

## EXECUTIVE SUMMARY

### INTRODUCTION

The project applicant, Die Boeram Venter Trust, proposes the construction and operation of a poultry breeder facility on a portion of Portion 6, 10 and 40 of Farm T'Zoetgeneugd 192 (referred to hereinafter as Middledrift), in the Sundays River Valley Municipality. The facility is proposed to consist of six (6) fully enclosed houses within two (2) separately fenced-in operational areas, as well as associated infrastructure, and will have the capacity to stock 58 740 chickens. In addition, an existing irrigation water storage dam measuring 13 670m<sup>2</sup> in extent and with a current storage capacity of 19 600m<sup>3</sup> is proposed to be expanded in order to ensure a secure water supply for the proposed poultry breeder facility, as well as the future agricultural activities on the remainder of the farm. The expanded dam is proposed to have a footprint of 39 035m<sup>2</sup> and a capacity to store 94 698m<sup>3</sup> of irrigation water.

The farm Middledrift, measuring ~204ha in combined extent, is zoned Agriculture I and the majority thereof is planted with pastures (lucerne/ kikuyu), as the farm is currently being operated as a dairy farm. The proposed poultry breeder facility and associated infrastructure including the proposed dam expansion is proposed to occur within the existing pastures. The total proposed development footprint, including associated infrastructure, is anticipated to be ~24ha. The majority of the remaining portions of the farm, which are not proposed for development and are currently planted with pastures, will, in future, be replaced with citrus orchards. However, this component of the project does not trigger any listed activities in terms of the NEMA EIA Regulations 2014 (as amended), therefore, the project activities and assessment of impacts in this report is primarily focused on the listed activities which require Environmental Authorisation.

Middledrift is surrounded by farms that are engaged in various agricultural activities. It is located outside of the urban edge of Addo/ Nomathamsanqa, ~4km northeast of the farm. It is anticipated that the affected portion of the farm to be occupied by the proposed poultry breeder facility, will require Special Consent zoning.

Middledrift is currently accessed by turning off the tarred MR00450 (R335) road onto the gravel MN50595 road and continuing for a distance of ~2.7km, before turning right onto a private, 4m wide gravel road, situated along the southern boundary of Portion 6. The nearest boundary of the Addo Elephant National Park is located ~6km east of the proposed development area.

In terms of the NEMA EIA Regulations 2014 (as amended), published in GN R326, 327, 325 and 324, promulgated under Chapter Five of the National Environmental Management Act (Act 107 of 1998) (NEMAA), and published in Government Gazette 40772 on the 7 April 2017, the project requires a Basic Assessment (BA), because it triggers the following listed activity, in Listing Notice 1 (GN R327):

*"5. The development and related operation of facilities or infrastructure for the concentration of—  
(ii) more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days;  
(iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area"*

Public Process Consultants has been appointed by the applicant as the independent Environmental Assessment Practitioners (EAP) to undertake the Basic Assessment, including Public Participation for the project.

### SITE OVERVIEW

At present, the farm Middledrift is being utilized as a dairy farm by the current landowner. Thus, the majority of the farm is planted with pastures (lucerne/ kikuyu). The proposed poultry breeder facility and associated infrastructure, including the proposed dam expansion is proposed to occur within the existing pastures. A services area including offices, sheds, milking sheds and workshops are located in the north eastern corner of the farm. Adjacent to the southern boundary, in the vicinity of the dam proposed for expansion are five (5) staff houses, as well as a workshop/ storage shed.

There are two irrigation water storage dams in the southern portion of the farm. The most eastern dam (14 450m<sup>3</sup>/ 10 140m<sup>2</sup>), adjacent to the southern boundary is proposed to be demolished. This will include the removal of the associated irrigation infrastructure (inlet and outlet pipelines), as well as the pumphouse. The second dam (19 600m<sup>3</sup>/ 13 670m<sup>2</sup>), located towards the centre of the southern portion of the farm is proposed for expansion in order to ensure a secure water supply for the proposed poultry facility, as well as the future agricultural activities on the remainder of the farm.

All of the existing structures, for example houses, sheds, offices etc. are proposed to be utilised to support the new proposed poultry breeder facility, as well as future agricultural activities on the remainder of the farm.

The Sundays River is located adjacent to the northern and westernmost boundary of the farm. A ~20m buffer of natural vegetation has been retained between the existing pastures and the river bank. The proposed development will be located ~300m from the river at its nearest point.

## PROJECT DETAIL

Breeder farms are primarily for the production of fertilised eggs over a 60-week period, with an additional 6 weeks required for cleanout, disinfection and maintenance, thus a 66-week cycle. This assessment is being undertaken based on a worst-case scenario, assuming all in and all out for the entire farm.

Construction of the proposed breeder facility will entail the following components:

- 6 x roofed and fully enclosed breeder houses, measuring 120m x 16m (1 920m<sup>2</sup>) each.
- 6 x egg collection rooms.
- 1 x incubator room.
- 2 x mortality freezer rooms.
- 1 x centralised boiler room for the piping of heat to each of the six (6) houses, including a coal store.
- 3 x employees' houses.
- 2 x shower rooms and wash areas.
- 1 x generator room.
- 1 x tool shed.

In addition, and in order to ensure that the associated services (access, water, stormwater, effluent) are effectively provided and managed, the facility is proposed to include the following components:

- Expansion of the existing irrigation water storage dam.
- Expansion and formalisation of existing access.
- Widening of private gravel road.
- Installation of water reticulation system for the six (6) breeder houses, as well as for domestic consumption (3 x employees' houses) and associated on-site water treatment facility.
- Installation of foul sewer system, including conservancy tanks for the 3 x residential dwellings, as well as 2 x shower rooms.
- Construction of the internal road network.
- Installation of stormwater management infrastructure including pipes, canals and a stormwater detention pond.

The applicant also proposes to demolish an existing dam located in the south eastern corner of the farm. While this isn't directly linked to the primary activity (i.e. poultry breeder facility), it is connected to the future agricultural activities on the remainder of the farm and triggers listed activities. It is thus being included in this assessment process.

The Final Basic Assessment Report (FBAR) provides more detail on the proposed project components which are indicated in the Facility Illustration Drawing attached as Appendix C to the Report.

## PROPOSED ACTIVITIES

### Construction Phase

It is anticipated that the proposed construction phase of the project will entail the following activities on the site:

- Demarcation of the development footprint and equipment laydown area.
- Clearing of vegetation from the development footprints, including removal of existing pastures.
- Fencing in the site.
- Stockpiling of equipment and construction material.
- Site excavation and levelling.
- Construction of the proposed poultry breeder house facility and associated infrastructure including:
  - Expansion and formalisation of existing access.
  - Widening of private gravel road.
  - New internal road network.
  - Water storage and reticulation infrastructure.
  - Effluent management infrastructure.
  - Stormwater management infrastructure.
  - Construction of employees' houses.
- Expansion of an existing irrigation water storage dam.
- Demolition of an existing irrigation water storage dam.
- Rehabilitation of disturbed areas on the site.

### Roads and Access

Access to the existing farm portions is currently obtained via a private 4m wide access road onto the gravel minor road MN50595, ~2.7km south of MR00450 (R335). MN50595 intersects with MR00450, ~200m east of the Sundays River. It is proposed to upgrade the access road (indicated on Map 5 below) to 7m in width to accommodate truck traffic for delivery and collection of chicks, feed, and collection of fertilised eggs, as well as manure. Shoulder sight distance (SSD) from the existing access road onto MN50595 to both

the north and south are in excess of the minimum requirements. The internal road network will comprise of roads varying in width between 4m and 8m, widened at corners to accommodate truck turn paths (~30m). For more information regarding potential traffic related impacts see the Traffic Impact Assessment attached as Appendix D(v) of the Report.

### Expansion of an Existing Irrigation Water Storage Dam

An existing irrigation water storage dam measuring 13 670m<sup>2</sup> in extent and with a current storage capacity of 19 600m<sup>3</sup> is proposed to be expanded in order to ensure a secure water supply for the proposed poultry breeder facility, as well as the future agricultural activities on the remainder of the farm. The expanded dam is proposed to have a footprint of 39 035m<sup>2</sup> and a capacity to store 94 698m<sup>3</sup> of irrigation water.

It is anticipated that the following construction phase activities will be associated with the expansion of the dam:

- Existing dam will be emptied of water prior to demolition.
- Existing dam walls will be demolished and rebuilt during the proposed expansion by earth-moving machinery.
- Excavation of topsoil will be achieved with the aid of earth moving machinery and is proposed to be stockpiled temporarily, while the dam construction and shaping (cutting) is undertaken.
- Compaction of a 200mm layer of clay along the bottom of the new dam, to maintain impermeability.
- Excavated topsoil to be used in the construction of the dam wall and indigenous vegetation, to rehabilitate the proposed new dam walls in order to manage potential erosion.
- Installation of an outlet irrigation pipeline with an internal diameter of ~75mm, including the removal of topsoil, temporary stockpiling thereof and reinstatement of the soil after installation of the pipe. It is anticipated that an installation corridor of ~1m will be required.

Irrigation water from the LSRWUA canal system is proposed to be reticulated into the expanded dam via an existing concrete canal, which will continue to be utilised for this purpose.

### Demolition of an Existing Irrigation Water Storage Dam

An existing dam measuring 10 140m<sup>2</sup> and having a capacity of 16 450m<sup>3</sup>, located in the south eastern corner of the farm is proposed to be demolished. It is anticipated that the following construction phase activities will be associated with the demolition of the dam:

- Existing dam will be emptied of water prior to demolition.
- Existing dam walls will be demolished by earth-moving machinery.
- Existing pumphouse and associated infrastructure will be removed.
- The dam site will be levelled.
- Rehabilitation of the disturbed area.
- In the future this portion of the farm is likely to be planted with citrus orchards.

### Operational Phase

Once the necessary infrastructure has been constructed, the poultry breeder facility will commence operations. The facility is proposed to consist of six (6) fully enclosed houses within two (2) separately fenced-in operational areas (3 x houses per area) and will have the capacity to be stocked with 58 740 chickens. The standard 66-week breeder model will apply to the proposed facility. A brief summary of the cycle is outlined below:

WEEK	OPERATION
0 - 30	Delivery of feed to silos.
	Delivery of day-old chicks into the facility (maximum of 58 740).
	Removal of mortalities bi-weekly. Temporary storage in mortality freezer rooms for weekly disposal.
31 – 60	Collection of eggs produced, transported to Sovereign Foods hatchery.
	Removal of mortalities bi-weekly. Temporary storage in mortality freezer rooms for weekly disposal.
60	End of cycle. Chickens are collected and sold to registered cull buyers or sent to Sovereign Foods rendering facility.
61 - 66	Removal of mortalities bi-weekly. Temporary storage in mortality freezer rooms for weekly disposal.
	Removal of manure to registered composting facility.
	House disinfection.
	Maintenance activities.

A typical breeder house is a totally enclosed and environmentally controlled facility, making use of a computer-controlled ventilation system. The ongoing maintenance of this system is directly linked to the health and survival of the flock, as well as having indirect environmental and other benefits. It is vital that the correct temperature, humidity and air quality level be maintained within the house at all times. However, the specific environment varies for the age of the chicks. Being a computer-controlled system, any breakdown within the system triggers remote alarms, thus ensuring a prompt response and intervention.

## Associated Infrastructure Requirements

### Stormwater Management

A design perspective to avoid flooding of the proposed poultry breeder houses, employees' housing and operational structures on the site, as well as the areas adjacent to the northern boundary of the site, has been adopted as a priority.

Considering the topography on and near the site, as well as the proposed site layout, the catchment area which will drain to the detention pond is ~20ha. Due to the fact that the six (6) breeder houses will be fully roofed and enclosed to floor level, with a concrete floor and a 600mm high concrete stub wall (except for the door openings at the gable ends), the chances are virtually nil that the litter of the breeder houses could end up in an uncontrolled manner in the stormwater system during or after rain storms. The stormwater overland run-off from each breeder house will be diverted by an open channel and piped stormwater system to flow around and/ or away from the respective breeder houses (Refer to Map 4 in the Report).

In an attempt to address the post-development stormwater drainage in a responsible way, including adherence to the accepted objectives, the following preliminary design proposals are recommended:

- Subject to the detailed design of earthworks, roads and stormwater system, the upgraded internal roads to the site will be designed to not act as shallow stormwater channels but will accommodate the natural flow of stormwater, as far as practically possible.
- The operational access ways on the site will also not act as shallow stormwater channels. The access ways will be designed to accommodate the distributed overland sheet flow, which will be intercepted by the open channel stormwater system.
- The overland run-off will be intercepted adjacent to the up-stream side of each breeder house, to prevent flooding of the building and will be channelled down-stream to the stormwater detention pond.
- The intercepted stormwater will mainly be conveyed via pipes near or under the proposed internal roads. In accordance with our design calculations, the pipe diameters will vary from 300mm up to 600mm, and the total length of the piped stormwater system will exceed 1000m.
- The stormwater detention pond shall be designed to intercept the overland run-off as well as piped stormwater from the breeder house development to retain post-development major design storm inflows up to 1 in 100-year recurrence interval and shall release a design outflow associated with a pre-development 1 in 5-year rain storm.
- In accordance with our preliminary calculations, the stormwater detention pond will have an effective storage capacity of 6 360m<sup>3</sup> and a footprint of 3 112m<sup>2</sup>.
- The stormwater detention pond will be designed to function as a "dry" detention pond after the release of the intercepted stormwater.
- The intercepted stormwater from the stormwater detention pond will be released to the existing stormwater run-off route via 2 x 450mm diameter piped outlets, with adequate erosion protection.
- The disturbed area of the stormwater detention pond will be vegetated with an indigenous drought-resistant ground cover to limit possible erosion, as specified by a specialist. As confirmed with Nico Venter on 6 February 2019, the natural watercourse directly north of the stormwater pond outlets will be vegetated with kikuyu to also serve as pastures for livestock.
- The gradient of constructed embankments to the main internal stormwater system and stormwater detention pond will as far as practically possible, not be steeper than 1 in 3, to accommodate the establishment of vegetation and soil stability under wet conditions.
- The inlet and outlets to the piped portions of the stormwater system on the site will be done with non-rigid geo-textile lined gabion structures, complete with Reno mattress erosion protection.
- It is further recommended to establish indigenous drought-resistant ground cover to the stormwater outlet areas, the disturbed cut and fill areas and the verges of the constructed road areas to limit the transport of sediment in these affected areas by water or wind.

### Water Supply System

Currently, water is provided for irrigation purposes from the Lower Sundays River Water User Association (LSRWUA) to the existing irrigation water storage dam, Dam A (storage capacity of 19 600m<sup>3</sup>), located on Portion 10, near the south-eastern corner of the site. The farm has been allocated water use entitlements of 193.6ha of water. Water entitlements from the LSRWUA provide for 900mm/ha/yr (9000m<sup>3</sup>/ha/yr). This equates to 1 742 400m<sup>3</sup> per year and on average 4 773.7m<sup>3</sup> per day. See Sales Agreements for Portions 6, 10 and 40 of Farm 192 T'Zoetgeneugd attached in Appendix G(viii) of the Report indicating the Water Use Entitlements assigned to the respective properties.

Mr JG Le Roux, Group Agri Manager for Sovereign Foods, whom the applicant proposes to supply, has confirmed that the **average water usage for the six (6) chicken breeder houses is anticipated to be 50m<sup>3</sup>/day.**

Given the afore-mentioned data, it is reasonable to assume and base the design calculations for the six (6) proposed breeder houses, and the 4 x employee houses, on an **Annual Average Daily Demand (AADD) of 55kl/day (55m<sup>3</sup>/day) and the maximum daily demand on 67kl/day (67m<sup>3</sup>/day).**

In order to accommodate the afore-mentioned demands, including the normal quota of irrigation water for Portions 6, 10, and 40, Mr. N. Venter (the applicant) intends to expand the existing irrigation water storage dam. The size of the pipe from the dam to the treatment plant measures 75mm in diameter.

**The annual water demand** for the breeder house development in its entirety, has been calculated to be **20 075m<sup>3</sup>**. In accordance with our preliminary calculations, the Instantaneous Peak Operational Demand of 5.63L/s and the Fire Demand of 25L/s, equals 30.63L/s.

Subject to the re-registration for a change in water usage and approval by the LSRWUA, the Applicant will be allowed to use a portion of the water entitlements for domestic and operational purposes. In accordance with the afore-mentioned calculations, there will be sufficient water available to serve the proposed breeder house development in its entirety. The annual demand of 20 075m<sup>3</sup> is less than 1.15% of the normal water quota for Portions 6, 10 and 40 (193.6ha scheduled water).

In order to limit the dependency of domestic demand on the water supply from the LSRWUA, it is recommended that a rain water storage tank (minimum capacity of 5 000L) be connected to each habitable unit (3 x employees houses).

The Applicant will be required to treat the raw irrigation water to the required standards for operational and domestic use on site to the required standards. The on-site water treatment system will be designed and constructed subject to the outcome of the test results on the raw irrigation water. The on-site water treatment system should consist of a screen filter, sedimentation facility, filter system, chlorinator and storage tanks combined with a booster pump system, to ensure adequate supply to the required design standards. In order to handle the worst-case scenario concerning suspended solids, clay, sand inter alia, the on-site water treatment process could include all of the following:

- 2 x Dual-chamber storage reservoirs adjacent to the on-site water treatment plant, with raised outlets and an effective capacity of 200m<sup>3</sup> each (total effective storage capacity of 400m<sup>3</sup>).
- Pump raw water from the irrigation water storage dam, proposed for expansion (Dam A), to the 2 x dual-chamber storage reservoirs through a manual screen or a Bell series self-cleaning electric screen filter.
- Mixing tank regarding dosing with flocculation additive and pH adjustment, combined with sedimentation tanks with a minimum capacity of 80m<sup>3</sup>.
- Automatic flushing sand filter.
- 5 Micron cartridge filter and accurate dosing of chlorine dioxide by means of a dosing pump and flow meter.
- Duty and standby booster pump system, including diaphragm pressure tank.

The 2 x dual chamber reservoirs could also be designed to act as a sedimentation facility that would form part of the water treatment system.

In order to accommodate the required minimum residual head pressure of 150kPa under instantaneous peak demand conditions and to accommodate a fire flow of 20 – 25L/s (moderate fire risk), as well as maximum residual head pressures under low flow conditions, the main internal reticulation will consist of a branched/ looped reticulation consisting of 160mm and 110mm diameter PVC-U pipelines Class 12, in accordance with SANS 966: 1998 Part 1 specifications and laid in accordance with SANS 1200 LB. The completed water reticulation will be tested under a minimum pressure of 1800kPa in accordance with SANS 1200 L. The afore-mentioned reticulation will be combined with an effective pump system, which will consist of at least a duty and standby pump and a duty and standby generator system, to ensure a minimum residual head of **150kPa under maximum fire flow conditions of 25L/s**. The fire hydrants will be the pedestal type, unless otherwise dictated by the Sundays River Valley Municipality. The maximum spacing of the fire hydrants will mainly be in accordance with SANS 0900 – 1972 stipulated for moderate risk fire areas.

The following alternative water sources and water saving proposals should be considered:

- As far as practically possible, provision should be made for roof rain water harvesting in the architectural guidelines.
- The roof-collected water can be used for outdoor and indoor purposes (hot water, washing, toilet, etc).

The use of water can further be reduced by using water saving products listed as follows:

- Water saving toilets (capacity 6L and less), with a dual-flush valve.
- Water saving taps with spray cartridges.
- Water-saver shower heads with a flow rate of 4 to 9L/min, by generating finer droplets.

#### ***Foul Sewer System (Domestic Effluent)***

The total design Average Dry Weather Flow (ADWF) of domestic effluent which is anticipated to be generated at the 3 x employees houses and at the 2 x shower rooms on site, has been calculated to be **3.125 kilolitres per day** (3 125 m<sup>3</sup>/day), under full post-development conditions.

The aforementioned habitable units (3 x employees houses) and shower rooms can be served by foul sewer conservancy tanks. The size of each tank (5 x tanks in total) will have an effective storage capacity equal to 2.5 weeks x ADWF. In accordance with our preliminary design calculations the size of each of the five (5) conservancy tanks, (one for each of the dwellings and shower rooms) will be 3m x 3m x 1.8m deep with an effective **storage capacity of 13.125m<sup>3</sup>, totaling a storage capacity of 65.625m<sup>3</sup> for all 5 tanks.**

The domestic effluent of the proposed development will mainly be treated by the Addo Waste Water Treatment Works with a capacity of 1 Ml/day (1 000m<sup>3</sup>/day), as confirmed with the Acting Manager: Technical Services: Mr. R.J. Herholdt of the Sundays River Valley Municipality, during July 2018. The Applicant will be liable for the effective maintenance and emptying of the conservancy tanks serving the breeder house development. Additionally, the Applicant will be required to enter into an agreement (as approved by the local authority) with a competent registered contractor for the regular emptying of the conservancy tanks and discharge of the mentioned raw effluent to the registered Addo Waste Water Treatment Works.

In accordance with preliminary design calculations, the gravity sewer will mainly consist of 110 PVC-u sewer pipes Class 51 (Class 34 if under roads): SABS 791, to convey the effluent from the habitable units and shower rooms to the respective conservancy tanks. The longitudinal gradients of the gravity sewers will be designed to accommodate the peak wet weather flows, as well as maintaining minimum self-cleansing velocities higher than 0,7m/s. All main internal sewers and manholes have to be constructed in accordance with SANS 1200 LD, SANS 1200 LB and Municipal Standards and Specifications. For more information including proposed design drawings see the Roads and Wet Services Report prepared by JJ Spies Civil Engineers, attached in Appendix D(iv) of the Report.

### **Electricity Requirements**

The applicant has an existing connection to an Eskom supply which provides electricity to the current dam and dairy operations. It is proposed that an additional 350kVA electricity will be required to service the proposed development. The applicant proposes to install a new 500kVA transformer to support the proposed development. Eskom has confirmed that the additional 350kVA supply can be accommodated on the SR812 Gedeelte 10 van die Plaas Zoet, Feeder Nooitgedacht/ Barkley bridge 22kV line (see confirmation attached as Appendix G(viii) of the report).

### **Waste Generation**

The following potential sources of waste have been identified:

- Poultry Litter.
- Mortalities.
- Domestic waste (general refuse, fluorescent tubing etc.).

### **Litter Removal and Disinfection**

Breeder houses are operated on an "all-in all-out" basis and require time for cleaning and repair between flocks. The most common type of housing for breeders is enclosed with a concrete floor covered with dry bedding. Dry bedding (litter) can be sawdust, wood shavings, chopped straw or other products, depending on availability and cost. Manure, as excreted by birds, has a high water content, thus the litter acts as a moisture absorbent. Stockpiling of manure on site can result in the contamination of the next flock of birds, may result in odour impacts, as well as potentially impact on ground and surface water. Therefore, no manure will be stockpiled on site at the proposed poultry breeder facility. At the end of each cycle the manure is removed from the house within 14 days, both mechanically and by hand, and transported in covered vehicles to a registered manure composting facility and fertiliser processing plant, also owned by the project applicant.

### **Disposal of Mortalities**

The breeder houses are checked every 2<sup>nd</sup> to 3<sup>rd</sup> day and dead chicks are bagged and removed from the house for storage in a locked freezer facility on site (2 x 450L freezer facility). Thereafter, the chicken carcasses are removed on a weekly basis, dependent on mortality rates and capacity of the mortality chamber, from the site for disposal at a registered disposal facility (Aloes).

### **Domestic Waste**

General waste that will be generated at the employees houses and at the admin and maintenance areas of the poultry breeder facility, which may contain hazardous elements (e.g. fluorescent tubes/ light bulbs), Such waste will be classified, separated and temporarily stored in a designated waste storage area in suitably marked bins, before final disposal at an appropriate registered facility.

### **Biosecurity**

Biosecurity control and disease management on site are important in order to ensure the health and survival of the flock. This entails various measures to prevent the introduction of diseases to the flock, contamination between flocks, as well as a response plan in case of an outbreak of disease, as follows:

- Disinfection and clean out between flocks (14 days) which entails both a dry and wet cleaning procedure.
- Strict limited access to the site (permission is required to access the site).
- Fencing of the site, as well as the facility to limit unrestricted access.

- Disinfection protocol for vehicles, personnel or others entering or exiting the facility. This entails the washing down of all vehicles and includes individuals showering in and out before entering or exiting a facility.
- In case of the outbreak of a disease Sovereign Foods subscribes to the "CONTINGENCY PLAN IN CASE OF AN OUTBREAK OF NOTIFIABLE AVIAN INFLUENZA (NAI) IN POULTRY IN SOUTH AFRICA" as compiled by: Dr RF Horner, Allerton PVL, Pietermaritzburg and Dr ACE Pienaar, National Directorate of Animal Health, Pretoria (EDITION 3 REVISED JUNE 2009).

## PROJECT TIMING

Should the proposed development receive a positive Environmental Authorisation, it is proposed that the preconstruction phase (detailed planning and design approval) will commence immediately and will be completed within 24 months. The construction phase will commence within 12 months of completion of the preconstruction phase and will take 24 months to complete. The poultry breeder facility will become operational upon completion of the construction phases and will continue in perpetuity.

## BASIC ASSESSMENT PROCESS AND PUBLIC PARTICIPATION

In terms of the NEMA EIA Regulations 2014 (as amended), published in GN R326, 327, 325 and 324, promulgated under Chapter Five of the National Environmental Management Act (Act 107 of 1998) (NEMAA), and published in Government Gazette 40772 on the 7 April 2017, the project requires a Basic Assessment (BA), because it triggers the following listed activity, in Listing Notice 1 (GN R327):

- "5. The development and related operation of facilities or infrastructure for the concentration of —*
- (ii) more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days;*
  - (iv) more than 25 000 chicks younger than 20 days per facility situated outside an urban area"*

In addition to the above the following listed activities are also anticipated to be triggered by the proposed development:

- GN R327 (Listing Notice 1): 8, 9. (i) and (ii), 24. (ii), 31. (v) (a) and (b), 50.  
GN R324 (Listing Notice 3): 4. a. i. (ee) and (gg) and 16. a. i. (ff) and (hh).

These listed activities require authorisation from the Department of Economic Development, Environmental Affairs and Tourism (DEDEAT). The BAR needs to show the competent authority, DEDEAT (Sarah Baartman Region), as well as the project applicant, Die Boeram Venter Trust, what the consequences of their choices will be in biophysical, social and economic terms. Public involvement forms an important component of this process, by assisting in the identification of issues and alternatives to be evaluated.

Public Participation forms an important component of the BA Process and together with specialist input, assists the competent authority with their decision-making. Public Participation forms an important component of the BA Process and together with specialist input, assists the competent authority with their decision-making. The BA Process is currently at the stage where the Final Basic Assessment Report (FBAR) is being submitted to the competent authority for their decision-making. No comment period is proposed for the FBAR.

## SPECIALIST STUDIES

The following specialist studies have been undertaken as part of the BA Process in order to inform the FBAR and are attached to the report as Appendices D(i) to D(vi):

- Aquatic Specialist Assessment
- Desktop Archaeological Impact Assessment (Letter of Exemption)
- Desktop Palaeontological Impact Assessment (Letter of Exemption)
- Roads and Wet Services Report
- Traffic Impact Assessment
- Desktop Air Quality Impact Assessment from a previous Poultry Broiler Facility

## ENVIRONMENTAL IMPACT STATEMENT

The proposed development of a poultry breeder facility and associated infrastructure, including the proposed dam expansion is anticipated to have an overall LOW NEGATIVE impact on the receiving environment during the construction and operational phases, if all the recommended mitigation measures are applied. The demolition of the dam is anticipated to have a VERY LOW NEGATIVE to NEUTRAL impact.

Ecological impacts are not anticipated to be significant, as the site is largely modified, and no natural aquatic habitat has been identified on the site. In addition, the Sundays River is located ~350m north of the proposed development footprint, at its nearest point. Additionally, while not directly associated with the expansion of the dam, a 60m buffer around the riparian habitat of the Sundays River has been recommended by the aquatic specialist to reduce potential impacts of future land use activities. Changes to the local hydrological regime, with possible increases in surface flows during the operational phase has been identified. However, with the application of the proposed mitigation measures it has been rated as a LOW NEGATIVE impact, which has a less than 50% chance of occurring. The potential impact on the Sundays River/ Estuary system has been identified as a potential Cumulative Impact. However, with the application of the proposed mitigation measures, it has been rated as a LOW NEGATIVE impact. An

increase in the potential aquatic habitat would occur due to an increase in available emergent habitat associated with the expanded dam (larger water surface area). This impact has been rated as a LOW POSITIVE.

Socio-economic impacts which have been identified, which include the generation of noise and dust, as well as health and safety, visual and odour impacts can also be mitigated to LOW or VERY LOW NEGATIVE, except for the Traffic Safety Impact, which can be mitigated to MEDIUM NEGATIVE. Other Traffic impacts including additional volume, intersection capacity and road deterioration can all be mitigated to LOW NEGATIVE.

Heritage impacts can be mitigated to NEUTRAL during the construction phase, if the ECO and/ or construction foreman are informed of the types of heritage artefacts which could be uncovered during vegetation clearing and excavations and are aware of the required action to be taken should heritage material be uncovered.

The risks associated with the proposed expansion are largely associated with the creation of additional hard surface areas and the resultant stormwater flow, as well as the generation of waste (e.g. domestic effluent, wash water, chemical waste packaging) during the operational phase. However, the application of the proposed mitigation and design measures, as recommended by the respective specialists, are anticipated to effectively manage and reduce these potential impacts, so as to not have a detrimental effect on the receiving environment.

In addition, some positive impacts have also been predicted. These include the creation of a number of additional employment opportunities and associated economic growth for the local community (rated as HIGH POSITIVE) during the construction and operational phases, as well as the expansion of additional aquatic habitat due to the expansion of the dam (rated as LOW POSITIVE). In addition, the contribution of the proposed breeder facility to local food supply is rated as a MEDIUM POSITIVE impact.

**No-go alternative (compulsory)**

The No-Go alternative will result in the potential employment and skills development opportunities for the local community not being realised. In turn, the potential opportunity for economic growth in the community will be lost. The price of poultry meat and eggs will continue to increase due to insufficient local supply. These consequential impacts are regarded as HIGH NEGATIVE.