technology alternative is preferred as managing feeds will make it possible to identify diseases early and apply individual treatments precisely to improve herd performance and reduce antibiotic use.

Diseased Carcass Disposal Alternative: Above-ground burial (preferred by the applicant)

This preferred technology alternative entails the use of a shallow trench excavated into the soil to a depth of approximately 60cm. Thirty cm of carbonaceous material is placed at the bottom of the trench, followed by a single layer of animal carcasses. Excavated soils are subsequently placed back in the trench, forming a mound on which the vegetative cap is established.

The perimeter of the mound is trenched to prevent the intrusion of surface water into the system. Once the carcasses have decomposed, the disposal site is levelled and returned to its previous use.

The alternative is preferred as it is expected to have a lower risk than deep burial, due to the increased separation of the carcasses from the groundwater table.

Technology Alternatives: water saving options

The technologies to be used for the piggery will be based on implementing water saving technologies such drinking nozzles to be installed throughout the piggery.

This option is preferred as it estimated that 30% of water will be saved.

Technology Alternatives: energy saving options

The technologies to be used for the piggery will be based energy saving options such as, the installation of thermostats (as opposed to heat lamps), energy saving light bulbs and the use of larger fans (as opposed to small fans) as a method of cooling.

The abovementioned options are preferred as energy cost and demands will be reduced.

Operational Alternative: (preferred by the applicant)

The preferred operational alternative entails the use of an operating plan for the proposed piggery which was informed by extensive market research and an assessment of the need of the products that will be produced.

This is the preferred alternative as the piggery will contribute towards food security and nutrition options aimed at affordable prices.

No-go alternative (rejected by the applicant):

The no-go alternative entails no construction of the piggery, which is rejected as it will result in a loss to increase profit and pork production.

The No-go alternative will also mean that the opportunity to improve the local socio-economic situation through temporary and permanent employment creation will be lost.

3. Impact Assessment and Mitigation measures

3.1 Activity need and desirability

The proposed piggery is required to improve the site's economic viability and its existing agricultural activities through intensification, diversification and value adding. The farm is also suitably located near existing raw product supplies, abattoirs and markets in the area.

In order to determine the fertilizer requirements of the soil for the preferred crop (lucerne) and soil suitability for the proposed use of piggery wastewater for lucerne cultivation, a Soil Fertility Assessment dated 12 October 2020 was also conducted. According to the Soil Fertility Assessment study, the sampled areas on the site have adequate nutrient concentrations to sustain the cultivation of lucerne at sustainable yields. It was also determined that wastewater from the piggery can be used beneficially for crop production, without having significant negative impacts on soil quality.

3.2 The Regional/Planning Context

The site is zoned Agriculture and the proposed piggery does not require a rezoning application. All other planning related application(s) must be submitted to the local municipality in order to fully permit the proposed piggery.

The site was previously used as a composting facility, which was decommissioned. As such, the site is transformed and does not contain any indigenous vegetation. The proposed development aims to increase the viability of agriculture in suitable areas, which is consistent with the objectives in terms of the Western Cape Provincial Spatial Development Framework, 2014 and the City of Cape Town Spatial Development Framework, 2018. The City of Cape Town Northern District Plan and Environmental Management Framework in this regard specifically requires that high potential agricultural areas be preserved and utilised for agricultural purposes.

The proposed development is therefore consistent with the relevant planning policies applicable to the area.

3.3 Biophysical Impacts

The property is a brownfield site and mainly consists of existing agricultural fields, two dams, a storeroom area, a housing area and an office area. The larger areas on the farm were previously used for the cultivation of vineyards. There is no undisturbed indigenous vegetation remaining on this property and the farm is an active agricultural unit. The proposed piggery will be situated on the already disturbed footprint of the old composting area. As such, no direct negative impacts on indigenous vegetation are expected.

The nearest watercourse is located approximately 380m to the west of the proposed piggery site. No wetlands were identified within 500 m from the piggery infrastructure. The piggery will be located more than 32m from the existing irrigation dam on the property, which has a spillway into the stream. The stream is located on an adjacent property at approximately 230m to the east of the piggery. As such, no direct negative impacts on watercourses are expected.

Since the piggery will be situated on old composting area, the conditions of the area were assessed in terms of the Site Assessment Report dated 15 July 2020. It was determined that the substances present in the soil, as result of the composting activities presents no immediate risk to human health or the environment.

3.4 Groundwater Impacts

According to the Site Assessment Report dated 15 July 2020, the groundwater quality is within SANS 241:2015 drinking water standards, indicating that constituents of concern in the soil did not negatively impact the groundwater.

The groundwater table is deep, which will reduce the likelihood of on-site irrigation negatively impacting the groundwater quality.

A clay layer beneath the site is expected to also protect groundwater from potential contamination. In order to further reduce any negative impacts on groundwater, monitoring boreholes and a seepage trench must be installed at the lowest part of the farm, while seepage water collected will be collected in a manhole and tested so that the appropriate action can be taken, if so required. Further measures must also be implemented to help mitigate any groundwater and soil pollution to be of low negative significance. These were made part of the provisions of the EMPr and include measures such as *inter alia*, appropriately lining the waste storage dam, stockpiling the sludge on an impermeable base and preventing wastewater from entering the stormwater system. Low to negligible negative groundwater impacts are therefore expected. Groundwater monitoring will also be required to further avoid having any significant negative groundwater related impacts. In view of the abovementioned conditions of the site and the proposed mitigation measures, it was determined in the Final BAR that no direct negative impacts on the underlying aquifer are expected.

3.5 Visual/Sense of place

The proposed piggery will be consistent with the surrounding landuses. Existing tree rows around the farm will also be retained which will act as a visual barrier and help to screen the piggery. The visual impacts are therefore expected to be of a very low negative significance.

3.6 Heritage

The site has been disturbed by a composting facility and it is highly unlikely that any heritage resources are present. Heritage Western Cape indicated in its correspondence dated 19 August 2021 that there is no reason to believe that the proposed piggery will impact on heritage resources and that no further action under Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) is required.

3.7 Waste Management

Waste will be managed as biodegradable industrial waste/ biosolids through provisions in the relevant Department of Water and Sanitation Sludge Guidelines. Due to the nutrient content in piggery waste, the piggery waste will be used as fertiliser for lucerne through a controlled irrigation system, whereafter the lucerne will be taken off site.

The screened solids will be stockpiled on an area with an impermeable base and used off site as soil conditioner / composting starter agent.

All non-condemned mortalities/carcasses will be removed off site and will be disposed of at a licenced Waste Management Facility for disposal or other alternative means. The carcasses will be contained and transported in a specially designed trailer. On 17 August 2021 the City of Cape Town confirmed that capacity exist to receive non-infectious carcasses. On 17 August 2021 a

private facility confirmed that it will be able to receive carcasses for purposes of crocodile feeding.

Piggery waste will be managed as biodegradable industrial waste / biosolids through the applicable provisions, such as Sludge Guidelines (DWAF 2006).

Diseased carcasses/mortalities will not be removed off-site but will be disposed of by means of aboveground on-site burial space, which is in line with the South African Pork Producers' Organisation's ("SAPPO") Biosecurity Guidelines and protocols. However, if there is a disease outbreak, the farm manager will be required to contact epidemiologists or veterinarians to select the most appropriate disposal method for the specific disease agent and the geographic location.

The pens where the pigs are housed will be located on fully-slatted plastic floors from where waste will fall through slats and collected in an underground drainage system. The associated liquid waste, after screening will flow into the newly expanded lined dam. Sub surface drainage structures will be monitored to detect any leakage that might occur and thereby avoiding the associated impacts of leakages, as far as possible.

The newly enlarged dam will be used as a waste storage lagoon / dam for the liquid waste. It will also be suitably engineered and lined with a suitable liner to prevent any seepage to groundwater sources. The pH of the water in the dam will be kept in the range where the hydrogen sulphate is not in the odorous sulphide format.

The housing units and drainage systems will be cleaned and sanitised on a scheduled basis and floors will be pressure hosed and disinfected after every production cycle. This will reduce any potential nuisance related impacts. Litter, bedding, feed and feeding stuffs, hay and straw contaminated by diseased animals will be appropriately disposed of through composting, burial and/or burning in order to avoid any disease outbreaks.

General waste will be removed on a regular basis by a third-party waste contractor and disposed at an authorised waste facility(ies).

Biological waste (hazardous waste) will be stored in appropriate medical waste containers and disposed of as medical waste in accordance with strict biosecurity standards.

Domestic waste generated by the ablution facility, will be captured in an approximate 6.5m³ concealed septic tank / conservancy facility, which will be periodically emptied by the municipality and appropriately disposed of.

Environmental contamination from bedding, feed, carcasses and the abovementioned operational waste management options were assessed to be of medium negative significance, post mitigation. These mitigation measures were included in the EMP and include *inter alia*, ensuring that staff receive training on correct waste management practices, appropriately disposing of carcasses and adhering to the necessary biosecurity and hazardous waste management measures.

3.8 Services

Water for the piggery operations will be abstracted from existing boreholes, which will be within the authorised limits for the said property. A Water Use License is also required and was applied for in terms of the National Water Act, 1998 (Act No. 36 of 1998). Water will also be required for domestic use and as part of the biosecurity measures. Grey water will also be used to irrigate the on-site gardens, where possible.

A stormwater management plan will be submitted to the local authority for approval and will be implemented. The stormwater management plan will focus on *inter alia*, preventing wastewater from entering the stormwater system and the use of swales and overflow channels to accommodate flooding events.

Sewage will be disposed of via a septic tank and soakaway system / conservancy system.

There are existing access roads over the farm and an existing Eskom electrical connection.

3.9 Traffic

Traffic impacts are expected to be very low to negligible, as traffic to be generated by the piggery will be limited to pig feed that will be purchased once a week, and during full operation, when pigs will be transported to the abattoir twice per week.

3.10 Nuisance

Odor emissions can be expected in the immediate vicinity of the proposed piggery. This impact is expected to be of low negative significance on the immediate environment due to the remote location of the piggery and the immediate surrounds mainly comprising other existing agricultural activities.

Production will take place in modernised pig housing units that are climate controlled, which will help to mitigate odours, while the newly expanded dam will have a surface aerator and an odour scavenger dosed to eliminate odours that might arise. An Odour Management Plan also forms part of the EMP, which contains provisions to further mitigate nuisance impacts relating to odours. These measures will help to ensure that odour impacts will be of low negative significance.

Construction noise will be experienced during the construction phase. This impact will be negligible due to the site location not being within close proximity to residential areas and other sensitive receptors.

3.11 Socio-economic

The proposed development will result in positive socio-economic impacts including the creation of employment opportunities and increasing the economic viability of the site in terms of its agricultural landuse activities.

The development will result in both negative and positive impacts.

Negative Impacts:

- Risks associated with potential groundwater contamination and pollution.
- Odour impacts.

Positive impacts:

- Provision of employment opportunities during construction and the operational phases.
- Diversification and intensification of the agricultural offerings of the site as an active agricultural unit.
- Contribution to the local economy.

4. National Environmental Management Act Principles

The National Environmental Management Principles (set out in section 2 of the NEMA, which apply to the actions of all organs of state, serve as guidelines by reference to which any organ of state must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- the effects of decisions on all aspects of the environment to be taken into account;
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activity(s) (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between organs of state through conflict resolution procedures; and
- the selection of the best practicable environmental option.

5. Conclusion

In view of the above, the NEMA principles, compliance with the conditions stipulated in this Environmental Authorisation, and compliance with the EMPr, the Competent Authority is satisfied that the listed activity will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the listed activity can be mitigated to acceptable levels.

You are reminded of your general duty of care towards the environment in terms of Section 28(1) of the NEMA which states: *“Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment.”*

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