

## EXECUTIVE SUMMARY

### Introduction

The Venter Wildlife Trust is proposing the establishment of 12 broiler house facilities and associated infrastructure on Farm 713 (~555ha) in the Sundays River Valley Municipality. The facility will consist of 12 broiler houses in 4 separate enclosed operational areas, for the rearing of chicks from 1 day to approximately 42 days old. Each broiler house will contain 45 000 to 50 000 birds at any one time, totalling 480 000 to 600 000 birds. The affected farm portion is currently zoned for Agriculture and it is anticipated that the activity will require Special Consent zoning.

The applicant also intends to establish 95 ha of citrus production, including associated infrastructure on the same farm, Farm 713. The citrus production is proposed to be located west and south of the broiler house facilities. A separate application for environmental authorisation and a Final Basic Assessment Report for this activity has been submitted to the Department of Economic Development, Environmental Affairs and Tourism, for their decision making.

The site is located north of the town of Addo and east of Kirkwood on the gravel Kirkwood/ Enon road. The R335 regional road (Zuurberg Road) is east of the site and the gravel Sunlands Road is located south of the site. The southern entrance to Farm 713 can be accessed off the gravel Sunlands Road, by turning west at the intersection of the Kirkwood/ Enon and Sunlands Road. This intersection is approximately 3.9km west of the gravel Zuurberg road. The entrance to Farm 713 is located approximately 2.9 km north of the Sunlands and Kirkwood/ Enon road intersection. The broiler houses are proposed for construction on the northern portion of Farm 713.

The site is zoned for agricultural use and is currently stocked with game. The portion of the site which is not currently proposed for development (approximately 430ha) will stay zoned as Agriculture and will be utilised by the game currently on the site.

### Project Overview

The project can be divided into the following phases:

- Construction Phase
- Operational Phase

Decommissioning of the project is currently not proposed but will be subject to the regulations applicable at the time if it takes place.

### **Construction Phase**

The construction phase of the project will entail the clearing of vegetation and levelling of the site for the establishment of the broiler houses and associated infrastructure. An existing farm house within the development footprint is proposed to be demolished.

Twelve broiler houses are proposed for construction which will be fully enclosed (fenced in). It is proposed that the broiler farm is divided into four operational areas, which will be separately fenced in. Access to the site is proposed from the north and south, the southern entrance is the preferred access route to the site.

The 12 broiler houses will require the establishment of the following infrastructure.

- 12 broiler houses of 120 x 15 meters (1800m<sup>2</sup> each, totalling 21 600m<sup>2</sup>)
- A Storeroom/Toolshed and Coal Bunker (240m<sup>2</sup>)
- A pump station (to be shared with the citrus farm which forms part of a separate Basic Assessment application) (42m<sup>2</sup>)
- Water treatment facilities
  - Flocculation tank slab (108m<sup>2</sup>)
  - Chlorine dioxide aqueous solution stand (ClO<sub>2</sub>) (104m<sup>2</sup>)
- Northern (new access) and southern access road (upgrading and possible widening of existing road)
- Farm Managers house including an office (297 m<sup>2</sup>)
- Establishment of a storage dam for water (to be shared with the citrus farm which forms part of a separate Basic Assessment application)
- Installation of water transfer infrastructure (to be shared with the citrus farm which forms part of a separate Basic Assessment application)
- Generator room, substation and meter room (81m<sup>2</sup>)
- Connection and internal reticulation of water and electricity supply
- Installation of stormwater management infrastructure and stormwater detention pond (footprint of 1.6ha; storage capacity of 0.84MI) with a 1m high semi-permeable gabion structure instead of piped outlets.

Associated with each of the four operational areas will be the following infrastructure:

- Entrance including shower rooms at each entrance (78m<sup>2</sup> each) (312m<sup>2</sup> in total)
- Water reservoirs/ tanks (2 381m<sup>2</sup> in total)
- Dwellings for labourers (214m<sup>2</sup> each) (856 m<sup>2</sup> in total)
- 9 conservancy tanks (farm manager, 4 labourers dwellings, 4 shower rooms) (9m<sup>2</sup> each, totalling a surface area of 81m<sup>2</sup>)
- Mortality freezer rooms (14.5m<sup>2</sup> each, totalling 58m<sup>2</sup>)
- Internal roads and turning circles, 5 to 6 meters wide, 2700 meters in length (16 800m<sup>2</sup>)

Based on the above the total area proposed to be developed is anticipated to be approximately 60 000m<sup>2</sup> or 6 hectares. It is proposed that in order to meet the operational water requirements for the proposed facility water transfer infrastructure will have to be installed in order to transfer the water from the LSRWUA canal to a storage dam to be constructed on site. The proposed alignment is indicated on the proposed Water Layout drawn by JJ Spies Civil Engineers (attached in Appendix D of the Basic Assessment Report).

### **Bulk Services**

The following information is based on the Roads and Wet Services Report, dated 30 September 2013, provided by JJ Spies Civil Engineers. A copy of the report is attached in Appendix D of the Basic Assessment Report.

### **Roads**

#### *Access*

The site of the proposed broiler house development is near the mid-northern part of Farm 713, Scheepersvlakte. The preferable access to the site will be off the existing gravel road to Sunlands/Addo near the southern boundary of Farm 713. Access to the existing Disco Chicks development on Farm 690 is also off the afore-mentioned gravel road to Sunlands/Addo.

The traffic which would be generated by the new broiler house development on Farm 713, Scheepersvlakte, will be similar to the traffic associated with the existing broiler house development, Disco Chicks No. 1 on Farm 690 approximately 3km south of Farm 713.

The trip generation of the traffic related to the existing broiler houses on Farm 690 is minimal compared to the peak seasonal citrus traffic which uses the same road network for 8 months of the year. The traffic to and from the broiler house development usually also occurs during off-peak times. It is therefore reasonable to assume that the traffic which would be generated by the new broiler house development will have the same minimal impact if any on the mobility and safety of traffic in the area as well as the structural capacity of the existing road system which serves the farming community.

In addition to the preferred access road from the south it is proposed that an emergency access route be constructed from the gravel Kirkwood/ Enon road in the north. This road will be approximately 200m in length. It is anticipated that this route will only be utilized for the transportation of the poultry if adverse weather conditions make access from the south impossible.

#### *Structural*

The structural and geometric design of the main internal roads will have to be done in accordance with the specifications as contained in the specialist report by JJ Spies Civil Engineers. This includes but is not limited to the following:

- The structural layer works of the main internal roads have been preliminary designed to accommodate the repetitive axle loads associated with post-development light and heavy vehicles.
- In order to improve dust control and erosion, the top 100mm layer of the selected G8 rock material or G7 stone material could be treated with a stabilizing additive.
- As far as practically possible, the existing roads and/or vehicle tracks on Farm 713, shall be upgraded to function as access roads to the broiler house development. The preferred upgraded width of the main internal access road at the entrances to the development near the main intersections with the Sunlands gravel road should be at least 7.5m wide.
- Subject to the applicable trip generation figures, applicable traffic flow patterns and direction of flow, the width of the applicable main internal roads should vary between 4.0m up to 7.5m.
- The roads and upgraded vehicle tracks shall not act as storm water channels, but be designed to allow the flow of storm water as far as practically possible to occur as if the areas were not disturbed and to accommodate overland sheet flow.

## **Stormwater Management System**

A design perspective to avoid flooding of the proposed boiler houses of the lower-lying areas of the site and the areas adjacent to the northern boundary of Farm 713 has been adopted as a priority.

The proposed development would cover an area of approximately 45 000m<sup>2</sup> or 4.5 hectares. Considering the topography on and near the development site as well as the proposed site layout, the catchment area which will drain to the detention pond is approximately 38ha.

The floor areas of the super-structures will be approximately 40 000m<sup>2</sup>. Due to the fact that the broiler houses would be fully roofed and enclosed at 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 litter from the broiler houses could end up in an uncontrolled manner in the storm water system during or after rain storms.

The storm water overland run-off from the higher-lying area south of each broiler house will be diverted by an open channel and piped storm water system to flow around and/or away from the respective broiler houses. (Refer to enclosed Drawing Nos. NV-2013-09/RS/01 & /RS/02 in Appendix D of the Basic Assessment Report)

In an attempt to address the post-development storm water 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 storm water system, the upgraded internal roads to the broiler house site shall be designed to not act as shallow storm water channels, but to accommodate the natural flow of storm water as far as practical possible.
- The operational access ways on the broiler house site shall also not act as shallow storm water channels. The access ways shall be designed to accommodate the distributed overland sheet flow which will be intercepted by the open channel storm water system.
- The overland run-off will be intercepted adjacent to the up-stream side of each broiler house to prevent flooding of the building and will be channeled down-stream to the detention facility.
- The intercepted storm water 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.
- In accordance with our preliminary calculations, the primary detention facility shall have an effective storage capacity of 0.84Ml.
- The detention pond shall be designed to function as a “dry” detention pond after the release of the intercepted storm water.
- The detention pond shall be designed to intercept the overland run-off from the broiler 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 order to release the intercepted storm water from the detention pond in a distributed semi-sheet flow way, the wall to the detention pond shall be constructed with a 1m high semi-permeable gabion structure instead of piped outlets. The piped outlets will concentrate the outflow from the pond which could cause erosion under extremely high intensity rain storms.
- The semi-rigid gabion structures complete with overflows at regular distances not exceeding 20m in the detention pond wall will reduce the risk of uncontrolled erosion of lower-lying areas considerably.
- The disturbed pond area as well as the area up to 30m down-stream of the detention pond gabion wall shall be vegetated with an indigenous drought-resistant ground cover to limit possible erosion as specified by a specialist.
- The gradient of constructed embankments to the main internal storm water channel system shall as far as practical possible not be steeper than 1 in 3 to accommodate the establishment of vegetation and soil stability under wet conditions as far as practical possible.
- The inlet and outlets to the piped portions of the storm water system on the broiler house site shall be done with non-rigid geo-textile lined gabion structures complete with Reno mattress erosion protection.

It is also recommended to establish indigenous drought-resistant groundcover on the storm water 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**

Currently water is provided for irrigation purposes from the Lower Sundays River Water User Association (LSRWUA) to Farm 713. The raw water from the Scheepersvlakte Dam is conveyed on a weekly basis to the site via a canal system.

The canal releases irrigation water to an existing dam with a pump station near the southern part of Farm 713 which is currently being used to pump irrigation water to existing dams on Farm 713 via a 90mm HDPE pumping

main. (Also refer to enclosed Drawing No. NV/2013-09/W/01 attached as Appendix D of the Basic Assessment Report)

The approved supply of irrigation water to Farm 713 is 960m<sup>3</sup>/ha/year which equals on average 1 446 kilolitres per day (1 446m<sup>3</sup> per day) (approved quota of 960 cubic metres per hectare per year for 550 hectares) as confirmed with Mr H. du Plessis of the LSRWUA during September 2013.

In accordance with the metered data as obtained from Mr. N. Venter, the Managing Director of Disco Chicks No. 1 who is operating an exact replica of the broiler house development on Farm 690, Disco, approximately 3.5km south of the proposed development, the water usage of the existing broiler house development is on average 30 000m<sup>3</sup> per year.

Based on the afore-mentioned data, it is reasonable to assume and base the design calculations for the proposed broiler house development on an Annual Average Daily Demand (AADD) of 82kl/day (82m<sup>3</sup>/day) and the maximum daily demand on 228kl/day (228m<sup>3</sup>/day).

In accordance with our preliminary calculations, the Instantaneous Peak Operational Demand of 5.28 litres per second and the Fire Demand of 25 litres per second equals 30.28 litres per second.

JN Venter Family Trust and Boeram Venter Trust currently have water use entitlements totalling 180ha on the adjacent farm (Ptn 0 of the Farm 690 and Ptn 21 of the Farm SwanepoelsKraal 104). Currently only 103ha of these water entitlements are used on these properties. This spare availability is because the applicant uses micro/drip irrigation which lowers the water requirement from 900mm/ha/yr (amount allocated) to only 600mm/ha/yr. Therefore approximately 77ha (693 000m<sup>3</sup> per annum) of entitlements are still available for use on Farm 713. Approximately 60ha (540 000m<sup>3</sup>) will be required to irrigate the 90ha of citrus orchards proposed for establishment on Farm 713. The remaining 17ha (153 000m<sup>3</sup> per annum) of water use entitlements is anticipated to be sufficient to meet the requirements for water for the proposed poultry broiler facility.

Subject to the re-registration for a change in water usage and approval by the LSRWUA, the Owner will be allowed to use a portion of the transferred water entitlements for domestic and drinking purposes. The Owner will be liable to treat the raw water for drinking purposes and domestic use on site to the required standards. In accordance with the afore-mentioned calculations, there will be enough water available to serve the proposed broiler house development with an annual demand of 30 000m<sup>3</sup>.

In order to limit the dependency of domestic demand on the water supply from the LSRWUA, it is also recommended to connect rain water storage tanks (a minimum of 5 000 litres capacity tank to each habitable unit) to roof areas.

It is recommended to design and construct a dual-chamber storage reservoir (labeled Dam D1) on site near the 185m MSL contour with an effective storage capacity of 1.5MI (1 500m<sup>3</sup>) to accommodate the treatment and effective supply for domestic and drinking purposes (with particular reference to low rainfall seasons). The dual chamber reservoir could also be designed to act as a sedimentation facility that would form part of the water treatment system. The water from Dam D1 is gravity fed into the water treatment system which is located within the facility through a 110 diameter pipe.

The on-site water treatment system will have to be designed and constructed subject to the outcome of the test results on the raw irrigation water. It 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 etc, the on-site water treatment process could include all of the following:

- pump raw water from the storage reservoir D1 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 capacity of 132m<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
- storage reservoir adjacent to treatment plant with raised outlets and a minimum effective capacity of 750m<sup>3</sup>
- duty and standby booster pump system including diaphragm pressure tank

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 – 25 litres per second (moderate fire risk), and maximum

residual head pressures under low flow conditions, the main internal reticulation will mainly consist of a branched/looped reticulation mainly 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 1800 kPa in accordance with SANS 1200 L. (Also refer to enclosed Drawing No. NV/2013-09/W/02 attached as Appendix D of the Basic Assessment Report)

The afore-mentioned reticulation shall 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 25 litres per second.

One could also consider and investigate the following alternative water sources and saving proposals:

- As far as practical possible, the Architect should also make provision for roof rain water harvesting in the architectural guidelines.
- The roof-collected water can be used for outdoor and indoor purposes.

From the above it is evident that the roof rain water harvesting will also act as a water saving mechanism. The use of water can also be reduced by using water saving products listed as follows:

- water saving toilets (capacity 6 litres and less) with a dual-flush valve
- water saving taps with spray cartridges
- water-saver shower heads with a flow rate of 4 to 9 litres per minute by generating finer droplets

### **Foul Sewer System**

The broiler houses will be fully roofed and enclosed at floor level with a concrete floor and a 600mm high concrete stub wall (except for the door openings at the gable ends). At the door openings, a 10m X 10m X 150mm thick concrete apron slab will be constructed to allow for the direct loading and carting away operation of the chicken litter (chicken manure mixed with sawdust, wood shavings, chopped straw etc.) and to prevent pollution of the surrounding areas. The chicken litter will be transported in covered trucks to farmers who utilize the manure as fertilizer and/or to a registered composting site. No chicken manure will be stockpiled on site at the broiler house farm.

The total design Average Dry Weather Flow (ADWF) of domestic effluent which would be generated at the dwellings of the manager and the labourers and shower rooms of the proposed broiler house development has been calculated to be 7.0 kilolitres per day (7 m<sup>3</sup>/day) under full post-development conditions.

The domestic effluent of the proposed broiler house development will mainly be treated by the Kirkwood Waste Water Treatment Works with a capacity of 3.75 Ml/day (3 750m<sup>3</sup>/day) as confirmed with the Manager: Technical Services: Mr. R.J. Herholdt of the Sundays River Valley Municipality during September 2013.

The aforementioned habitable units and shower rooms can be served by foul sewer conservancy tanks. The size of each tank (9 tanks in total) shall 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 nine (9) 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>.

The Owner shall be liable for the effective maintenance and emptying of the conservancy tanks serving the broiler house development on Farm 713. The Owner shall also 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 Kirkwood Foul Sewer Treatment Works near Kirkwood.

### **Electricity**

Eskom has confirmed spare capacity is available on the Nooitgedacht Skilpad 1 22kV line and that the applicant can be supplied with a 500kVA point of supply in order to supply the the proposed poultry broiler house facility with electricity (see confirmation attached in Appendix G (x) of the Basic Assessment Report).

### **Operational Phase**

The standard 56 day grower model will apply, as follows:

- Stocking of broiler units with day old chicks
- Rearing of chicks
- From 42 days catching the broilers for transport to Sovereign Foods. Catching age varies according to factory requirements and planning schedules.
- A 14 day cleaning and disinfecting period, which entails
  - Removal of all litter from the broiler houses
  - Washing and disinfecting the broiler houses and placement of fresh bedding
  - Mechanical maintenance of broiler houses and finally placement of new chicks

A typical broiler house is a totally enclosed and environmentally controlled facility (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 a certain temperature, humidity and air quality is maintained within the house at all times, this varies for the age of the chicks. This system is computer controlled (for each element) and any breakdown in this system triggers remote alarms ensuring a prompt response and intervention.

Feed delivered to the facility (2.9 feed trucks per week in the first week and increasing to 14 feed trucks in week 6) is stored in silos at the end of each house and is mechanically provided on a demand basis to the chicks. In much the same manner, chicks are provided with water via a low pressure nipple type drinking system. Both feeding and watering systems are designed to minimise waste and spillage of moisture to the bedding material which can impact on odours.

As outlined in the specialist studies contained in Appendix G (x) of the Basic Assessment Report a source of odours and air quality impacts associated with broiler house facilities is the manure contained within the broiler house and the moisture content of the manure. The procedure of providing an environmentally enclosed and managed facility, together with limiting the moisture content of manure directly assists in maintaining the health and survival of the flock and has indirect benefits for potential air quality and odour impacts to the surrounding environment.

All chicks are removed from the site and are transported to the Sovereign Foods Factory in Uitenhage for processing. From one crop of chicks to the next crop of chicks is approximately a 56 day cycle with approximately 6.5 cycles per year including a 14 day clean out period per cycle. The production process should comply with the standard operating procedures for broiler facilities of Sovereign Foods.

Broiler 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 broilers is enclosed housing 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. The litter absorbs moisture excreted by the birds.

Mechanical ventilation is typically provided using a negative-pressure system, with exhaust fans drawing air out of the house, and fresh air returning through ducts around the perimeter roof. The ventilation system uses exhaust fans to remove moisture and noxious gasses during the winter months and excess heat during the summer months.

The following operational procedures, included in greater detail in the Basic Assessment Report, are fundamental to the management and sustainability of a broiler farm.

#### *Manure Removal and Distribution*

A typical broiler house with a capacity for 44 000 birds per cycle will produce 240 tons of manure per year. Stock piling of manure on site can result in the contamination of the next flock of birds, result in odour impacts as well as impacts to ground and surface water, therefore no manure is stock piled on site at broiler house farms. At the end of each cycle the manure, which is registered as a fertiliser, is removed from the house within 48 hours, both mechanically and by hand, and transported in covered vehicles to farmers in the region for direct application to land.

#### *Disposal of Mortalities*

The poultry houses are checked on a daily basis (every 24 hours) and dead chicks are bagged and removed from the poultry house for storage in a locked freezer facility on site. 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.

#### *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.

#### **Employment Creation**

It is anticipated that the proposed development will create an additional 24 permanent employment opportunities during the operational phase of the development as well as 100 temporary employment opportunities during the construction phase. The total anticipated capital investment is approximately R63 million.

## **Project Timeframes**

Should Environmental Authorisation for the proposed development be granted it is anticipated that it will take approximately **18 months** for the applicant to secure all the necessary permits and authorisations prior to commencement with the proposed development.

Once all the necessary permits and authorisations have been obtained the applicant will commence with construction. It is anticipated that the proposed development will require **1 year** to complete from the date of commencement.

Therefore it is anticipated that the facility will become operational **two and a half years (30 months)** from the date of Environmental Authorisation, should one be granted.

## **Project Alternatives**

### **No Go Alternative**

The No-Go alternative would involve maintaining the status quo on the site. Given the degraded and partially transformed nature of the portion of the site proposed for development it is anticipated that the No-Go alternative will result in the continued degradation and invasion by alien vegetation of this portion of the site, and the probable spread to the rest of Farm 713.

### **Go Alternative**

The proposed poultry broiler house facility is modelled after an existing facility located on Farm 690 Disco. The technology and operational aspects of the existing facility are intended to be used at the proposed facility on Farm 713. In addition, the applicant is a contract grower for Sovereign foods and therefore, certain aspects of the facility and operations are controlled under this agreement.

The locality of the proposed poultry broiler house facility is restricted by geotechnical, topographical and biosecurity constraints.

#### *Topographical*

The proposed facility must be located on a generally flat area that is slightly sloping. This reduces the requirement for intense earthworks prior to establishment of the facility and at the same time allows for efficient stormwater runoff management during the operation of the facility.

#### *Geotechnical*

Due to the nature of the houses (120m x 15m), the substrate thereunder must be of a particular quality to ensure that subsidence does not occur. For this reason a geotechnical investigation was undertaken on Farm 713 and the substrate of the proposed footprint was found to be suitable for this purpose.

#### *Bio Security*

Certain Bio-security protocols are in place to ensure the health and survival of the flock. This includes the requirement that poultry broiler house facilities may not be located within 1km from each other. Siting the proposed facility on Farm 713 in its proposed location will ensure that this requirement is met.

As the land is owned by the applicant alternative sites were not investigated during the Basic Assessment Process however alternative locations on Farm 713 were considered but were deemed not to be feasible due to, amongst others, topography, geotechnical constraints, suitability of soils for citrus production.

## **Basic Assessment Process**

In terms of Regulations 543, 544 and 546 promulgated under Chapter 5 of the NEMA in Government Gazette 33306 on 18 June 2010, the project requires Basic Assessment because it includes, amongst others, the following listed activity in GN R 544:

*"5. The construction 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"*

The listed activity requires authorisation from the Provincial Department of Economic Development, Environmental Affairs and Tourism (DEDEAT). The Basic Assessment needs to show the responsible authority, DEDEAT, and the project proponent, Venter Wildlife Trust, what the consequences of their choices will be in biophysical, social and economic terms.

Public Participation forms an important component of the Environmental Assessment Process and together with specialist input assists the decision making authority (in this instance), DEDEAT, with their decision making. The process is currently at the stage where the Final Basic Assessment Report is being submitted to the Department for their decision-making. Comments on the final report can be submitted directly to the Department within 21 days

of the submission of the report (by no later than **4 March 2014**) with copies thereof submitted to Public Process Consultants. The full report can be downloaded from Public Process Consultants' website: [www.publicprocess.co.za](http://www.publicprocess.co.za).

### **Specialist Studies**

A Heritage specialist and Engineering consultants were consulted for this project. The Roads and Wet services Report as well as the Phase 1 Heritage Impact Assessment have been included in full in Appendix D of the Basic Assessment Report.

The recommendations contained in the Roads and Wet Services Report have been outlined above.

The following is the summary of the Heritage Specialist's findings:

- The proposed development area is underlain by Kirkwood Formation bedrock, which is capped by a >1m - thick cover of Quaternary colluvium and residual soils of **low palaeontological sensitivity**.
- There are no indications of aboveground prehistoric structures, rock art, graves, graveyards or historical structures older than 60 years within the survey area.
- The survey has yielded number of stone tools distributed as contextually derived surface scatters at the site.
- The site is considered to be of **low archaeological sensitivity**.

### **Environmental Impact Statement**

#### **Construction Phase**

- Construction phase impacts on the biophysical environment (e.g. removal of indigenous vegetation and plant species of special concern, injury to fauna, erosion, impact on water resources) can all be mitigated to **Low or Very Low Negative**, while the removal of exotic plants in construction footprints is considered a **Medium to High Positive** impact.
- The impacts of the dust, noise, waste, pollution, erosion and storm water runoff are Medium Negative and Low Negative but can all be mitigated to **Low and Very Low Negative**.
- Negative socio-economic impacts (i.e. health & safety issues) can be mitigated to **Low Negative**. While positive socio-economic impacts (employment) is rated as a **High Positive** impact.
- The impact on undiscovered archaeological and palaeontological material can be mitigated to **Neutral or Very Low Negative**.
- It is unlikely that the impact ratings for the cumulative impacts to be experienced during the construction phase will change significantly to those that are anticipated to be experienced for the citrus orchards (as assessed in a separate Basic Assessment Process).

#### **Operational Phase**

- Operational phase impacts associated with potential long term employment opportunities and economic improvements are all considered **High Positive** impacts.
- Negative operational phase impacts associated with water including increased storm water runoff, and soil erosion as well as the impact on water resources (wetlands, drainage lines and LSRWUA canal) can be mitigated to **Low and Very Low Negative** significance.
- The invasion of alien plants into the indigenous vegetation that will remain on site can be mitigated to **Low Negative**.
- All of the Negative Cumulative impacts can be mitigated to **Very Low Negative, and Neutral**.
- Potential air quality impacts (nuisance odours, ammonia, dust and pathogens) are rated as Medium Negative impacts but can be mitigated to **Low and Very Low Negative**.
- Potential visual impacts as a result of the buildings themselves as well as the lighting requirements for the proposed development can be mitigated to **Low Negative**.
- Impacts on bulk services (water supply, electricity and effluent treatment) can be mitigated to **Low, Very Low Negative or Neutral** for the impacts caused by the poultry facility alone as well as the cumulative impact of the citrus orchards.
- The Positive Cumulative impacts can all be enhanced to **High Positive** impacts

#### **No-Go Option**

- Continued and increased invasion by exotic plants and the poaching of fauna on the site are considered **Medium Negative** impacts which will persist or possibly escalate at the site in the no-go alternative.
- The unrealised potential increase in the employment opportunities and other economic improvements should the development not proceed is considered a **Medium Negative** impact.
- Not transforming approximately 6ha of Sundays Spekboom Thicket is considered to be a **Medium Positive**.
- Not increasing the pressure on bulk services (water, electricity and sewage treatment) would be a **Low Positive** impact.