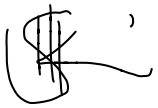
THE WASTE MANAGEMENT PLAN

FOR THE

PROPOSED EXPANSION OF A CHICKEN LAYER FACILITY AND ASSOCIATED INFRASTRUCTURE ON PORTION 65 OF THE FARM GROOTVLEI 272 JR, ROOIWAL IN PRETORIA WITHIN THE JURISDICTION OF CITY OF TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG PROVINCE

Author: Sinnah Mhlongo
Date Issued: July 2025
Client: Viomec Farm (Pty) Ltd
Physical Address: 546 16th Road, Block 2, Constantia Park, Randjespark, 1682
Email: shonie@scprojects.co.za / admin@scprojects.co.za
Tel: 011 026 2560
Cell: 079 614 8298 /079 569 5277
Fax: 086 552 0171

DOCUMENT CONTROL SHEET				
REVISION **001**	**NAME OF REPORT** **WASTE MANAGEMENT PLAN** THE PROPOSED EXPANSION OF A CHICKEN LAYER FACILITY AND ASSOCIATED INFRASTRUCTURE ON PORTION 65 OF THE FARM GROOTVLEI 272 JR, ROOIWAL IN PRETORIA WITHIN THE JURISDICTION OF CITY OF TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG PROVINCE			
	NAME	**DESIGNATION**	**SIGNATURE**	**DATE**
Compiled By: **Selahle Consultancy & Projects Pty Ltd**	Sinnah Mhlongo	Environmental Consultant		July 2025
Reviewed By: **Selahle Consultancy & Projects Pty Ltd**	Shonisani Selahle	Environmental Assessment Practitioner		July 2025
APPROVED BY:				

THE WASTE MANAGEMENT PLAN

Contents **Page**

..... 0

1 INTRODUCTION 4

2 LOCALITY 4

3 TRAINING AND AWARENESS FOR WORKERS AND CONTRACTORS 6

4 WASTE MANAGEMENT SIGNAGE ON THE FARM PREMISES 6

5 CLASSIFICATION OF WASTE THAT WILL BE GENERATED AT THE FARM 6

6 WASTE REDUCTION INITIATIVES AT THE FARM 7

6.1 Waste minimization 7
6.2 Recycling of waste at the source 8
6.3 Reuse of waste 8
6.4 The use of chicken manure and garden waste as compost 8
6.5 Reduction of waste 8

7 WASTE MANAGEMENT DURING THE CONSTRUCTION PHASE 8

7.1 Proposed mitigation measures. 9

8 WASTE MANAGEMENT DURING THE OPERATIONAL PHASE 9

8.1 Chicken mortalities/ carcasses management and disposal 9
8.1.1 Proposed Mitigation Measures. 9
8.2 Larvae management and manure disposal 10
8.2.1 Proposed Mitigation Measures 10
8.3 Handling of hazardous waste on the farm 11
8.4 Handling of sanitary waste on the farm 11
8.5 Management of wastewater/effluent 11
8.6 Temporary storage of waste on site 11

9 ODOUR CONTROL 12

9.1 The recommended odour mitigation measures are: 12

10 FLY CONTROL MEASURES 12

11 WASTE RECORDS MANAGEMENT 13

12 WATER CONSERVATION AND QUALITY CHECKS 13

13 REFERENCES 14

List of Figures

Figure 1: Locality Map of the proposed expansion 5
Figure 2: Waste signage and recycling bins 6
Figure 3: Waste Management Hierarchy 7

Definitions

Production area -	Includes poultry sheds, egg collection amenities, egg storage areas, egg grading and processing floors, dry storage areas, change rooms, on-site feed production or storage areas, loading pads and truck movement areas and ranges used for free-range production. It should be surrounded by a well-defined perimeter fence with a lockable gate.
Egg storage areas	A cool room where eggs are accumulated having been obtained from a shed or sheds within the immediate vicinity or a centrally located facility where eggs from the entire property are kept/stored.
Egg grading floors	An area where eggs are delivered from the property and graded, packed and sorted ready for storage and eventual distribution.
Egg processing	Where eggs are received from the property and are cracked and processed into a variety of products for storage and distribution.
Property	Refers to the land on which the production area is located and typically includes the facility manager's home or other accommodation and may include other farmland used for livestock or cultivation or waste disposal
Sheds	Refer to roofed fixed buildings, mobile housing and shelters capable of being used for containing poultry securely within their perimeter.
Range	refers to fenced pastures that are, or at times are, accessed by the poultry being farmed.
Spent hens	A hen at the end of her egg-laying cycle is referred to as spent. Pullets
General waste	Waste that does not pose an immediate hazard or threat to health or the environment and includes. Domestic waste. Building and demolition waste. Business waste. Inert waste; or Any waste classified as non-hazardous waste in terms of the regulations made under section 69, and includes non-hazardous substances, materials or objects within business, domestic, inert, building and demolition wastes as outlined below:
Domestic waste	Waste, excluding hazardous waste that emanates from premises that are used wholly or mainly for residential, educational, health care, sport or recreation purposes, which include: garden and park wastes municipal waste food waste Non-infectious poultry carcasses
Building waste	Means waste, excluding hazardous waste, produced during the construction, alteration, repair or demolition of any structure, and includes rubble, earth, rock and wood including. discarded concrete, bricks, tiles and ceramics discarded wood, glass and plastic discarded metals

	discarded soil, stones and dredging spoil Other discarded building and demolition wastes
Hazardous waste	Means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment and includes hazardous substances, materials or objects within business waste, residue deposits and residue stockpiles as outlined below: Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing and the hazardous portion of wastes from agriculture

1 INTRODUCTION

Selahle Consultancy and Projects (Pty) Ltd (SCP) as an independent Environmental Consultant was appointed by Viomec Farm (Pty) Ltd, to undertake the Environmental Impact Assessment process for the Proposed Expansion of a Chicken Layer Facility and associated Infrastructure on Portion 65 of the Farm Grootvlei 272 JR at Rooiwal town, located in Pretoria, Gauteng Province of South Africa. Projects of this nature need biosecurity measures, including a Waste Management Plan for egg production farms. For the control and prevention of endemic diseases on egg production farms, other enhancements to these standards may be required and must include vaccination and medication.

Waste generated by chicken layer farming activities includes bird excrement, spilt feed, bird feathers, mortalities, and spent chicken bedding (wood shavings, sawdust, and peanut hulls). The applicant intends to use the chicken manure as fertiliser for surrounding farmers and to sell a portion of the waste. Furthermore, the compost can be dried and used as fodder for local cattle farmers. This will require the applicant to attain a fertiliser permit if the compost is sold. Broiler chicken waste will be collected as and when the chicken homes are cleaned. If there is no demand for the waste, it will be disposed of at a licensed facility. A waste management license will not be required as the amount of waste produced is below the recommended threshold stipulated in the National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA).

The planning, construction and operation of poultry egg operations of any size must consider issues associated with storing, managing and utilising potential waste by-products. It is critical that manure is handled, stored, and disposed of properly, and that it is removed from the site regularly to avoid the attraction of undesired rodents and flies, which could lead to disease outbreaks in the area. If manure is not properly disposed of, it can cause odours and infections to spread to other animal enterprises in the area. Scavenger birds can act as vectors, allowing the organism to spread to previously uncontaminated pastures.

2 LOCALITY

The study area is located 12 km North of Hammanskraal on Portion 65 of the Farm Grootvlei 272 JR, Rooiwal in Pretoria, within the Jurisdiction of the City of Tshwane Metropolitan Municipality. The study area will cover an extent of approximately 8.5 Hectares, and the proposed study area can be accessed through Kremetart Street and unnamed gravel road in Rooiwal Town. The coordinates for the site are **25°30'37.39"S 28°16'59.28"E** (refer to Figure 1 for the site locality).

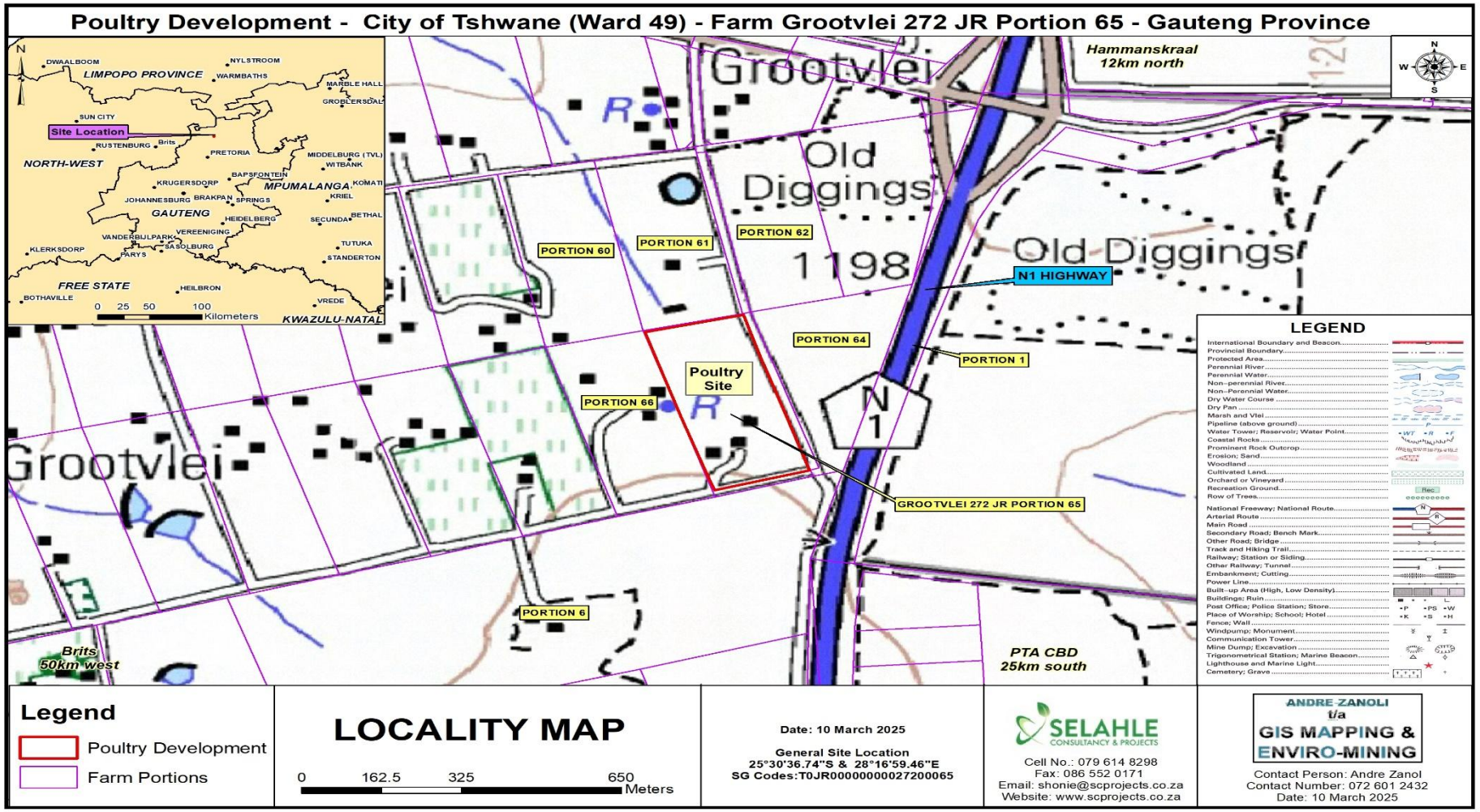


Figure 1: Locality Map of the proposed expansion

3 TRAINING AND AWARENESS FOR WORKERS AND CONTRACTORS

The Applicant must ensure that all workers and every newly appointed worker are trained on how to manage waste generated on the farm, train the workers on no littering, waste classification and waste minimisation. Workers also need to understand and be knowledgeable about the importance and benefits of waste recycling, how to sort recyclable waste and how to make use of the waste recycling bins provided on the farm premises. The costs associated with the waste management-related training programs must be budgeted for and implemented by the applicant throughout the project life

4 WASTE MANAGEMENT SIGNAGE ON THE FARM PREMISES

There must be clearly visible signs placed when entering the gate and inside the farm that caution workers, contractors and visitors at the site about the waste management principles, such as no littering and showing where waste bins are located at various points on the farm. The waste recycling bins must be clearly marked to illustrate where recyclable plastics, glass, paper and cans can be placed so that the waste is sorted on-site, and the waste is not mixed.

Figure 2: Waste signage and recycling bins

5 CLASSIFICATION OF WASTE THAT WILL BE GENERATED AT THE FARM

Farming activities will generate construction and operational waste that will not be processed on-site, written confirmations and proof of collection/delivery of waste by companies and farmers who will be providing the waste management services for the farm must be consistently recorded and those records kept on-site for monitoring and auditing purposes. During the construction phase of the project, waste that will be generated includes general domestic waste generated by workers at the construction site, including sanitary waste from the toilets as well as building waste. The building waste will be minimal because prefabricated materials will be used, and pre-mixed cement will be

used. The construction waste will be responsibly managed by the building contractor as part of the service contract with the applicant and in accordance with this waste management plan.

During the operational phase of the project, agricultural waste such as chicken manure of about 10 cubic metres which is made up of chicken droppings mixed with chicken bedding material/wood shavings from cleaning the chicken houses' floors at the end of each production. Other main waste will be generated from the dead chicken carcasses/mortalities, the mortality rate is estimated to be about 5,5% per production cycle, general domestic waste, hazardous waste, as well as the liquid effluent from wastewater in the septic tank

6 WASTE REDUCTION INITIATIVES AT THE FARM

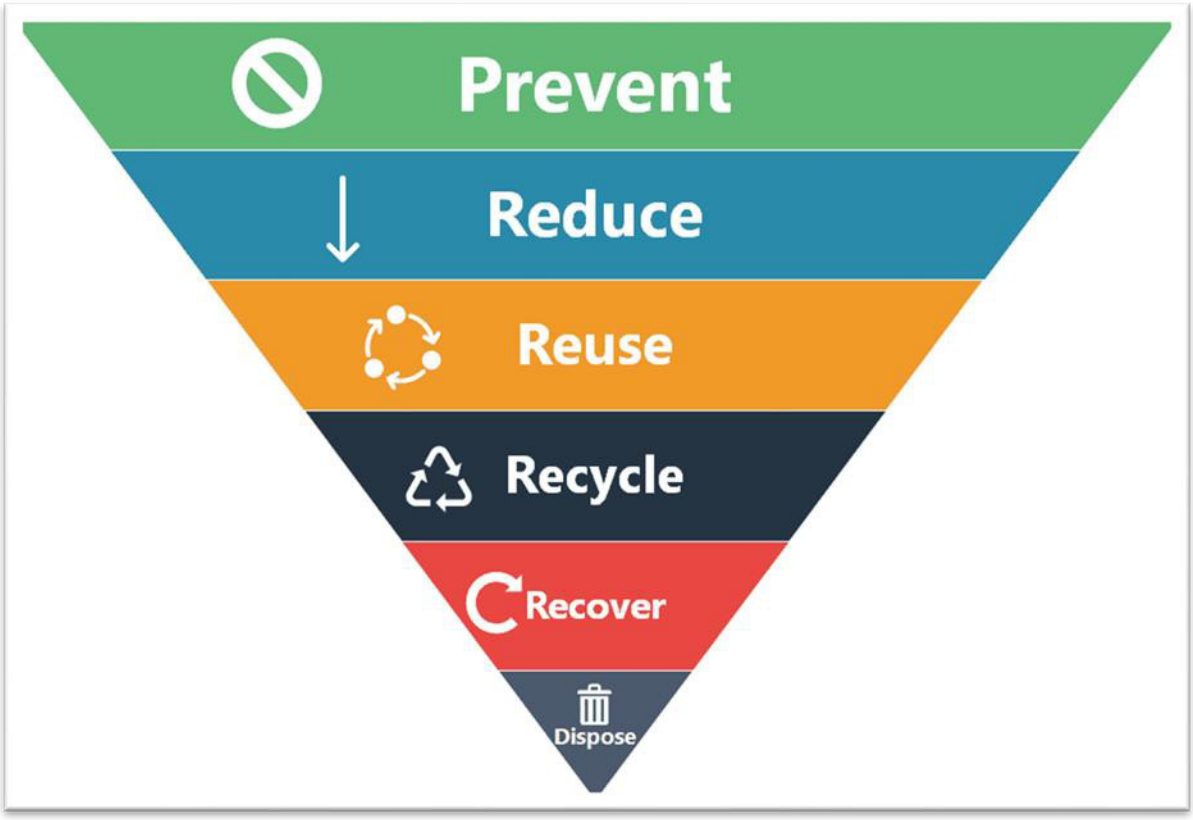


Figure 3: Waste Management Hierarchy

6.1 Waste minimisation

Waste minimisation is the first step towards effective waste management in any activity or organisation. This helps to lower the amount of waste that will be disposed of in the landfill site. One of the highest contributors to waste on the farm will be the chicken mortalities, carcasses and feathers, therefore, if the chicken mortality rate can be controlled by implementing strict biosecurity measures as per the biosecurity plan, it will result in fewer mortalities. This can be realised by buying healthy day-old chicks and applying all the best chicken-rearing methods to ensure fewer

mortalities throughout the production cycle. Another way in which waste will be minimised will be by using refills when buying cleaning agents and disinfectants.

6.2 Recycling of waste at the source

Sorting and recycling of recyclable materials at the premises is recommended to reduce the waste going to the landfill site as much as possible. Domestic general waste generated on the farm must not be mixed, but it must be separated and sorted into garden waste, paper, plastic, glass and metal by placing them into recycling bins at the construction site and designated areas around the farm recycled, reused, put separately and save recyclable waste material such as paper, glass and plastic.

6.3 Reuse of waste

The applicant must always look out for ways of reusing the waste generated on the farm as much as possible. Where possible, some chicken houses' bedding can be reused, however necessary environmentally friendly treatment must be followed to avoid infections in the next production cycle.

6.4 The use of chicken manure and garden waste as compost

We recommend that the chicken manure and garden waste be used as compost on the farm and that excess manure be sold to other local farmers and nurseries to use the manure as fertilizer. The manure must first be treated for any pathogens before being used as fertilizer.

6.5 Reduction of waste

Introduce an electronic filing system to lower the amount of paper that needs to be printed. Less heavy bedding material must be used. Ensure proper chicken-rearing operational practices to lower the number of chicken mortalities, this will eventually lower the waste from chicken carcasses.

7 WASTE MANAGEMENT DURING THE CONSTRUCTION PHASE

Solid waste that will be generated during the construction phase of the project will be general waste generated by the workers on site as well as the construction waste from building the infrastructure. Waste during the construction phase can be minimal by making use of prefabricated materials and pre-mixed cement for the construction of the chicken houses and related infrastructure.

The construction solid waste produced will be responsibly managed by the construction company as part of the contract with the applicant. The construction solid waste and any domestic waste during the construction phase will then be sorted on-site for waste collection to a registered Landfill site on a weekly basis or whenever necessary.

7.1 Proposed mitigation measures.

- No dumping of construction waste such as cement, concrete and other farming chemicals into the natural environment and watercourses.
- Train workers on the different types of waste on the farm, about hazardous waste and how to dispose of it.
- Place waste bins at designated points on the farm to separate waste (plastics, paper, glass, cans)
- Do not mix organic (food, garden refuse) waste with solid waste.
- Dispose of general solid waste at the registered landfill site on a weekly basis and sign off the disposal sheet for records

8 WASTE MANAGEMENT DURING THE OPERATIONAL PHASE

During the operational phase of the project after the chicken houses have been build and operational, the waste produced will be made up of the general domestic waste, the manure coming out of cleaning the chicken houses at the end of each production cycle and the chicken mortalities/carcasses, hazardous waste as well as the liquid effluent.

When the project is operational, all the chicken manure and chicken carcasses must be carefully managed in accordance with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the associated Waste Regulations.

8.1 Chicken mortalities/ carcasses management and disposal

All dead poultry need to be disposed of appropriately to eliminate chances of infectious, contagious and communicable diseases spreading on this farm as well as to neighbouring farms. By doing this, it also protects the air and soil quality and prevents possible contamination of surface and ground water. A method for the disposal of the mortalities is to keep them in the freezer on the site, where all the poultry carcasses can be stored temporarily, which can then be collected by any nearby predator farms (crocodile or lion farms). The frequency of collection depends on the size of the fridge as well as the number of daily mortalities. It is important to clean and sanitize it between batches. The same goes for the containers in which the carcasses are stored. The area allocated for the collection of the frozen carcasses should be far away from the production line, to prevent the vehicle from entering the site.

8.1.1 Proposed Mitigation Measures.

- Workers must inspect the chicken houses each morning and afternoon for chicken mortalities.
- Remove the carcasses from each chicken house.
- Record the carcasses on the mortalities recording sheet and store the carcasses in the freezer before collection by the external contractor.
- A room must be designated for the installation of freezers to store the chicken mortalities.

- A separate freezer must be used for infectious chicken mortalities and marked as containing hazardous waste.
- Determine the cause of the chicken mortalities through the state Veterinary for unusually large than normal numbers of mortalities.
- Do not give away dead chicken carcasses to humans

8.2 Larvae management and manure disposal

During the operational phase, solid waste in the form of chicken manure is produced. This is a source of odour. An effective manure removal procedure will be implemented. Chicken manure will be removed from the chicken houses daily and loaded directly onto the trucks that transport it from the site. A conveyor belt will be placed under each row of cages, which extends under the rows of batteries on each level. This transverse conveyor will travel through each chicken house, receiving the manure from the battery conveyors in each and finally delivering the load to an elevator conveyor from which the manure is loaded directly onto the trucks that remove the manure.

The trucks that remove the manure will be covered with tarpaulin to prevent spillage and reduce odour. The entire procedure is termed a “dry brush operation.” The material removed after the dry brushing will be added to the solid waste that will be removed from the site daily. The manure that is collected and loaded onto trucks will then be used as fertilizer for large-scale farmers in the larger area. By collecting the manure in this manner and within this period, flies do not have time to hatch and cause sanitary issues. Household-type solid waste during the operational phase will be gathered daily after closing time. The waste will be disposed of at the local refuse site.

8.2.1 Proposed Mitigation Measures

- Animal manure, in this case, chicken manure is defined as a by-product of animal excreta which is biodegradable and could be used for fertilization purposes.
- Manure must be removed at the end of the production cycle from the chicken houses, using scraping and pushing the manure with a bobcat and then loaded directly into a trailer, then from the trailer to a designated storage area.
- The manure storage area must be at least made of concrete impermeable floor, with side wall panels at least two meters high and a roof cover to prevent manure from wetting during the rainy season, where manure collectors will collect from.
- Manure from the chicken houses can be used as a fertilizer in the far the rest will be sold and used as fertilizer by other local farmers.
- It is important that the manure is not left for longer than 7 days without being collected from the farm to prevent larvae breeding, which eventually forms flies, which are a nuisance to the public and transport infectious diseases.
- The manure must not be overloaded, and it must be collected in an enclosed vehicle to ensure that the manure does not drop on the road during transportation.
- The manure must be managed in an environmentally responsible manner, ensuring that the manure movement to the secondary farm is not just a transfer to create even greater

pollution problems at the receiving farms. The manure must be treated for any pathogens before being used as crop fertilizer.

8.3 Handling of hazardous waste on the farm

Any hazardous waste during the construction and operational phases of the project on the farm must be put in a separate bin and marked and recorded for collection by a registered waste management company that specially deals with the handling of hazardous waste.

8.4 Handling of sanitary waste on the farm

Any sanitary waste generated on the farm during the construction and operational phases of the project must also be put in a separate plastic bag, clearly marked and recorded for collection by the waste management company dealing with sanitary waste.

8.5 Management of wastewater/effluent

About 15 cubic metres of liquid wastewater effluent will be produced during the operational phase of the project, from the wastewater coming from high-pressure cleaning of the broiler chicken houses by the end of each production cycle, as well as the everyday cleaning of the abattoir. This wastewater must not go into the stormwater or municipal sewerage system. Do not let the dirty wastewater mix with clean water in accordance with the Department of Water and Sanitation guidelines.

The wastewater will then be channelled from each chicken house into a central septic tank every time cleaning takes place, and then a qualified waste management company that deals with wastewater treatment will be consulted by the applicant to pump out the septic tank.

Septic tanks must be constructed by professional companies, using impermeable materials to ensure that there will be no surface and groundwater contamination. The septic tanks must be serviced well and pumped out on time before they are overfull.

8.6 Temporary storage of waste on site

The storage site that will be utilised to temporarily store chicken manure between coming out of the chicken houses and collection by other users must be constructed out of permeable material which will prevent groundwater contamination.

The manure storage area must be at least made of concrete, an impermeable floor, with side wall panels of at least two metres high and a roof cover to prevent manure from wetting during the rainy season, where manure collectors will collect from. Do not store waste on-site for more than 7 days to avoid larvae breeding on the farm.

The manure must be managed in an environmentally responsible manner, ensuring that the manure movement to the secondary farm is not just a transfer to create even greater pollution problems at the receiving farms. The manure must be treated for any pathogens before being used as crop fertilizer.

Records of the amount of chicken manure waste collected must be kept on site. This will help the applicant monitor their waste amounts to ensure that each year waste generation is reduced.

9 ODOUR CONTROL

Odour from a broiler and the layer chicken farming activity mostly comes from the ammonia created in the chicken houses. The hygiene status of the farm and the type of feed that the chickens feed on also affect the levels of ammonia produced by the chickens. The ventilation control in each chicken house also impacts the air quality levels in the chicken houses.

The applicant must ensure that the health of the workers, the public and neighbouring communities is considered by ensuring that odour coming from the chicken houses is controlled and mitigation measures well implemented.

9.1 The recommended odour mitigation measures are:

- Maintaining hygienic conditions in the chicken houses and the ablution facilities.
- Waste must be collected on time and not be left out unattended.
- Consistent and good housekeeping all around the farm. The grass around the chicken houses must be well-maintained and trimmed.
- Implementation of good biosecurity measures as per the biosecurity plan developed.
- Do not overstock the chickens, accommodate only the correct ratio of chickens allowed per chicken house.
- Good ventilation and temperature control in the chicken houses. Ensure that the equipment is always in good running condition and is serviced on time.

10 FLY CONTROL MEASURES

The Fly control on a poultry farm is essential for maintaining animal health, preventing disease transmission, and minimizing nuisance to surrounding communities. The primary source of fly infestations is improperly managed chicken manure, which provides ideal breeding conditions for flies, especially when damp or left uncovered. To mitigate this, the applicant must adopt an integrated approach to fly control.

First and foremost, manure must be removed frequently, ideally daily or weekly to disrupt the fly breeding cycle. Once removed, it should be stored in a roofed and well-ventilated structure with an impermeable floor to prevent flies from accessing it. Moisture control is equally important; dry

manure discourages fly egg-laying, while aerobic composting can be used to generate heat that kills eggs and larvae.

Mechanical methods such as fly traps, sticky tapes, and UV light zappers should be installed around chicken houses and manure storage areas to capture adult flies. Physical barriers like window screens and netting on ventilation openings further prevent flies from entering poultry buildings. When necessary, chemical control using environmentally approved insecticides or larvicides can be applied strategically, focusing on breeding hotspots rather than broad spraying. These chemicals should be rotated to avoid resistance buildup and used cautiously to avoid harming beneficial insects.

Maintaining farm hygiene is equally critical, therefore, spilled feed, feathers, and decaying organic matter must be promptly cleaned, and surrounding vegetation should be trimmed to eliminate additional breeding sites. Furthermore, open communication with nearby residents regarding fly management efforts can foster cooperation and reduce complaints. The applicant should also avoid spreading excessive manure on nearby fields to prevent off-site fly infestations.

11 WASTE RECORDS MANAGEMENT

A waste collection recording template must be developed as part of the Environmental Management Programme (EMPr) which must be used to record waste-related information such as the amount of waste generated on the farm, the waste disposed of from the farm, records of who collected the waste and to which landfill site/farm the waste goes to.

It is a requirement to keep and monitor the waste records. This will help with the monitoring and auditing of the waste management for the farm, so that the environmental performance of the farm can be measured and audited, and improvements can be made where necessary.
The waste management records must be kept at the project site office and be made available whenever the relevant Department, Municipality or Interested and Affected Parties (I&APs) request these records.

12 WATER CONSERVATION AND QUALITY CHECKS

- Prevent surface and underground water contamination by proper waste management.
- Clean water must not be mixed with dirty water. Proper water channels should be created to direct wastewater into the septic tank.
- Rainwater harvesting is a recommended method of water conservation, through the fitting of water collection tanks, and water gutters, collecting rainwater from the roofs of the chicken houses, through the water gutters and into the water storage tanks. This water can be used on the farm to wash the chicken houses and irrigate the fields.
- Conduct water quality laboratory tests every month and in accordance with the requirements of the Department of Water and Sanitation (DWS) to ensure that the surface

and underground water quality does not deteriorate and that the chickens drink healthy water.

13 REFERENCES

National Environmental Management Act: Waste Act 59 of 2008: List of waste activities that may have a detrimental effect on the environment: Government Gazette No. 37083 published on 29 November 2013.

National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).

City of Tshwane Metropolitan Municipality: Waste Management By-Law Amendment, 2016
National Environmental Management Act, 1998.

National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended and the Environmental Impact Assessment Regulations, 2014.

National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).

National Environmental Management: Waste Amendment Act, 2014 (Act No. 26 of 2014)
National Water Act, 1998 (Act No. 36 of 1998).

Norms and Standards for the Storage of Waste, 2013.