APPENDIX P:

OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN FOR LOW-THROUGHPUT ABATTOIR (FINAL)

STEINTHAL ESTATE, TULBAGH

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TABLE OF CONTENT

SECTION 1: INTRODUCTION

1.1. INTRODUCTION
1.2. BACKGROUND
1.3. S24G AND OTHER APPLICATIONS
1.4. KEY OEMP OBJECTIVES
1.5. PARALLEL ENVIRONMENTAL MANAGEMENT PLANS
1.6. ASSUMPTIONS AND LIMITATIONS

SECTION 2: RECEIVING ENVIRONMENT

2.1. LOCATION
2.2. OWNERSHIP AND MANAGEMENT
2.3. ZONING
2.4. STEINTHAL LAND USES
2.5. STEINTHAL INFRASTRUCTURE
   2.5.1. Fresh water
   2.5.2. Wastewater (ETP)
   2.5.3. Composting facility
   2.5.4. Site access
   2.5.5. Eskom servitudes
2.6. ADJACENT LAND USES
2.7. THE RECEIVING ENVIRONMENT
   2.7.1. Climate
   2.7.2. Topography
   2.7.3. Soils
   2.7.4. Geology
   2.7.5. Natural watercourses
   2.7.6. Freshwater storage dams
   2.7.7. Settlement ponds and irrigation storage dam
   2.7.8. Vegetation
   2.7.9. Habitat and Fauna
   2.7.10. Archeological and historical

SECTION 3: OVERVIEW OF ACTIVITIES

3.1. INTRODUCTION
3.2. UPGRADED ABATTOIR
3.3. OVERVIEW OF PRODUCTION PROCESS
   3.3.1. Receiving
   3.3.2. Killing (Dirty area)
   3.3.3. Evisceration (Clean area)
   3.3.4. Packing and chilling
   3.3.5. Product dispatch
   3.3.6. Slaughter waste
3.4. PROCESS INPUTS
   3.4.1. Live chickens
   3.4.2. Packaging material
   3.4.3. Water
   3.4.4. Soaps and Disinfectants
3.4.5. Electricity

3.5. OUTPUTS
3.5.1. Product
3.5.2. Slaughter waste and blood
3.5.3. Condemned material
3.5.4. Plucked feathers
3.5.5. General waste
3.5.6. Hazardous waste

3.6. WASTE WATER

3.7. ON-SITE TRAFFIC FLOWS

3.8. STAFF

SECTION 4: BASELINE INFORMATION

SECTION 5: APPLICABLE LEGISLATION

5.1. INTRODUCTION

5.2. NEMA (Act No. 107 of 1998)
5.2.1. NEMA Basic Assessment Regulations, R386 of 2006
5.2.2. NEMA Basic Assessment Regulations, R544 of 2010

5.3. WATER USE AND IRRIGATION WITH TREATED EFFLUENT
5.3.2. General Authorization, GN 399 of 2004

5.4. WASTE AND WASTEWATER
5.4.1. NEM: WASTE ACT (Act 59 of 2008)
5.4.2. National Waste Management Strategy (2011)
5.4.3. NEM:WA Regulations (2009)
5.4.4 Guidelines for the Handling, Treatment and Disposal of Abattoir Waste (2001)

5.5. PUBLIC HEALTH – ABATTOIRS AND FOOD PREMISES
5.5.1. Meat Safety Act (Act 40 of 2000)
5.5.2. Poultry Regulations, R153 of 2006
5.5.3. R 918 of 1999

5.6. ANIMAL HEALTH AND BIO-SECURITY
5.6.1. Animal Diseases Act (Act 35 of 1984)

5.7. OCCUPATIONAL HEALTH AND SAFETY
5.7.2. OHSA Draft Safety Regulations (R 1034 of 2005).
5.7.3. OHSA General Administrative Regulations (R 929 of 2003)

5.8. ANIMAL WELFARE
5.8.1. Animal Protection Act (Act 71 of 1962)

SECTION 6: MANAGEMENT PROVISIONS

6.1. INTRODUCTION

6.2. ROLES AND RESPONSIBILITIES
6.2.1. Steinthal Estate Board
6.2.2. Operator/ Abattoir Manager
6.2.3. Meat Inspectors
6.2.4. Health and Safety Representative
6.2.5. First Aid provider

6.3. ACTIVITIES PRIOR TO COMISSIONING

6.4. CONSTRUCTION ACTIVITIES
6.4.1. Monitoring and auditing

6.5. OBJECTIVE 1: ONGOING LEGAL COMPLIANCE
6.6. OBJECTIVE 2: WATER USE/Demand Management
6.7. OBJECTIVE 3: WASTEWATER MANAGEMENT
6.8. OBJECTIVE 4: HIGHLY PUTRESCIBLE WASTE
6.9. OBJECTIVE 5: OTHER SOLID WASTE
6.10. OBJECTIVE 6: FOOD SAFETY
6.11. OBJECTIVE 7: BIO-SECURITY
6.12. OBJECTIVE 8: HUMANE TREATMENT OF BIRDS
6.13. OBJECTIVE 9: NUISANCE RISK MANAGEMENT
6.14. OBJECTIVE 10: STAFF TRAINING
6.15. OBJECTIVE 11: OCCUPATIONAL HEALTH AND SAFETY
6.16. COMPLAINTS REGISTER
6.17. INCIDENTS REGISTER
6.18. EMERGENCIES
6.18.1. Provisions for dealing with emergencies
6.19. NOTIFIABLE INCIDENTS
6.20. REMEDIATION RESPONSE STRATEGY
6.20.1. Remedial Response Plans

SECTION 7. AUDITING AND REPORTING

7.1. INTRODUCTION
7.2. AUDITING
7.2.1. Terms of Reference
7.2.2. Initial audit
7.3. REPORTING

SECTION 8. UPDATING OF OEMP

8.1. INTRODUCTION
8.2. INITIAL UPDATES
8.3. UPDATES IN RESPONSE TO AUDITS

APPENDIXES

Appendix A: List of Sources

FIGURES

Figure 1: Steinthal Abattoir in local context
Figure 2.2. Key land uses on Steinthal
Figure 2.3. Abattoir, broiler houses (1-6) and dairy in relation to neighbors.
Figure 2.4. Abattoir in relation to Tierkloof and storage dams.

TABLES

Table 3.1: Estimated use of soaps and detergents per month
Table 3.2: Typical output fraction ratios for a commercial broiler per live weight
Table 3.3: Estimated traffic volumes (LDV trips per week)

Table 4: Potential Risks to the Biophysical Environment
Table 5: Potential Risks to Human Health and Safety
Table 6: Potential Risks to Steinthal Institutional Uses and Adjacent Properties
Table 7: Assessment Indicators
LIST OF ABBREVIATIONS

CWDM: EH  Cape Winelands District Municipality: Environmental Health
DEA&DP  Department of Environmental Affairs and Development Planning (WCP)
DAFF  Department of Agriculture, Forestry and Fisheries (national)
DA:VPH  Department of Agriculture: Veterinary Public Health
DEA  Department of Environmental Affairs (National)
DWA  Department of Water Affairs
ETP  Effluent Treatment Plant
GA  General Authorisation (in terms of the NWA)
HACCP  Hazard Analyses and Critical Control Point
HSR  Health & Safety Representative
KPI  Key Performance Indicator
MSDS  Material Safety Data Sheet
NEMA  National Environmental Management Act
NEM:WA  National Environmental Management: Waste Act
NWA  National Water Act
NWMS  National Waste Management Strategy
OEMP  Operational Environmental Management Plan
OHS  Occupational Health and Safety
OHSA  Occupational Health and Safety Act
PEO  Provincial Executive Officer
RRP  Remedial Response Plan
RPS  Remediation Response Strategy
SANS  South African National Standard
S24G  Application in terms of NEMA Section 24
SDF  Spatial Development Framework
SEB  Steinthal Estate Board
WCP  Western Cape Province
WLM  Witzenberg Local Municipality
WML  Waste Management License
WWMP  Wastewater Management Plan
SECTION 1: INTRODUCTION

1.1. INTRODUCTION

This Operational Environmental Management Plan (OEMP) forms part of Steinthal Estate’s S24G application to the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP). The application entails rectification for, and resuming of broiler farming activities and operation of a low-throughput abattoir. A parallel application is simultaneously made for a Waste Management License (WML) to operate a composting facility which would process some of the abattoir (feathers) and broiler (manure, bedding, feathers) waste.

A Draft OEMP was prepared in December 2012. The Draft OEMP focused on operational aspects, and included baseline information, provision for the management of key risks, for emergency response plans, monitoring programmes, and annual auditing against key performance indicators (KPIs).

The Draft OEMP has been updated to reflect a new maximal throughput scenario of 1700 broilers/ day, instead of the 2000/d originally proposed (see below). Further updates were made to address comments from DEA&DP: Pollution Management (see below). In addition, the Draft OEMP format has been changed to reflect uniformity among the 4 OEMPs in support of the S24G and WML applications with regard to presentation of baseline and process information, as well as compliance with legal requirements and management provisions.

1.2. BACKGROUND

Broiler slaughtering activities on Steinthal started in 2001. Initially activities were carried out in a temporary building, under a permit authorizing the slaughter of up to 50/ d. In 2001 an existing farm building (footprint 76 m²) was rezoned to Industrial II (noxious use: abattoir), and a small abattoir was established in the renovated building in 2002.

The abattoir was directly managed by Steinthal until September 2006. During this period, the facility slaughtered under permits of up to 1000/ d. Permit totals were adhered to, and operations were carried out nuisance free. Abattoir waste was however disposed of on an ad hoc manner, variously by burning or feeding rendered matter to pigs. Disposal was however carried out neatly and efficiently, and no complaints or authority notices were received. The abattoir did not form part of Steinthal’s initial S24G application in 2006 (rectification of broiler farming activities only). The Poultry Regulations (R153 of 2006) in terms of the Meat Safety Act (Act 40 of 2002) came into effect in February 2006.

In September 2006 Steinthal’s farm manager resigned, and from October 2006 the Estate’s agricultural component was leased out to a third party, Boland Poultry (BP). Under BP, 1000/ d permitted slaughter totals were routinely exceeded by up to 200/d or more. Ad hoc extensions were made to the abattoir building in 2007. Abattoir waste disposal practices lead to numerous complaints from neighbors, and a number of notices from the Cape Winelands District Municipality: Environmental Health (CWDM: EH) and the Department of Agriculture (Veterinary Services). Inconsiderate traffic management at the abattoir caused obstructions on the Schoonderzicht servitude road, leading to conflict with residential and (then) tourism activities on Schoonderzicht.
Disposal practices during 2007 included uncontrolled composting, feeding raw material to pigs, burning of feathers, and uncovered dumping in a drainage ditch. These disposal practices impacted directly on adjacent Schoonderzicht property (smoke, odours, health risk) and users of the MRC 5 Steinthal road (odours, health risk).

1.3. S24G AND OTHER APPLICATIONS

In 2008 the scope of the initial S24G application was extended to include the abattoir. An Operational EMP made provision for activities at the abattoir, until these were phased out in May 2008. The OEMP made provision for burial by trenching of offal and blood in accordance with the provisions of the Poultry Regulations, and the controlled composting of feathers at a new site. The relevant practices were carried out for a 4-5 month period in 2008. Steinthal’s rental agreement with BP was annulled in December 2008.

In May 2008 the PEO (Department of Agriculture: Veterinary Services: Public Health) indicated that no further permits would be issued until the abattoir building has been upgraded in compliance with the 2006 Poultry Regulations. Renovations to the existing structure, an extension of the activity footprint to include the yard, and provision for traffic movement would be required. The Industrial II zoning footprint would need to be extended.

Building plans for the renovated/ upgraded abattoir have been drawn up in direct consultation with Dr Christie Kloppers (Deputy Director: Veterinary Public Health (Western Cape)), and submitted to Witzenberg Local Municipality (Appendix B). A rezoning application was also submitted. The relevant submissions are pending, in turn pending the outcome of the S24G application (Taljaard – pers. comm).

The proposed upgraded facility would be classified as a low-throughput abattoir in terms of R153. A low-throughput abattoir could theoretically slaughter up to 2000/ d. To maximize potential socio-economic benefits (employment, income), the 2010 S24G DEIR (previous process) therefore included provision for resuming of activities at two scale alternatives, namely Alternative 1: historic up to 1000/d, and Alternative 2: up to 2000/d (preferred). The relevant alternatives were also proposed in the S24G DEIR submitted in December 2012 (current process). Comment from Dr Kloppers on the DEIR in February 2013 indicated that the 2000/ d scale would likely result in significantly more wastewater generation than anticipated.

According to information provided by Dr Kloppers, Alternative 2 would likely lead to a cumulative increase of above 15 000 m³/a, and trigger an onerous Category B activity in terms of the NEM: Waste Act Regulations (2009). Alternative 2 has therefore been scoped out, and Alternative 3 (up to 1700/d) is currently proposed as the preferred alternative. This OEMP has been updated accordingly. The parallel Waste Water Management Plan (WWMP) and Composting OEMP have also been updated to reflect waste streams consistent with an up to 1700/ day scenario.

In addition, the Draft Abattoir OEMP has been updated to reflect comments received from DEA&DP: Pollution Management (DEA&DP: PM) in February 2013. These comments relate to the need to make explicit provision for:

- the safe and responsible handling of solid waste,
- nuisance risk management,
- the humane treatment of birds,

Boland Environmental Consultants CC.
• potential impacts on neighbors;
• a public complaints register,
• responding to incidents and emergencies,
• ongoing soil and water monitoring programmes.

1.4. OEMP OBJECTIVES

This OEMP has been drafted taking into account the Western Cape Provincial Guideline for Environmental Management Plans (2005). The objectives of this OEMP are to provide:

- A description of the receiving environment;
- A description of the relevant activities, included associated waste streams;
- Key baseline information with regard to potentially affected receptors;
- An overview of key applicable legislation and policy;
- A management framework to address key risks;
- For recording and monitoring programmes;
- For the opening of a Complaints Register;
- For the opening of an Incidents Register;
- For a Remedial Response Strategy;
- For roles and responsibilities in implementing the OEMP;
- For annual auditing against KPIs; and
- For updating of the OEMP.

1.5. PARALLEL MANAGEMENT PLANS

This OEMP should be read in conjunction with 3 other OEMPs which have been drafted in support of the S24G and WML applications:

• The Steinthal Broiler Farming OEMP;
• The Steinthal Waste Water Management Plan (WWMP);
• The Steinthal Composting OEMP.

The Broiler OEMP covers aspects relating to the rearing of broilers on Steinthal. Overlaps with the Abattoir OEMP are with regard to shared facilities (biosecurity showers), the temporary storage (freezing) of broiler mortalities, the humane packing and transport of broilers for slaughter, and use of the Schoonderzicht access road.

The WWMP covers aspects relating to fresh water use, waste water generation and treatment, and irrigation with treated effluent on the Estate’s fields. Overlaps with the Abattoir OEMP are mainly in terms of water demand management and pre-treatment wastewater management. The WWMP includes baseline information relating to Steinthal’s soils, water uses associated with the Tierkloof stream, and water quality of the Tierkloof stream, Steinthal storage dams and the Effluent Treatment Plant (ETP) system. The WWMP makes provision for various water quality, sludge and soil monitoring programmes, as well as remedial responses to Incidents (as defined in NEMA S.30).

The Composting OEMP covers the composting of plucked feathers from the abattoir. Overlaps with the Abattoir OEMP are in terms of the screening of solid waste, the transport of feathers to the composting site, and dealing with contaminated waste returned from the composting site. The Composing OEMP also includes baseline information and management/monitoring provisions with regard to Steinthal soils. Provisions with regard to the Tierkloof
are exactly the same as in the WWTP; those for soils focus on site leachate risks and the application of compost,

1.6 ASSUMPTIONS AND LIMITATIONS

Assumptions

- The abattoir would only be taken into commission once i). S24G approval has been obtained; ii). additional rezoning has been approved; iii). building plans have been approved; iv). the abattoir has been built according to plan; and v). a slaughter permit had been obtained from the PEO (Veterinary Public Health).

- Slaughtering activities would only commence once supporting infrastructure has been put in place. This includes upgrades to the Estate’s ETP system (as per WWMP), and construction of the composting facility once a WML has been obtained.

- A maximal abattoir throughput capacity of up to 1 700/ d at up to 260 days per year has been assumed for all input and output related calculations in this report.

- The Cape Winelands District Municipality: Environmental Health would continue to monitor the quality of treated fresh water on the Estate, and no additional monitoring programme is required with regard to treated fresh water quality.

- Process information and various process throughput estimates are based on interviews with BP’s abattoir manager and other staff in 2008. It is assumed that much of the information would remain applicable to resumed activities. Provision has however been made to accommodate requirements in terms of the Poultry Regulations.

Limitations

- It is unclear at this stage whether the abattoir would be run by Steinthal directly, or by a third party. This OEMP has therefore been drafted with this uncertainty in mind. Note however that the Steinthal Estate Board (SEB) as registered land owner would ultimately remain responsible for implementation of this OEMP.

- Due to poor historic record keeping, quantific baseline data based on actual measurements and documentation could not be obtained with regard to a number of inputs and outputs at the abattoir. With the exception of a specific industry standard for abattoir waste water generation which was provided by the State Veterinarian, these gaps have largely been filled by “best estimates” which were obtained from the various past operations managers at Steinthal and slaughter information from Elgin Free Range. Process baseline values may need to be adjusted once a record of actual measurements has been established.

- For reasons discussed under Section 2.7.5. below, up-slope down-slope borehole-based groundwater monitoring would not be feasible.
SECTION 2: RECEIVING ENVIRONMENT

2.1. LOCATION

Steinthal Estate is located in the eastern Tulbagh Valley, directly to the east of the town of Tulbagh in the Witzenberg Local Municipality (WLM) of the Cape Winelands District Municipality (CWDM). The Estate is ~860 ha in extent. The ridgeline of the Witzenberg (mountains) constitutes the eastern perimeter of the Estate. Schoonderzicht Farm does not form part of the Estate. Road access to Steinthal is via the tarred Minor Road 5 (MR or “Steinthal rd”) from Tulbagh, and to Schoonderzicht via a servitude road off Steinthal road (Figure 2.1).

Figure 1: Steinthal Abattoir in local context

More than half of Steinthal consists of natural veld on mountainous terrain. The abattoir is located in the built-up mid-section of the Estate, and adjacent to the Schoonderzicht servitude road (33º 16’ 44.41"S 19º 11’ 15.92"E).

2.2. OWNERSHIP AND MANAGEMENT

Steinthal Estate belongs to the Uniting Reformed Church in Southern Africa (URC in SA). The Estate is registered in the name of one of its organs, the Steinthal Estate Board (SEB). The SEB is also responsible for the management of the Estate. It is not clear at this stage whether the SEB will directly manage the abattoir, or lease out the facility to a third party.
2.3. ZONING

The existing abattoir footprint of 76 m² is zoned Industrial II (noxious trade: abattoir). A rezoning application is currently pending to increase the Industrial II area to 929 m², as would be required for the upgraded abattoir and yard.

With the exception of a 230 m² area (essentially one building) zoned for Consent Use on Agriculture I (for the purpose of chicken rearing), the remainder of Steinthal is zoned Agriculture I and Institutional II. A Consent Use application is currently pending with regard to the other 6 existing broiler houses.

2.4. STEINTHAL LAND USES

Steinthal has been used for farming activities since around the first half of the 18th century. Institutional uses date from the early 19th century, when Witzenberg 182 was acquired by the Rhenish Missionary Society (RMS), and from the 1830’s used to settle freed slaves on Church and communally run agricultural land (Witzenberg Draft SDF, 2012). During the Apartheid era Steinthal was one of the few non-White owned commercial farms in the Tulbagh area.

![Figure 2.2. Key land uses on Steinthal](image)

Current institutional use (core use) is comprised of a Children’s Home, a School, and a Skills Development Centre. These are managed separately from the farming component. The farming component and Estate lands (including Institutional grounds) are managed by the
Steinthal Estate Board (SEB). From its inception in the 1830’s, agricultural activities have been one of the key means of financially supporting institutional activities on the Estate. The broiler farming and abattoir are envisaged as a funding mechanism for existing activities.

Agricultural

Farming activities have been dormant since 2008, pending outcome of the S24G application. Traditional activities included dairy cattle, the cultivation of fodder crops, small-scale commercial broiler farming, and the operation of a small poultry abattoir.

Resumed operations would include broiler farming (~163 800 broilers per year), operation of a low-throughput poultry abattoir (up to 1 700 broilers/ day), a dairy herd and milking parlor, and fodder cropping activities. At a later stage, vegetables, orchards and vineyards may also be investigated for establishment.

Institutional

Approximately 400 learners, the majority of which have special education needs, attend the Steinthal School. Around 150 learners who have been committed by courts reside in 3 dormitories at the Children’s Home. A further 200 learners reside in two school hostels on the Property. Approximately 40 people are currently employed at the school and an additional 40 at the Children’s Home. One dormitory is used to accommodate approximately 40 learners with disabilities and another dormitory is used as a camping site. A Skills Development Centre is rented to the Department of Education as a School of Skills.

Residential

Three staff households associated with the School and Children’s Home reside on the Estate. In addition, 12 households associated with farming activities on the Estate reside on the Estate (area shaded yellow in Figure 2.2.).

2.5. STEINTHAL INFRASTRUCTURE

The abattoir would be supported by the following infrastructure on Steinthal:

2.5.1. Fresh water

Fresh water would be obtained from the Estate’s central fresh water treatment plant. Steinthal currently has a fresh water use allocation of 360 000 m³/a. Water for potable purposes is exclusively drawn from the uppermost storage dam on the Estate, and treated to the SANS Drinking Water Standard (SANS 241). Water quality inspections are currently carried out by the CWDM: EH.

2.5.2. Wastewater (ETP)

Wastewater would be treated at the Estate’s existing ETP. Steinthal currently has a General Authorization (GA) in terms of the National Water Act (NWA) to treat up to 11 813 m³/a, and to dispose treated effluent as irrigation at a rate of up to 53 m³/d. The ETP system is currently sludged-up. Proposed upgrades include de-sludging, deepening of Ponds 1 and 2, and fitment of an additional jet aerator. The upgraded system would allow for increased waste water generation from the revised up to 1700/d scenario (see: WWMP Section 3).
2.5.3. Composting facility

Steinthal is currently applying for a WML to establish and operate a composting facility on the Estate. The facility would accept feathers from the abattoir for composting, but no other abattoir waste. The facility would be designed according to a site engineering plan which makes structural provision for a G-lined surface, on-site leachate/ run-off collection and containment, and run-on cut-off trenches.

2.5.4. Site Access

Steinthal Estate is accessible from 2 points off the MRC 5, namely via the main entrance to the Estate, and via the Schoonderzicht servitude road. Only movement between the three upper broiler houses (3-5) and the abattoir would need to make use of the Schoonderzicht road. All other activities associated with the abattoir could access the site via Steinthal’s main entrance and existing internal road network.

2.5.5. Eskom lines and servitudes

An Eskom 11 kV servitude and line are located directly to the north of the abattoir. The abattoir upgrade plan (Appendix B) makes provision for the extension of the abattoir building and yard towards the south, i.e. away from the servitude. No other servitudes are in meaningful proximity to the abattoir.

2.6. ADJACENT LAND USES

The Tulbagh valley is an important agricultural area. Orchard crops, viticulture, and mixed farming, including the cultivation of small grains and fodder crops and dairy cattle are key activities. Commercial-scale broiler farming and abattoir activities are currently limited in the Tulbagh area, but large industrial scale broiler farming facilities and abattoir are located in the Romansrivier/ Witrivier area south of Wolseley ~23 km to the south of Steinthal (Witzenberg Draft SDF, 2012). The area around Steinthal is mainly used for mixed farming.

Owners typically reside on their properties. Heritage/ scenic tourism is a key emerging land use in the immediate Tulbagh area. Other land uses on Steinthal Estate provide the immediate land use context, and are comprised of existing farming activities, institutional, and residential uses. The 2012 Draft Witzenberg Spatial Development Framework identifies Tulbagh as agricultural/ tourism development node. Provision is made for the eastward expansion of the Tulbagh urban edge (10-15 year).

Adjacent properties

A total number of seven landowners are situated adjacent to Steinthal. All the relevant properties are currently primarily zoned Agriculture I. Uses include primary agriculture and rural residential. Vineyard and mixed farming (e.g. dairy cows and fodder crops) predominates in the Steinthal area.

Key potentially affected receptors are mainly associated with properties located to the north-east (Witzenberg, Bella Vista) and south-east (Schoonderzicht). Residential receptors on Bella Vista and Schoonderzicht are in closest proximity to the abattoir, with the Horing residence on Schoonderzicht 350 m the nearest, and other houses >530 m.
Figure 2.3. Abattoir, broiler houses (1-6) and dairy in relation to neighbors.

The relevant properties all make use of the MRC5 (Steinthal road) to gain primary access to their properties. A servitude road across Steinthal currently provides sole access to Schoonderzicht and its residents. The road passes directly to the east of the abattoir (Figure 2.3.).

A portion of Kruys Vallei 187 located inside the Draft Tulbagh urban edge (Figure 2.1), currently zoned Agriculture is currently proposed for residential development. The relevant portion is located >1.5 km north-west of the abattoir, and largely screened from it by an intervening ridgeline.

2.7. BIOPHYSICAL ENVIRONMENT

Steinthal is located in the eastern aspect of the Tulbagh valley. The Witzenberg mountains crest line demarcates the eastern boundary of the Estate. The fertile Tulbagh valley has been extensively used for the cultivation of cereal, viticulture and fruit crops for a number of centuries, and is consequentially largely a disturbed, man-made landscape. Natural vegetation and associated habitat are essentially limited to the upper, less accessible slopes of the Winterhoek and Witzenberg mountains.

2.7.1. Climate and rainfall

The climate is typically Mediterranean, characterized by hot, dry summers and relatively mild, wet winters. Daytime summer (November until March) maximum temperatures are typically in the 30 ºC’s, but may on some days (mainly January and February) reach highs
of 40 ºC. Winter maximum daytime temperatures can reach 22 ºC with minimums at or just above freezing point when snow covers adjacent mountains. South easterly winds dominate in summer (Agri-Logix, 2010).

Information provided by the South African Weather Service indicates that records compiled by the Tulbagh weather station stretch back to 1878. The driest year on record was 1971 (276 mm), and the wettest 1879 (748 mm). The record indicates that three of the ten wettest years over the past three decades have occurred since 2006 (viz. 2006-8), with 2008 the wettest year for the 30 year period (624 mm). The lowest rainfall year for the 30 year period 1981 – 2011 occurred in 1997 (311 mm), with 2003-2005 three of the six driest years since 1981. Only limited official evaporation records are available for the Western Cape, not for Tulbagh, and only up to 1987 for the nearest location, viz. Worcester (De Jager – pers. comm).

2.7.2. Topography

The Witzenberg mountains crest line demarcates the eastern boundary of the Estate. The approximate height of the Estate is about 1 100 m above sea level and the terrain gradually slopes downwards from east to west. The abattoir is located on a relatively level terrain.

2.7.3. Geology

Steinthal is mostly underlain by the Porterville Formation of the Malmesbury group shales, as evidenced by scattered outcroppings on the Estate (AgriLogix, 2010). The Malmesbury group is the oldest geological formation in the Witzenberg region and comprises mainly phyllitic shales and fine-toned medium-grained greywacke, and dates back to around 550-540 million years ago. This formation is mostly confined to the Tulbagh area, where it occupies the base of the valley (Witzenberg, 2012: Map 6).

The Worcester Fault (which runs from Nuwekloof Pass, southwards to Robertson and further east) affects the Tulbagh area (Witzenberg, 2012). Tulbagh was hit by a 6.5 (Richter) magnitude earthquake in 1969, the largest ever to be recorded in South Africa. The risk is unpredictable and applies equally to all land uses in the Tulbagh valley and surrounds, and is therefore not specifically addressed in this OEMP.

2.7.4. Soils

The 2012 Witzenberg Draft SDF (Map 9) indicates that the arable portions of the Tulbagh Valley, including Steinthal, consists of poorly developed, shallow soils, in situ, underlain by parent material (Witzenberg, 2012). The abattoir would be based on an existing site in the historically built-up mid-section of the Estate. No specific information is available for the site, but the findings of the Soils and Wastewater Irrigation Study (2012) indicate that irrigated soils lower down on the Estate (near the urban edge) are sandy loams and suitable for irrigation agriculture, while the soils in the mid-section of the Estate are more typically clays, with elevated levels of manganese and phosphorus (EnviroScientific, 2012). The soils in the built-up mid-section are not considered of significant agricultural potential.

2.7.5. Groundwater

The Upper Berg and Breede areas around Tulbagh, Ceres and Wolseley are associated with relatively small inter-granular aquifers with moderately to high yields, reaching between 0.5 -5 l/s (litres per second). Ground water quality in the Tulbagh and Wolseley valleys is generally classified as brackish (79-300 mS/m) (Witzenberg, 2012, Map 15). Consequently,
farms located in the Steinthal area typically either make use of mountain runoff or municipal scheme water instead of boreholes for potable uses.

A single active borehole is located on Steinthal, ~30 m north-west of the abattoir. The borehole has a registered allocation of 20 000 m³/a. However, the hole is not fitted with a pump, and no water has been drawn from it for approximately 2 decades. During a DWA site visit in February 2013 it was confirmed that the single borehole would not suffice to implement an upstream-downstream borehole-based groundwater monitoring programme on Steinthal (see Section 2 of Waste Water Management Plan for more details).

2.7.6. Natural watercourses, wetlands and seeps

Steinthal is located within the Berg River Catchment Management Area (G10E). Only one significant natural watercourse, the Tierkloof stream, is located on Steinthal. Flow is mainly associated with the winter rainfall period and after rainfall events. No wetland areas or seeps have been identified on the Property (Buntman – pers. comm).

![Figure 2.4. Abattoir in relation to Tierkloof and storage dams.](image)

**2.7.7. Tierkloof stream**

The Tierkloof stream is a small, non-perennial tributary of the Klein Berg River (Figure 2.4). Virtually the entire course of the main stream (~9.20 km) is located on Steinthal. The stream joins up with the Klein Berg River inside the Tulbagh urban edge. The final ~1.8 km is inside the urban edge. No weirs or dams, etc have been constructed on the stream. The stream is traversed by the MR 5 Steinthal road in two places. The relevant sections pass through cement culverts underneath the road.
A system of off-stream dams stores water from the stream on Steinthal. An additional dam is located on Schoonderzicht. Only Steinthal currently draws water from the Tierkloof stream. Abstraction takes place where the Tierkloof reaches the lower foot slopes of the Witzenberg, well above any existing and proposed farming and institutional activities.

Tributaries are located on Schoonderzicht, Kruys Vallei and Sagtevlei. Associated farming and residential activities on these properties located either upslope from waste water generating activities on Steinthal, or within the Tierkloof’s catchment, but on the other bank of the stream relative to Steinthal.

2.7.8. Freshwater storage dams

No natural dams or lakes are located on Steinthal. 9 Manmade dams are located on the Estate. With the exception of the uppermost storage dam (Figure 2.4.), all the dams store only irrigation water. Water is primarily drawn from the Tierkloof. The 9 dams are interconnected, and provide for a registered use of 340 000 m³/a (see Section 5 of WWMP). The Klipfontein (irrigation storage) dam is located directly to the north-west of the abattoir site.

2.7.9. Vegetation

Natural vegetation on Steinthal and surrounding farms is essentially limited to steeper terrain upslope of the relevant activities, and consists of Mountain Fynbos on edaphic, sandstone and shale derived soils. Remnant patches of historically disturbed and degraded Renosterveld occur on clayey patches associated with shale outcroppings at mid-elevation.

According to Mucina & Rutherford (2006), the vegetation type on the relevant portion of Steinthal is classified as Breede Shale Renosterveld. Mucina & Rutherford lists the vegetation type as Vulnerable, but it is no longer listed as Vulnerable in the 2011 National List of Threatened Ecosystems (G 34809, GRN 1002).

2.7.10. Habitat and Fauna

The SANBI Witzbenberg Critical Biodiversity Areas Fine Scale Map indicate that the middle portion of Steinthal Estate consists mainly of NNR (“No Natural Area Remaining”), but with some ONA (“Other Natural Areas”), mainly associated with ephemeral drainage lines (www.sanbi.org/fsp/witzenberg/CBA.asp).

The Tierkloof stream, may provide habitat to small mammalian carnivores such as mongooses. Opportunistic passerine scavengers such as pied crows and medium-sized raptors such as buzzards (Buteo spp.) are also common in the region. Due to proximity to the urban edge, occasional stray dogs and feral cats may also occur. Norwegian rats and mice have been known to occur on Steinthal.

2.7.10. Archeological and historical

No known archeological or paleontological sites are located on Steinthal. Permanent settlement of the Tulbagh Valley dates to the period 1700-1740. Historical houses in Tulbagh, and picturesque orchards against the scenic backdrop of the Winterhoek and Witzenberge has made the Tulbagh valley into a key provincial tourist destination. Tulbagh town currently has the highest concentration of listed heritage structures in South Africa (38 for a town of ~6 500).
The only national monument located outside of Tulbagh is on Steinthal, namely the Rhenish Missionary Church (1834). The listing is associated with the erection and use of the building as church to emancipated slaves on the Estate. The Church is currently used as an interpretation centre by the Steinthal school, but receives virtually no tourists (Dreyer – pers. comm). The Church is located within the Institutional/ administrative cluster of Steinthal (~230 m south-west of the abattoir).
SECTION 3: OVERVIEW OF ACTIVITIES

3.1. INTRODUCTION

The description below aims at providing a broad overview of typical activities associated with a low-throughput abattoir. The facility would process live birds into whole carcasses, as well as edible offal and two solid waste streams. The abattoir would not accommodate any further on-site processing activities (e.g. portioning, packaging, rendering).

Slaughtering operations will be carried out during weekdays (Monday to Friday), between 7h00 and 18h00. Assuming a five day week, this would translate into ~ 260 slaughtering days per year.

3.2. UPGRADED ABATTOIR

The existing abattoir would have to be upgraded to meet the provisions of the 2006 Poultry Regulations. Plans for the new facility have been drafted in consultation with the State Veterinarian (Appendix B). The upgraded abattoir would make provision for, amongst others, the following:

- Structural capacity to implement all process requirements in terms of the Poultry Regulations;
- Bio-security control;
- Staff facilities (lockers, showers, eating area);
- On-site parking, and
- Access control.

3.3. OVERVIEW OF PRODUCTION PROCESS

The overview is based on interviews with the Steinthal abattoir manager in 2008 as well as the flow pattern derived from the process requirements of the 2006 Poultry Regulations.

3.3.1. Receiving

Live birds would transported to the facility at around 7h00 a.m. on slaughter days. Birds from Steinthal would be transported by truck, bakkie or tractor-drawn open bed trailer via Steinthal’s internal road network. Birds from external growers would be transported by truck or bakkie along the Schoonderzicht access road.

Ante-mortem inspection would be carried out during unloading. Dead birds would be immediately disposed of in an on-site container. Injured birds would be singled out for priority slaughter. Damaged tissue from such birds would be discarded as condemned material. Sick birds would be euthanized in the killing area and disposed of in a bin provided for condemned material on the site.

Birds would typically be dispatched in perforated poly-propylene (PP) crates (typically 3 or 8 birds per crate, depending on crate size). Article 64 (3) of the 2006 Poultry Regulations stipulates that birds must be slaughtered within a 4 hour period from arrival at the facility.
3.3.2. Killing (Dirty area)

At a typically low-throughput abattoir, birds are unpacked crate by crate, and individually stunned by means of an electric stunner. Immediately after stunning, birds are passed through a wall hatch into the killing area. Empty crates are collected for dispatch to the washing area.

Inside the killing area the stunned bird’s carotid artery is severed manually by means of a knife with a non-serrated blade. Birds are then placed upside down inside a conical, compartmentalized metal device in order to bleed to death. Birds are left to bleed for approximately 3 minutes. Blood collects in a drip trough underneath the device.

Bled birds are next placed inside a 200 liter scalding tank. The purpose is to loosen feathers prior to plucking. Up to 8 birds at a time are placed inside a perforated light plastic bin and manually dunked for approximately 3 minutes. Water inside the tank is kept at a temperature of between 54 and 57ºC. Detached feathers are scooped out of the tank from time to time and deposited in large (50 kg feed = ca. 0.1 m³) mesh-weave plastic bags temporarily stored adjacent to the receiving platform.

Batches of scalded birds are next manually placed inside an electrically operated plucker. The plucker is fitted with a lid, and equipped with sets of flexible rubber protrusions inside the chamber which beat against the carcasses in order to detach the feathers. The feathers are concentrated inside the chamber by means of centrifugal force. Feathers are periodically collected and deposited into large (0.1 m³) mesh-weave plastic bags temporarily stored adjacent to the receiving platform.

Plucked birds are next manually hooked upside down by their hocks onto stainless steel shackles suspended from a motorized overhead dressing rail. Feet and heads are manually severed by means of non-perforated knives. Heads would be discarded into a dedicated container. Feet are collected in heavy duty PP crates placed on stainless steel tables for periodic dispatch into the packing chiller.

3.3.3. Evisceration (Clean area)

Provisionally dressed carcasses enter the evisceration area by means of the motorized overhead dressing rail through a hatch in the wall with the killing area. An inspection point is located immediately adjacent to the hatch. A ventral slit is manually made into each carcass by means of a non-serrated knife. Carcasses are then individually inspected by a qualified inspector. Rejected carcasses are disposed of into a large, leak proof plastic bin located at the inspection point.

Accepted carcasses are then manually eviscerated by means of eviscerating spoons. The offal is washed in running water, and manually separated into stainless steel trays holding hearts, livers, spleens, gizzards, intestines and fat. Gizzards are manually cut open and the contents rinsed out. Necks are manually severed from the carcasses, washed and stored separately. Excess fat from the skin around the thoracic vent is removed from carcasses, washed and stored separately.

The different edible offal components are temporarily stored in deep stainless steel trays on stainless steel tables prior to packing into separate PP product crates for dispatch to the packing chiller. Lung tissue, kidneys, ovaries and other inedible organs are washed out of the carcasses. Dressed carcasses pass into the packing area by means of the motorized overhead dressing rail through a wall hatch.
3.3.4. Packing and chilling (Clean area)
Dressed carcasses are washed under running water and specks of clotted blood, fat, etc. removed. Carcasses are then packed into PP product crates. No portioning or further processing is done at the facility. An ambient temperature of 10 ºC is maintained in the area.

Packed carcasses and various offal components destined for consumption are stored in separate areas in a chiller room adjacent to the packing area. The chiller room would be sealed off from the packing area by means of a thermo-proofed stainless steel door, and kept at an ambient temperature of <4 ºC. Product crates are color coded. All floor crates are coded red, and yellow crates are used for stacking on top.

3.3.5. Product dispatch
The various product components would be stored overnight in the chill room. The product would be collected around 5 am Tuesdays to Saturdays, packed onto a truck, and transported to buyers for further processing.

3.3.6. Slaughter waste
This waste fraction includes inedible offal (heads, lungs, gallbladders, etc), blood and condemned material. During the dressing process, solid waste and blood would be separated from the edible fraction, and temporarily stored in suitable containers at the various work stations. At the end of the working day, accumulated offal and blood would be transferred to suitable containers for temporary freezing and storage in a dedicated waste freezing facility in the abattoir. Accumulated waste would be safely disposed off-site 2-3 times per week.

Plucked feathers would be transported via the Estate’s internal road network to the proposed composting facility at the end of every slaughter day. The material would be transported to the composting site in mesh-weave bags, by means of tractor-drawn trailer. Empty plastic bags would be returned to the abattoir sites for reuse.

3.4. PROCESS INPUTS

3.4.1. Live chickens
Assuming a maximum of 260 slaughter days per year, the proposed abattoir would process up to 442 000 broilers per year (maximum). All of the broilers reared on Steinthal would be slaughtered at the facility (~163 800 broilers per year). The balance (~278 200) would be slaughtered on behalf of external growers.

3.4.2. Packaging materials
Chickens will be transported onto site in reusable PP crates. Product will be dispatched in reusable PP crates. No other packaging materials would be required.

3.4.3. Fresh water
Treated fresh water would be required for cleaning, washing and disinfection purposes. Water would be obtained from the Estate’s central fresh water treatment plant. Based on an industry standard of up to 15 liters per bird at 2006 Poultry Regulations-complaint low-
throughput abattoirs, up to 25.5 m³/ day (6 630 m³ year) of treated fresh water would be required at the upgraded abattoir.

### 3.4.4 Soaps, Disinfectants and Detergents

Detergents and disinfectants will be used for a number of purposes. These include:

- Anti-bacterial soap for the washing of crates, equipment and for staff use (showers, hand wash basins, etc);
- A bactericidal, de-emulsifying substance for washing carcasses and the edible offal fraction;
- Surface cleaning detergents for cleaning floors, walls and work surfaces during the course and at the end of the working day.

Based on historic use at the abattoir, it is estimated that the volumes listed in Table 1 below would be required. Note that volumes for a 1000/ d facility have been multiplied by a factor of 1.5 for a 1 700/ d facility, as it is assumed that the same equipment and surfaces will have to be cleaned irrespective of increased throughput:

#### Table 3.1. Estimated use of soaps, disinfectants and detergents (per month)

<table>
<thead>
<tr>
<th>CAPACITY</th>
<th>SOAPS</th>
<th>DISINFECTANTS</th>
<th>DETERGENTS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 000/ day</td>
<td>50 l/ m</td>
<td>75 l/ m</td>
<td>150 l/ m</td>
<td>275 l/ m</td>
</tr>
<tr>
<td>1 700/ day</td>
<td>75 l/m</td>
<td>112.5 l/ m</td>
<td>225 l/ m</td>
<td>412 l/ m</td>
</tr>
</tbody>
</table>

Historic operations made use of Dermosan soap, SurehandPlus detergent, AND Chlorpower. The MSDS for these products indicate that none pose any risk to the environment, and that the containers are suitable for disposal as general waste. Other products included Divobac Liquid hypochlorite disinfectant which does pose a risk to aquatic organisms in undiluted form, and TR91 alkaline floor cleaner, which, undiluted may cause localized soil alkalization.

Provided appropriate cleansing products are properly handled and used, the waste water stream entering the ETP would essentially consist of bio-degradable effluent, and would contain little to no chemical residues.

### 3.4.5. Electricity

Electricity for processing equipment, lighting, cleaning and chilling would be obtained from an existing connection to the Estate’s internal electricity grid. The Estate is serviced by ESKOM. Based on historical records, average electricity consumption for a 1000/ d facility is

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1 Material Safety Data Sheet 1C027000 (JohnsonDiversey; 07/07/2002 revision 2); Material Safety Data Sheet 1C315000 (JohnsonDiversey; 27/07/2000 revision 1); Material Safety Data Sheet 1D078000 (JohnsonDiversey; 29/07/2002 revision 2); Novartis AH, October 2005.

2 Material Safety Data Sheet 1A063000 (JohnsonDiversey; 19/07/2003 revision 2); Material Safety Data Sheet 1D455000 (JohnsonDiversey; 08/07/2002 revision 2).
approximately 3 300 kWh per month, or an average of 39 600 kWh per year. This figure may rise to 5 610 kWh per month in a 1700/ d scenario.

3.5. PROCESS OUTPUTS

Table 3.2 provides an overview of typical output ratios associated with the commercial slaughter of broilers.

Table 3.2. Typical output fraction ratios for a commercial broiler per live weight

<table>
<thead>
<tr>
<th>Product and edible by-products</th>
<th>EDIBLE</th>
<th>% of live weight</th>
<th>Total %</th>
<th>DISCARDED</th>
<th>% of live weight</th>
<th>Feathers</th>
<th>% of live weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dressed carcass</td>
<td></td>
<td>65%</td>
<td></td>
<td>Blood</td>
<td>11%</td>
<td></td>
<td>(Dry weight) 2%</td>
</tr>
<tr>
<td>Carcass total</td>
<td></td>
<td>65%</td>
<td></td>
<td>Heads</td>
<td>2.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red offal</td>
<td></td>
<td>7.4%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feet</td>
<td></td>
<td>4.4%</td>
<td></td>
<td>Other offal</td>
<td>2.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washed intestines</td>
<td></td>
<td>5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sellable by-product total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td></td>
<td><strong>81.8%</strong></td>
<td><strong>16.2%</strong></td>
<td></td>
<td></td>
<td><strong>2%</strong></td>
</tr>
</tbody>
</table>

(Sources: Pieterse - pers. comm; Bester – e-mail (20/07/09).

Live weight of broilers of slaughter age depend on a number of factors, and can range between 1.5 kg and 2.5 kg. An average live weight of 2.3 kg may be regarded as typical for birds of approximately 42 days of age. Calculations in this OEMP will be based on this weight (2.3 kg).

3.5.1. Product

The sellable product consists of dressed carcasses, red offal (liver, heart, spleen, gizzard), feet and washed intestines. Together these fractions constitute approximately 82% of the broiler by live weight. Assuming a maximum of 260 slaughter days per year and an average live weight of 2.3 kg per broiler, a 1 700/ d throughput scenario would produce an estimated 3 206.2 kg (~3.2 t) per day, and 883 612 kg (~884 t) sellable product per year.

3.5.2. Slaughter waste and blood

The solid waste fraction (excluding feathers) consists of heads and inedible offal (gallbladders, kidneys, lungs, etc) and constitutes approximately 5% of the broiler by live weight. The blood constitutes a further 11% per live weight, bringing the discarded fraction to a total of approximately 16% per live weight. Assuming a maximum of 260 slaughter days per year and an average live weight of 2.3 kg per broiler, a 1 700/ d scenario would produce an estimated 0.67 t per day, or 14.4 t per month. All the relevant material is
proposed for temporary storage in a dedicated freezer at the abattoir, and disposal 2-3 times per week at a licensed off-site composting facility, Tommi’s Abattoir (Hermon).

3.5.3. Condemned material

Condemned material includes birds which died before slaughter, euthanized birds, as well as carcasses which have been rejected during inspection. For typical operations, such material constitutes on average approximately the equivalent of 1% of birds presented for slaughter. At up to 1700/ d, this would generate up to 17 birds per day – i.e. up to 39.1 kg/ day, or 0.847 t/ month. Tommi’s would not be able to accommodate condemned material and carcasses. Such waste would be frozen together with broiler mortalities, and disposed of weekly at a suitable licensed landfill site (e.g. Vissershok in Cape Town).

3.5.4. Plucked feathers

Approximately 2% per live (dry) weight per broiler consists of feathers. In order to facilitate plucking, killed broilers are dunked in scalding tanks. In consequence, the discarded waste stream consists of wet feathers at the time of disposal. Dunking considerably increases the weight of the feather waste. Measurements carried out at Steinhthal abattoir in 2008 indicated an increase in weight by as much as 10% of live weight, thus yielding a saturated wet weight of approximately 12% of dry live weight per broiler. Measurements further indicated that 1000 kg of wet feathers equates approximately 1 m³ of waste.

Calculations here are based on saturated weight. As a result, the values are upwardly biased and indicate maximal volumes. Assuming a 260 slaughter day year, the relevant volumes generated by broilers of an average size of 2.3 kg would be up to ~552 kg/ day = 143 520 kg/ year (= ca. 144 t/a = ca. 144 m³/ year). The feathers would be disposed of on a daily basis at the proposed Steinhthal composting facility.

3.5.5. General waste

As no packaging is involved, the operation is likely to produce very little general waste. Typical waste items are likely to include broken PP crates (estimated 3-5 per week), empty 25 liter HDPE containers (detergents and disinfectants), and scraps and associated packaging generated by laborers. Where possible, service providers should be asked to reuse spent HDPE containers. Waste which cannot be recycled would be disposed of together with the rest of the Estate’s general domestic waste via Municipal collection.

3.5.6. Hazardous waste

With the exception of bio-waste dealt with above, no classified hazardous waste would be generated by the operation. Material Safety Data Sheets (MSDS) would be kept for all chemical products used at the facility, and in as far as possible, all products with any hazard rating would be avoided. The use of poisons for pest control would be exclusively limited to control programmes implemented and serviced by an accredited service provider.

3.5.7. Waste water

Wastewater generation would essentially be the same as fresh water input, namely up to 25.5 m³/ d, or up to 6 630 m³/a. It is anticipated that daily disposal would be at a constant generation rate. Abattoir waste water would account for up to 46% of the Estate’s total wastewater generation of 14 543 m³/a.
As recommended in the 2001 DWAF Guidelines for the Handling, Storage and Treatment of Abattoir Waste, blood and slaughter scraps would be separated at source, and wastewater screens and traps fitted to screen out solids.

Wastewater would be treated at the Estate’s upgraded ETP. Retention times and oxygen transfer rates associated with the upgraded ETP would provide more than sufficient treatment and storage capacity to accommodate annual and daily peak (63 m³/a) figures in line with a contribution of 6 630 m³/a based on an up to 1700 /d scenario (see WWMP, Section 3).

3.6. TRAFFIC FLOWS

Traffic flows to the abattoir would be mainly associated with live broilers brought in from the Estate’s broiler houses, or from external growers. Table 3.3 provides an overview of associated trips by large delivery vehicle (LDV).

Trips generated in connection with live chickens from external growers have been calculated on the basis of shortfalls in Estate-grown broilers, viz. 96 200 per year (1000/ d facility), and 278 200 per year (1700/ d). Trips associated with the shortfalls have been evenly distributed over the theoretical number of total yearly slaughter days (260) in order to arrive at weekly averages. Broilers grown on Steinthal Estate will be transported to the facility via Steinthal’s existing internal road network and would not require any in- or outbound trips.

Table 3.3: Estimated Traffic volumes (LDV trips per week)

<table>
<thead>
<tr>
<th>Throughput</th>
<th>Live chickens (external growers)</th>
<th>Product dispatch</th>
<th>Slaughter waste</th>
<th>Weekly total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000/ day</td>
<td>4 trips</td>
<td>10 trips</td>
<td>2-4 trips</td>
<td>18-20 trips</td>
</tr>
<tr>
<td>1700/ day</td>
<td>14 trips</td>
<td>17 trips</td>
<td>4-6 trips</td>
<td>44-46 trips</td>
</tr>
</tbody>
</table>

Provisions are made in Section 6 below to ensure that traffic movement along the Schoonderzicht servitude is not adversely affected.

3.8. LABOR

Historical employment at Steinthal abattoir indicates the proposed upgraded low-throughput facility would provide a total of 15- 22 direct permanent employment opportunities. In addition to a manager, two qualified inspectors would be required. Until operations were suspended in 2008, most of the positions were filled by Coloured women from nearby Tulbagh town. It is anticipated that most of the positions would again be filled by the same group.
SECTION 4: BASELINE INFORMATION

Please refer to Section 4 of the WWMP for baseline information with regard to the following:

- ETP treated water quality;
- ETP sludge levels and quality;
- Tierkloof water quality (upstream and downstream sample points);
- Tierkloof water use profile;
- Irrigated soils physical and chemical characteristics, and
- Control soils physical and chemical characteristics.

Sampling, recording and monitoring programmes for these aspects are provided in the WWMP (Section 6). Figure 4.1. below provides an overview of the location of specified monitoring points:

- Tierkloof upstream-downstream monitoring points and 3 contingency sample points (D-F);
- Treated wastewater quality (Pond 6) and sludge composition (Pond 1) at the ETP;
- And irrigated and control soils. In addition, provision is made for a second control soil adjacent to the composting site (orange dot).

Figure 4.1. Overview of WWMP and Composting OEMP monitoring points.
SECTION 5. APPICABLE LEGISLATION

5.1. INTRODUCTION

This section outlines key legislation applicable to the operation of the proposed low-throughput abattoir. Please refer to the parallel WWMP and Composting OEMP with regard to legislation concerning the treatment and disposal of treated effluent and disposal by composting, respectively.

The SEB, as the registered land owner, is finally responsible for ensuring legal compliance of activities on Steinthal. At the same time, the operator of the abattoir (the SEB or a third party), would have defined responsibilities in terms of the Meat Safety Act, Animal Diseases Act, Occupational Health and Safety Act and Protection of Animals Act, and the relevant Regulations in terms of these Acts.

5.2. NEMA (ACT NO. 107 OF 1998)

The National Environmental Management Act (Act No. 107 of 1998 – as amended – “NEMA”) puts into effect a broad management framework with regard to the implementation of the Environmental rights outlined in section 24 of Chapter 2 (“Bill of Rights”) of the Constitution.

Section 28 of NEMA provides for a general Duty of Care towards the environment, which obliges every person who causes, has caused or may cause significant environmental degradation to take reasonable measures to prevent such degradation from occurring, continuing or recurring (section 28 (1)). The obligation to take reasonable measures is imposed on, amongst others, a land owner, a person in control of land or a person who has the right to use the land on which relevant activities are located (section 28 (2)).

In terms of Section 30 the Steinthal Estate Board is obliged to report “all incidents” to the relevant authorities. An “incident” is defined in S. 30 (1) (a) as an unexpected sudden occurrence, including a major emission, fire or explosion leading to serious danger to the public or potentially serious pollution of or detriment to the environment, whether immediate or delayed. Key potential incidents at the proposed composting facility are likely to include:

- Fires;
- accidental releases of untreated waste or wastewater into the environment (major leaks or spills);
- accidental releases of hazardous substances chemicals into the wastewater system.

Section 30 (3) obliges Steinthal to forthwith establish the nature of the incident; any risks posed by the incident to public health, safety and property; the toxicity of substances or by-products released by the incident; and any steps that should be taken in order to avoid or minimise the effects of the incident on public health and the environment, and notify the following parties accordingly: DEA&DP, South African Police Services, local fire fighting service (if applicable), any relevant provincial head of department or the local municipality, as well as all persons whose health or property may be affected by the incident.
Section 30 (4) obliges Steinthal to, as soon as reasonably practicable after knowledge of the incident, take all reasonable measures to contain and minimise the effects of the incident, including its effects on the environment and any risks posed by the incident; undertake clean-up procedures to remedy the effects of the incident; and assess the immediate and long-term effects of the incident on the environment and public health.

Section 30 (5) obliges Steinthal to report, within 14 days of the incident having taken place, the following information to the same parties identified in 30 (3):

- the nature of the incident;
- the substances involved and an estimation of the quantity released and their possible acute effect on persons and the environment and data needed to assess these effects;
- initial measures taken to minimise impacts;
- causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure; and
- measures taken and to be taken to avoid a recurrence of such incident.

Sections 30 (7) provide for appropriate responses from the relevant authorities, including the issuing of verbal and written directives. Section 30 (6) provides that Steinthal must undertake all response/remedial measures specified by the authorities within stipulated timeframes.

5.2.1. NEMA Basic Assessment Regulations, R386 of 2006

The NEMA Regulations provide schedules of listed activities which would require environmental assessment processes to be undertaken prior to the start of activities. Activities listed in R386 would require a Basic Environmental Assessment to be undertaken. The abattoir triggers the following scheduled activity:

1 (g) The construction of facilities or infrastructure, including associated structures or infrastructure, for the slaughter of animals with a product throughput of 10 000 kilograms or more per year.

Any conditions which may be set by DEA&DP in the record of decision must be implemented.

5.2.2. NEMA Basic Assessment Regulations, R544 of 2010

New NEMA Regulations came into effect in August 2010. The Schedule in R386 of 2006 is repealed by R544 of 2010. R 386. The current application however predates the promulgation of R544. In terms of R544 (3) the construction of facilities or infrastructure for the slaughter of animals with product capacity exceeding i). 50 poultry a day is a listed activity. This provision essentially replaces 1 (g) of R386 (2006).

5.3. WATER USE AND IRRIGATION WITH TREATED EFFLUENT

Implementation of water legislation is primarily administrated by the Department of Water Affairs (DWA), with functions delegated to the Western Cape DWA.

The National Water Act (NWA) provides a framework for the equitable allocation and sustainable management of water resources. Both surface and groundwater sources are redefined by the Act as national resources which cannot be owned by any individual, and rights to which are not automatically coupled to land rights, but for which prospective users must apply for allocation and register as users. The National Water Act also provides for measures to prevent, control and remedy the pollution of surface and groundwater sources.

Section 19 outlines measures for the prevention and remediation of pollution, and Section 20 measures in response to emergency incidents. The measures outlined in S. 20 are essentially the same as NEMA S.30.

Section 21 identifies water users and uses which need to be registered and licensed, including: (b) storing water, (e) engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1), (g) disposing of waste in a manner which may detrimentally impact on a water resource.

5.3.2. General Authorization, GN 399 of 2004

The authorisation permitted in terms of Schedule 2 replaces the need for a water user to apply for a licence in terms of the NWA, provided that the irrigation is within the limits and conditions set out in this authorisation. Section 2 (5) provides that once registered, the user would need to confirm registration and use every five years.

Steinthal is currently (as of April 2013) authorized to treat and dispose of (by irrigation) up to 63 $m^3$/d (peak flow), at an annual rate not exceeding 17 713 $m^3$, and provided that irrigation only takes place during the summer months, and further adheres to GA Schedule 2 conditions and parameters. Refer to the WWMP Section 5 for a detailed overview of GN 399 and management implications for Steinthal.

5.4. WASTE AND WASTEWATER

Implementation of NEM:WA and waste legislation is primarily administrated by the Department of Environmental Affairs (DEA), with functions delegated to the Western Cape DEA&DP.

5.4.1. NEM: WASTE ACT (Act 59 of 2008)

NEM: WA is one of a number of acts which focuses on applying the national environmental management framework outlined in NEMA to specific aspects of environment management, e.g. bio-diversity, air quality and waste management. NEM: WA specifically deals with matters pertaining to all waste management, including wastewater.

Objectives of the Act outlined in Section 2 include (a) to protect health, well-being and the environment by providing reasonable measures for (iii) reducing, re-using, recycling and recovering waste; (v) preventing pollution and ecological degradation; and (vi) securing ecologically sustainable development while promoting justifiable economic and social development.

Section 6 (1) makes provision for the development of a National Waste Management Strategy (NWMS) to give effect to the key objectives of the Act, including the provision of
measures to ensure that waste disposal activities are not harmful to people or the environment as per Section 24 of the Constitution.

Section 20 (b) provides that no waste management activity listed in terms of Section 19 of the Act may be undertaken without a waste management license (WML) or without historic licenses or GAs in place.

5.4.2. National Waste Management Strategy (2011)

The NWMS, as provided for in S. 6 (1) of NEM: WA was approved by cabinet in November 2011. The NWMS is based on the waste hierarchy concept, as first outlined in the 1999 White Paper on Integrated Pollution and Waste Management, which identifies waste avoidance and reduction as the basal strategy, and disposal by landfilling as last resort (i.e. top of the hierarchy pyramid). After avoidance, recovery, re-use and recycling comprise the second most basal level of the waste management hierarchy/strategy. Operations at the abattoir should strive to:

- minimize solid waste generation (e.g. by re-using product packaging crates);
- minimize wastewater generation (e.g. by avoiding “wash to drain” practices when cleaning);
- re-use/ recycle organic material which could be safely composted at Steinthal or an off-site licensed facility;
- capture, treat and beneficially irrigate with wastewater;
- only dispose by landfill such waste which cannot be safely disposed of otherwise (e.g. condemned material).

5.4.3. NEM:WA Regulations (2009)

The Waste Regulations (GRN 718 of 2009) were promulgated in terms of Section 19 (1) of NEM: WA, and defines activities which would require application for a waste management license.

The Schedule provides for Category A (3 (1-20)) and Category B (4 (1-11)) activities. Category A activities include: 3 (11) The treatment or of effluent, sewage or wastewater with an annual throughput capacity of more than 2000 m³/a, but less than 15 000 m³/a. Category B activities require a full EIA process to be conducted prior to any WML being issued. Listed activities include: 4 (7) The treatment or of effluent, sewage or wastewater with an annual throughput capacity of 15 000 m³/a or more.

Amendment of the existing GA to allow for an additional 2 730 m³/a (from historic 11 813 m³/a to proposed 14 543 m³/a) would not exceed the 15 000 m³/a threshold.

5.4.4 Guidelines for the Handling, Treatment and Disposal of Abattoir Waste (2001)

The Guidelines for the Handling, Treatment and Disposal of Abattoir Waste was compiled by DWAF in 2001, and thus predate NEM:WA the NWMS and the 2006 Poultry Regulations (see below). While permissible poultry abattoir waste disposal practices are now primarily addressed by the Poultry Regulations, the 2001 Guidelines remain of value, as it specifically addresses wastewater impacts from the perspective of the National Water Act.

The Guidelines notes that abattoir wastewater streams typically contain high levels of pollutants, and often struggle to meet municipal by-laws with regard to water quality.
Specifically blood, scraps, fats, oils and greases pose a problem. The Guidelines therefore recommend on-site pre-treatment, provided significant additional water use is avoided. Best practice for on-site pre-treatment include:

- solids separation by screening,
- fat separation by skimming,
- blood separation,
- system effluent balancing, and
- effective management of slaughter waste generated to avoid unnecessary water consumption associated with washing to drain – a serious problem, according to the Guidelines.

5.5. PUBLIC HEALTH – ABATTOIRS AND FOOD PREMISES

Implementation of the Meat Safety Act and Regulations is primarily administrated by the Department of Agriculture, Forestry and Fisheries (DAFF), with functions delegated to the Western Cape Department of Agriculture.

Food Handling Premises fall under the purvey of the Health Act, and implementation primarily falls under the Department of Health, with functions delegated to the Western Cape Department of Health and local authorities - in Steinthal’s case, the Cape Winelands District Municipality: Environmental Health (CWDM: EH).

Note that abattoirs are not included amongst regulated food handling premises listed in Annexure A of the HACCP Systems Regulations of 2003 (Food, Cosmetics and Disenfectants Act). Provisions for hazard-analysis based hygiene management systems are however made in the Poultry Regulations (Part III, S. 51-52).

5.5.1. Meat Safety Act (Act 40 of 2000)

The Meat Safety Act is the most fundamental piece of legislation with regard to the operation of abattoirs. The Act replaces the Abattoir Hygiene Act of 1992. The purpose of the Act includes providing measures to promote meat safety and the safety of animal products and to establish and maintain essential national standards in respect of abattoirs (…) (Preamble). The following provisions are of relevance to Steinthal:

Essential national standards which apply to all abattoirs are defined in Section 11 (1). Of these, the following are of key relevance:

- 11 (1) (a). An abattoir may only be registered (and issued with an operating license) if it complies with the prescribed requirements relating to throughput, structural requirements, hygiene management practices and related matters;
- (b) An abattoir owner must appoint a suitably qualified meat inspector, as approved by the PEO;
- (c) meat inspection services may only be performed by the national executive officer, a provincial executive officer, an authorised person or an assignee, who must perform that function independently from the abattoir;
• \((d)\) a person contemplated in paragraph \((c)\) must be a veterinarian, meat inspector, meat examiner, animal health technician or such other duly qualified person as may be prescribed:

• \((e)\). An abattoir must be managed in accordance with a prescribed hygiene management and evaluation system;

• \((f)\). Any person entering an abattoir must adhere to prescribed hygiene requirements;

• \((h)\). Animals presented for slaughter must be handled humanely during loading, transportation, off-loading, housing, immobilizing an killing, as prescribed by the Animals Protection Act (Act 71 of 1962 – see below);

• \((f)\). Any person suspecting that an animal is infected with a controlled animal disease as prescribed in terms of the Animal Diseases Act (Act 35 of 1984) must immediately relay that suspicion to a veterinarian in the employ of the Department of Agriculture;

• \((g)\). The abattoir owner must keep the following records: number of animals slaughtered, the origin of animals slaughtered, details of examinations carried out while the animals were alive and inspections carried out after the animals had been slaughtered and the destination of the meat and animal products, and must at the request of a person contemplated in paragraph \((c)\) furnish such information to that person;

• \((r)\). The treatment, removal and disposal of condemned material, effluent and refuse must be carried out in accordance with prescribed procedures.

Section 15 makes provision for the PEO to inspect an abattoir at any time during working hours, and to provide the PEO with any documents or records as may be requested.

5.5.2. Poultry Regulations, R153 of 2006

R153 of 2006 (Poultry Regulations) is the most directly applicable piece of legislation with regard to the operation of the abattoir. The Poultry Regulations were promulgated in terms of Section 22 of the Meat Safety Act (Act No. 40 of 2000). The purpose of the Regulations is to apply the intent and general provisions of the Meat Safety Act to the operation of specifically poultry abattoirs. The Regulations make provision for addressing a number of issues, including:

• Structural and equipment requirements;
• Hygiene management systems;
• Bio-security and access control;
• The humane treatment of animals;
• Staff training, amenities, and health and safety;
• Dealing with slaughter waste and condemned material.

The Provincial Executive Officer (PEO) contemplated in the Regulations is the Head State Veterinarian: Veterinary Public Health, Western Cape Department of Agriculture (Elsenburg). In compliance with section 2 (2), slaughtering activities at Steinthal will require the issuing of a low-throughput facility slaughtering permit by the PEO. The permit will stipulate maximum allowable throughput, period of validity and other conditions.
Applicability

With the exception of Part II A (s. 4; 6-7); Part II C (2) (s. 31-36) and Parts IX – XI, all sections of the Regulations (104 in total) apply to the facility at Steinthal. Of specific relevance to this OEMP are the following:

Licensing procedures

Sections 1 to 3 outline the procedures in applying for a certificate (slaughter permit) to operate a poultry abattoir. Section 2 (1) requires design drawings of the facility to be submitted to the Provincial Executive Officer (PEO) for evaluation and approval prior to the facility being erected. Note that plans for the upgraded abattoir were drawn up in direct consultation with Dr Christie Kloppers (Deputy Director: Veterinary Public Health).

Classification and general operational requirements:

According to the definition provided in Part II A (s. 5) Steinthal abattoir would be classified as a Low throughput poultry abattoir, viz. a facility with a maximum throughput of 2000 poultry units per day, or a lower maximum throughput if so determined by the PEO (s. 5 (a)).

The requirements for operating a low-throughput abattoir are listed under S. 5 (b) – (m). Of specific relevance are the following:

- 5 (b) premises must be fenced and provided with a gate to control access of people and animals;
- (c) roofed facilities for offloading and holding of live birds must be provided;
- (d) a facility where poultry transport trucks must be sanitized after offloading must be provided;
- (e) separate equipped rooms, inter-connected by means of hatches only, must be provided for killing areas, evisceration areas, portioning and rough offal handling.
- (f) facilities must be provided where feathers and inedible products can be kept under hygienic conditions prior to removal from the abattoir, unless it is removed on a continuous basis;
- (g) separate chillers and freezers must be provided for the daily throughput of – (i) carcasses, red offal; and (ii) washed rough offal;
- (h) a personnel entrance to the clean areas of the abattoir must be provided and must be designed as an ante-chamber for cleaning purposes and must be provided with hand washbasins, soap dispensers, hand drying facilities, a boot wash, apron wash, hooks for aprons and a refuse container;
- (i) change room, shower, toilet as well as hand wash-facilities must be provided on the premises for persons working at the abattoir;

Note that plans for the upgraded abattoir were drawn up in direct consultation with the relevant PEO during 2009.

Structural and equipment requirements

Part II B (s. 8–28) lists the structural and equipment requirements for abattoirs and cold storage units. This includes provisions regarding requirements for wastewater (S. 9) the interior of the building and rooms (11), process equipment (12), toilets and change rooms (13), sterilizers (14), hand wash-basins (15), fresh water quality (17), containers for slaughter waste (18) meat inspection equipment (22) and bactericidal final wash equipment (25).
Section 9 (2) provides that provision must be made for storm water management, and (3) that the abattoir must be equipped with an enclosed drainage system for the disposal of effluent and sewerage.

Section 11 makes provisions for the interior construction of food handling areas, staff areas and toilets. Specific provisions are made with regard to 14 aspects, ranging from floor drainage to lighting, to wall surfaces.

Section 17 provides that input water must be under pressure and must conform to at least Class II according to SANS 241 standard for drinking water.

Section 18 deals with equipment required for the handling and storage of condemned material, and provides that -

- 18. (1) sufficient theft and leak proof containers with tight fitting lids, complying with regulation 12, must be provided to keep and transport condemned material and they must be clearly marked “CONDEMNED”
- (2) Containers must be provided to collect and hold inedible material until disposal.
- (3) Facilities to collect and hold blood prior to disposal must be provided.
- (4) Refuse containers must be provided for the collection of general refuse at various points on the premises.
- (5) Areas where waste or refuse containers are kept prior to removal must be impervious, curbed and drained and the containers must be enclosed or fitted with tight fitting lids.

**Hygiene management**

Part II C (1) (s. 29-30) outlines hygiene management and related practices with regard to the handling of red (s. 29) and rough (s. 30) offal. Part II C (3) (s. 37-42) outlines operational requirements with regards to chilling areas at abattoirs and associated temperature parameters; Part II C (4) (s.43) outlines procedures for loading of carcasses and meat for transport; Part II C (5) (s. 44-46) outlines operational requirements with regards to sanitation in the abattoir. Temperature parameters for cleaning water are defined in S 44, and S45 makes provision for approved sanitation programmes (documented cleaning schedules, times when should be cleaned, and responsibilities – see below under HMPs).

**Hygiene Management Systems (HMS):**

In terms of S.47 (a), the owner of an abattoir is obliged to provide the PEO with a documented Hygiene Management System (HMS) containing detailed information on measures or programmes required to monitor identified control points, including the methods of monitoring or checking, for approval.

S 51. provides that the abattoir owner must provide a list of all potential biological, chemical or physical hazards that may occur at each step of the process, and S.52 that written HMPs must be submitted to the PEO to prevent, eliminate or identified hazards, including control programmes for each.

S.48 (b) provides that a document management system must be provided for the recording of each slaughter batch containing information regarding date of slaughter, mass, quantities, identification and destination for carcasses as well as cut meat.
Hygiene Management Plans (HMPs):

In terms of Section 53 the owner of an abattoir is obliged to establish and maintain the following 14 Hygiene Management Programmes (HMPs):

- **53 a).** Ante-mortem inspection HMP - including for dead, distressed and diseased birds, and birds which may pose a high contamination risk.

- **b).** Slaughter and dressing HMP - including measures to ensure cross-contamination is avoided.

- **c).** Meat inspection HMP – including provision for qualified inspectors and secure slaughter waste management procedures.

- **d).** Personal hygiene of workers HMP - including an approved general code of conduct for personnel who come into contact with edible product, and provisions for ongoing hygiene and safety training.

- **e).** Medical fitness of workers HMP - to ensure only healthy workers come in contact with meat.

- **f).** a HMP for ensuring correct operational Water Temperature in sterilizers.

- **g).** a HMP for the availability of liquid Soap and soap dispensers, toilet paper, and disposable towels.

- **h).** a HMP for Sanitation and continuous cleaning including a cleaning schedule providing for areas to be cleaned, appropriate method, frequencies, material safety data (cc), and inspections.

- **i).** a HMP for availability and quality of Water in terms of which (i) the owner of the abattoir must account for the source of water supply and the status of such water;

- **j) a HMP for Vermin Control in terms of which the owner of the abattoir must provide a written control programme.

- **k) a HMP for Waste Disposal, including condemned material, in terms of which a written control programme for the removal of each different category of waste material including general refuse removal. The HMP must also include security arrangements to prevent condemned material from entering the food chain.

- **m).** a HMP for Maintenance – to ensure routine maintenance of all equipment and structures; and

- **n).** a HMP for Thermo Control in terms of which temperature control to ensure safe operational temperatures in work areas, fridges and freezers, and regular monitoring and emergency procedures in case of temperature control equipment failure.

These programmes should be drawn up in consultation with the PEO once the abattoir has been upgraded, but prior to commissioning.
Hygiene requirements for people entering abattoirs

Part IV (s. 54-61) outlines hygiene requirements for persons entering abattoirs.

S.54 provides that all persons entering an abattoir must be issued with clean suitable protective clothing. S.55 provides for the prior medical examination of staff, and S.56 for daily personnel health checks and procedures in case of illness. S.58 provides for the correct treatment of injuries.

Section 57 makes provision for protective clothing. S 57 (1) provides that protective clothing must be light coloured, clean, in good repair and must include safety hats, hair nets, beard nets, head and shoulder capes, white gumboots and safety boots compliant with hygiene requirements and waterproof

Section 59 provides that all personnel who handle foodstuffs must (a) shower before assuming duties; and (b) wash hands and forearms with a liquid germicidal soap and running water immediately after they become soiled or after having used a toilet or when entering a working area. Section 60 provides that (3) Eating, drinking or using or handling tobacco are not allowed in any area where meat is handled.

Section 61 provides that all personnel must be trained in hygiene procedures and personal hygiene matters by the owner, and training records must be kept.

Humane treatment of poultry

Part V (s. 62-71) outlines requirements for the humane treatment of poultry, and details the required steps in the slaughtering process.

Section 61 is concerned with the catching and transport of poultry, and provides that (1) catching of poultry on the farm and transport to the abattoir must be done considering the Animal Protection Act 1962 (Act no. 71 of 1962).

Section 63 concerns requirements for vehicles and containers during transport. S.63. (1) provides that crates must be designed such that sufficient shelter, shade and ventilation are provided for birds in transit. S. 63. (3) prohibits the tying of legs during transport. S 63 (2) provides that crates used to transport poultry must –

- 62. (2).(b) not be overloaded, enabling all birds to rest on the floor of the crate at the same time;
- (c) be high enough to allow poultry to move their heads in a normal upright manner when sitting on the floor;
- (d) have a lid that can be secured to prevent the birds from escaping;
- (e) be constructed to prevent protrusion of the head, wings, legs, feet and toes; and
- (f) be manufactured free of sharp edges or any features which could cause any injuries;

Section 64 provides measures applicable during offloading. Provisions include:

- 64. (1) Vehicles waiting to offload live poultry, and crates with live poultry after offloading, must be parked or put in a shaded area while maintaining ventilation through crates.
- (2) Crates with live poultry must be handled with care in such a manner as to avoid unnecessary suffering, injury, pain and excitement of birds.
• (3) Birds received in crates must be slaughtered within four hours of arrival at the abattoir and may not be kept overnight.
• (4) Birds that are seen to be moribund, excessively injured or unfit for slaughter at offloading, must be euthanized without delay and destroyed.
• (5) Birds that are injured while awaiting slaughter must be preferentially slaughtered.
• (6) The owner of a vehicle must ensure that the vehicle used to transport poultry to an abattoir is kept in a clean and hygienic condition.

Section 65 provides that where live birds are hung on shackles on a moving conveyor line, care must be taken to avoid injury and stress and birds must be handled humanely and without the use of undue force when hooking the legs into the shackles.

Section 66 provides that all poultry must be rendered unconscious humanely by means of electrical stunning before bleeding, and that the stunner must be kept in good working order and used in a manner approved by the PEO.

Section 67 provides that bleeding (killing) must be done in the following manner:

• 67. (a) Throat slitting must be done within ten seconds after stunning using a sharp knife suited for the purpose.
• (b) The spinal cord must not be severed during throat slitting and must be kept intact until the bird has transpired.
• (c) The bleeding knife must be washed and sterilized and sharpened frequently using a multiple knife exchange system.
• (d) A minimum of 90 seconds bleeding time is required.
• (e) Birds not bled must be totally condemned.
• (f) The killing rate must facilitate humane handling of birds as well as allow for effective stunning and complete bleeding and must correlate with the rate of dressing.

Meat inspections

Part VI (s. 72-83) outlines the requirements with regards to meat inspections. S.72 concerns ante-mortem inspections, and provides that -

• 72. (1) No poultry may be submitted for slaughter in an abattoir without a declaration of health and origin having been submitted by the owner of the poultry. (a) in the case of a low throughput abattoir, on the day of slaughter;
• (2) Such health declaration must contain information regarding – (a) date of delivery; (b) name and address of owner, farm(s) and fowl house number; (c) number of birds and specie(s); (d) average weight of birds; (e) health status of the flock(s) including mortality rate; and (f) medication, if given as well as withdrawal periods and dates.
• (3) The abattoir owner must record the information in sub-regulation (2).
• (4) A standard information sharing procedure should be established between the owner of the poultry and abattoir inspectors.

Section 73 (1) provides that the registered meat inspector must do ante-mortem inspections of poultry on the day of slaughter. S. 73 (2-9) details bird health conditions under which poultry may be slaughtered, and applicable conditions. S. 73 (3) obliges the abattoir operator to immediately report any chickens suspected of being infected with a listed controlled disease to the local provincial state veterinarian.
Section 74 (1) provides that birds which are received dead on arrival must be disposed of as condemned material in terms of Part VIII, (2) that no carcass or part thereof that has been condemned may be brought into any part of the abattoir containing edible products.

Section 76 provides that the PEO may determine the number of registered meat inspectors required at any given abattoir (as provided for in S.11 of the Meat Safety Act).

**Treatment, storage and disposal of slaughter waste:**

Part VIII (Sections 89-95) outline the requirements for the treatment and disposal of condemned material/ slaughter waste.

Section 89. (1) provides that carcasses, portions thereof or any edible products in an abattoir, which cannot be passed for human or animal consumption must be –

- (a) placed in a theft proof container which has been clearly marked "CONDEMNED", in letters not less than 10 cm high, or conspicuously marked with a stamp bearing the word "CONDEMNED", using green ink;
- (b) kept in a holding area or a room or dedicated chiller provided for the purpose, except if removed on a continuous basis; and
- (c) removed from the abattoir at the end of the working day or be secured in a dedicated chiller or freezer at an air temperature of at least minus 2 °C.

S. 89 (3) provides that the abattoir owner is responsible for complying with all legal requirements or conditions relating to the safeguarding and disposal of any carcass, part thereof or any edible product which cannot be passed for human or animal consumption.

S.90 provides for permissible ways of disposing of condemned material and slaughter waste:

- 90. (a) total incineration (at a licensed facility);
- (b) denaturing and burial of condemned material at a safe site, approved by the PEO and local government (i.e. Witzenberg Municipality);
- (c) processing at a registered sterilizing plant; and
- (d) any other method for which a protocol has been approved by the PEO – e.g. composting at a licensed facility, or disposal at a licensed landfill site, as was recommended by the PEO, Dr Christie Kloppers, and currently proposed.

S.94. provides measures applicable to the transport of condemned material/ waste. S.94 (1) provides that a dedicated vehicle should be used for transporting waste, and that such a vehicle may not be used to transport edible product. S. 94 (2) provides that the load space must be lockable, theft proof, and sealable.

**5.5.3. R 918 of 1999**

*Regulations Governing General Hygiene Requirements for Food Premises and the Transport of Food* (R918 of 1999) was promulgated in terms of S 35 the Health Act (Act 63 of 1977). Many of the general provisions are duplicated in the later abattoir-specific Poultry Regulations.

The abattoir would be classified as a food premise, and all workers as food handlers in terms of R 918 (definitions). Section 3 of the Regulations provide that food may only be handled in a facility for which a certificate of acceptability has been issued by the local
authority. 3 (7) obliges the abattoir operator to apply for a new certificate within 30 days of one abattoir manager replacing another.

Regulation 5 sets out requirements and standards for food premises. These pertain to design and equipment (5 (2)), finishes of interior surface, ventilation and lighting (3 (a-b)), facilities, including ablution, hand basis and changing facilities (c–d).

Regulation 6 sets standards and requirements for facilities on food premises. This includes measures regarding cleaning and housekeeping. 6 (4) (b) (i) provides that no food handling surfaces may not have >100 viable micro-organisms per cm$^2$. R 6. (5) provides that all process chilling and heating equipment must be provided with thermometers. Annexure E of the Regulations provide a Code of Practice for Measuring Temperatures of Food.

The duties of the person in charge of the food premises (i.e. abattoir management) are set out in R 10. Key provisions include an obligation to provide measures:

- 10 (a) to control and eliminate flies and vermin;
- (b) to ensure all workers are properly trained in food hygiene practices (as set out in R 11);
- (c-e) to provide for safe and nuisance free temporary storage of solid waste;
- (g) ensuring vehicles and containers transporting product are kept clean;
- (o) keep a record of all staff diseases and injuries.

R 13 deals with standards and requirements for the transport of food. 13 (1) sets requirements for the cleanliness of vehicles used to carry food. 13 (2-3) deals with food which is not pre-packaged, and provides that the interior of vehicles used to transport such should be easy to clean, rust-free, dust proof, and not used for simultaneously transporting persons or items which may cause food contamination.

5.6. ANIMAL HEALTH AND BIO-SECURITY

Implementation of the Meat Safety Act and Regulations is primarily administrated by the DAFF, with functions delegated to the Western Cape Department of Agriculture.

5.6.1. Animal Diseases Act (Act 35 of 1984)

South African regulatory measures for animal health are governed by the Animal Diseases Act. The purpose of the Act is to provide measures for the control of animal diseases and parasites, and to promote animal health. In terms of the Act, a “controlled animal disease” is any disease for which a particular control measure has been prescribed (definitions).

The Act empowers the Minister to declare/ list controlled and notifiable animal diseases. According to the DAFF: Directorate Animal Health, no notifiable poultry diseases are currently listed.

The following controlled poultry diseases are currently listed:

- Any animal disease or infectious agent not known to occur in South Africa;
- Newcastle disease;
- Notifiable avian influenza ("bird flu");
- Psittacosis;
- Salmonella Enteriditis;

Boland Environmental Consultants CC.
• Salmonella Gallinarum (Fowl typhoid);
• Salmonella Pullorum;
• All strains of tuberculosis\(^3\).

Note that in terms of both the Meat Safety Act and the Animal Health Act, the SEB would be obliged to notify the DA: VPH immediately upon suspicion of the occurrence of any controlled disease, both at the abattoir and broiler farming components. Further note that the list may be amended by the Minister or Provincial MEC by means of Gazetted Notices.

### 5.7. OCCUPATIONAL HEALTH AND SAFETY

The Department of Labour is responsible for implementation of key legislation, with functions delegated to the Western Cape Department of Labour.

Note that the Poultry Regulations and Food Premises Regulations also make provision for occupational health and safety (OHS) and related training.


The purpose of the Act is, amongst others, to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery (…) (Preamble). In terms of the Act, a workplace is constituted by “any premises or place where a person performs work in the course of his employment”.

S. 8 sets out the general duties of any employer towards employees. S. 8 (1) provides that a reasonably safe and risk-free working environment must be provided and maintained, including with hazard identification and avoidance (2 a-d) all along the production chain. Further duties include OHS training, adequate work supervision, and ensuring workers understand the scope of their responsibilities (e-j).

Section 17 obliges every employer with more than 20 employees in employment at a specified workplace, to appoint a Health and Safety Representative (HSR), for a specified period, in writing. The duties of the HSR are set out in S. 18, and essentially relate to ensuring the ongoing efficacy of OHS measures implemented.

Section 24 deals with the duty to report certain incidents. Reportable incidents include death, loss of consciousness, occurrence of a major catastrophe, or major spilling of a substance which may endanger the health and safety of workers.

#### 5.7.2. OHSA Draft Regulations (R 1039 of 2005).

R 1039 of 2005 was promulgated in terms of S. 43 of the OHSA. Regulation 2 (3) requires employers to provide workers with all safety clothing and equipment necessary to fulfill their tasks without undue exposure to OHS risks, and 2 (5) obliges owners to train workers in proper use and maintenance of equipment. Regulation 7 sets out minimum first-aid response requirements. 7 (4) obliges every employer of more than 10 people to employ someone with a valid certificate of competency in first aid which should be available at all working hours.

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5.7.3. OHSA General Administrative Regulations (R 929 of 2003)

R 929 was promulgated in 2003 in terms of S. 43 of the OHSA. Regulation 8 makes more specific provision for the reporting of OHS incidents, as described in S.24 of OHSA. In terms of 8 (1) (a-b), an employer must notify the Provincial Director: WC Department of Labour within 7 days of any incident having occurred. R 9 (1) provides that a written record must be kept of all incidents for at least 3 years.

5.8. ANIMAL WELFARE

Implementation of the Animal Protection Act and Regulations is primarily administrated by the DAFF, with functions delegated to the Western Cape Department of Agriculture.

Both the Meat Safety Act (S. 11 (h) and the Poultry Regulations (S. 62-67) make provision for the humane treatment of birds accepted for slaughter. Provisions in both require adherence to the provisions of the Animals Protection Act of 1962.

5.8.1. Animals Protection Act (Act 71 of 1962)

The Animal Protection Act is aimed at preventing cruelty to animals, including chickens (“fowl”).

In terms of the Act, the owner of an animal includes any person having the possession, charge, custody or control of that animal (definitions), or who is capable of, by the exercise of reasonable care and supervision, preventing acts of cruelty occurring (S. 2). In this definition, the abattoir management and Steinthal Board would both be responsible for ensuring the welfare of broilers accepted for slaughter.

5.9. SUMMARY OF KEY APPLICABLE LEGISLATION

An overview of key applicable legislation is provided in Table 5.1. below. Focus is on aspects not covered in parallel OEMPs.

Table 5.1. Summary of key applicable legal provisions

<table>
<thead>
<tr>
<th>ASPECT</th>
<th>KEY LEGISLATION</th>
<th>KEY SECTIONS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCESS CONTROL</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 5 (b)</td>
<td>Perimeter fencing</td>
</tr>
<tr>
<td></td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>Part IV (R. 51 – 64)</td>
<td>General hygienic requirements for persons entering abattoirs</td>
</tr>
<tr>
<td>ABATOIR REQUIREMENTS: STRUCTURAL</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 2 (1)</td>
<td>Plan approved by PEO</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R. 5</td>
<td>General structural requirements for various use areas</td>
</tr>
<tr>
<td></td>
<td>R 918 of 1999</td>
<td>R. 5</td>
<td>General requirements for food handling premises</td>
</tr>
<tr>
<td>ABATOIR REQUIREMENTS:</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R 5 (g)</td>
<td>Separate edible and waste chillers and freezers</td>
</tr>
<tr>
<td>ASPECT</td>
<td>KEY LEGISLATION</td>
<td>KEY SECTIONS</td>
<td>DESCRIPTION</td>
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<tr>
<td>EQUIPMENT</td>
<td></td>
<td>R. 12</td>
<td>General requirements and maintenance</td>
</tr>
<tr>
<td></td>
<td>R 918 of 1999</td>
<td>R. 5</td>
<td>General requirements for food handling premises</td>
</tr>
<tr>
<td>ABATTOIR REQUIREMENTS:</td>
<td></td>
<td>R. 11</td>
<td>Perimeter fencing</td>
</tr>
<tr>
<td>FITTINGS AND FINISHES</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R 918 of 1999</td>
<td>R. 5</td>
</tr>
<tr>
<td>BIOSECURITY</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 59</td>
<td>Mandatory staff showers</td>
</tr>
<tr>
<td></td>
<td>Animal Health Act (Act 7 of 2002)</td>
<td>S.17</td>
<td>Prevention, containment, treatment of ill and diseased birds</td>
</tr>
<tr>
<td>CERTIFICATES/PERMITS, etc</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R.2 (2)</td>
<td>Registration as slaughter facility</td>
</tr>
<tr>
<td></td>
<td>R 918 of 1999</td>
<td>R. 3</td>
<td>Certificate of Acceptability as Food Handling Premise</td>
</tr>
<tr>
<td></td>
<td>Animals Protection Act (Act 71 of 1962)</td>
<td>S. 1 (a); 2</td>
<td>General offences and duty of responsibility</td>
</tr>
</tbody>
</table>
| HYGEINE MANAGEMENT            | Poultry Regs (2006) | Part II C (R29-46) | • Pest control  
|                               | R 918           | R. 6 (4) (b) (i) | • Measures for steps along production chain  
|                               |                 |              | • Sanitation  
<p>|                               |                 |              | Microbial presence standard for abattoir surfaces                            |
| HYGEINE MANAGEMENT SYSTEMS    | Meat Safety Act (Act 40 of 2000) | S. 11 (e)   | General requirement                                                          |
|                               | Poultry Regs (2006) | R. 53 (a-n). | 14 mandatory HMPs to be approved by PEO                                      |
| MAINTANANCE                   | Poultry Regs (R 153 of 2006) | R. 53 (k)   | Specific HMP required                                                        |
| MANAGEMENT DUTIES             | R 918 of 1999   | R. 10        | General hygiene management duties                                            |
|                               | OHSA (1993)     | S.8          | OHS duty towards employees                                                   |
|                               | Poultry Regs (R 153 of 2006) | Part VI (R72-83) | Specific provisions                                                          |
| NOTIFIABLE INCIDENTS          | NEMA            | S.30         | Incidents, within a 14 day period                                            |
|                               | NWA             | S. 19-20     | Incidents which may affect                                                   |</p>
<table>
<thead>
<tr>
<th>ASPECT</th>
<th>KEY LEGISLATION</th>
<th>KEY SECTIONS</th>
<th>DESCRIPTION</th>
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<tr>
<td></td>
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<td></td>
<td><strong>water resource</strong></td>
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<tr>
<td></td>
<td>Meat Safety Act (2000)</td>
<td>S. 11 (g)</td>
<td>Reporting of listed controlled diseases</td>
</tr>
<tr>
<td></td>
<td>Animal Diseases Act Gazetted</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Notices</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Animal Health Act S.17. (1) (c)</td>
<td></td>
<td>Duty to report incidence of controlled disease to PEO</td>
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<tr>
<td></td>
<td>OHSA (1993)</td>
<td>S.24</td>
<td>Duty to report OHS related incidents</td>
</tr>
<tr>
<td></td>
<td>General Administrative Regulations (2003)</td>
<td>R. 8</td>
<td>Notification of OHSA S24 incidents to Department of Health within 7 days</td>
</tr>
<tr>
<td></td>
<td>OHSA (1993)</td>
<td>S.8</td>
<td>OHS duty towards employees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S. 17</td>
<td>Appointment of HSR</td>
</tr>
<tr>
<td></td>
<td>Draft General Safety Regulations (2005)</td>
<td>S. 2</td>
<td>• Protective clothing;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• OHS training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.7</td>
<td>• First aid requirements</td>
</tr>
<tr>
<td></td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 53 (j)</td>
<td>Specific HMP required</td>
</tr>
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<tr>
<td>PESTS AND NUISANCE</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 53 (j)</td>
<td>Specific HMP required</td>
</tr>
<tr>
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</tr>
<tr>
<td>RECORD KEEPING</td>
<td>Meat Safety Act (2000)</td>
<td>S. 11 (e)</td>
<td>General requirement with regard to certain operational information</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Administrative Regulations (2003)</td>
<td>R. 9</td>
<td>All incidents reported in terms of S24 of OHSA</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATERIAL</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 18</td>
<td>Handling and temporary storage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R. 53 (m)</td>
<td>Specific HMP required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Part VIII</td>
<td>• Temporary storage containers (R. 89)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(R. 89-95)</td>
<td>• Permissible ways of disposal (R. 90)</td>
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<tr>
<td>TRANSPORT</td>
<td>Animals Protection Act (Act 71 of 1962)</td>
<td>S. 1 (m)</td>
<td>Humane treatment of live birds during transport</td>
</tr>
<tr>
<td></td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 63</td>
<td>Requirements for vehicles carrying live birds</td>
</tr>
<tr>
<td></td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 5 (b)</td>
<td>Structural provision for sanitation of vehicles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R. .94</td>
<td>Transport of slaughter waste for disposal</td>
</tr>
<tr>
<td></td>
<td>R 918 of 1999</td>
<td>R. 13</td>
<td>Transport of food, including vehicles (1) and unpackaged food (2-3)</td>
</tr>
<tr>
<td>STAFF TRAINING</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 61</td>
<td>Hygienic practices</td>
</tr>
<tr>
<td></td>
<td>Draft General Safety Regulations (2005)</td>
<td>R. 2</td>
<td>OHS training</td>
</tr>
</tbody>
</table>

Boland Environmental Consultants CC.
<table>
<thead>
<tr>
<th>ASPECT</th>
<th>KEY LEGISLATION</th>
<th>KEY SECTIONS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER (INPUT) STANDARD</td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R.17</td>
<td>SANS 241: Class II (min)</td>
</tr>
<tr>
<td>WASTEWATER</td>
<td>GA in terms of NWA (GN 399 of 2004)</td>
<td>S.2</td>
<td>Treatment and disposal of effluent</td>
</tr>
<tr>
<td></td>
<td>Poultry Regs (R 153 of 2006)</td>
<td>R. 9 (3)</td>
<td>Enclosed wastewater system</td>
</tr>
</tbody>
</table>
SECTION 6: MANAGEMENT PROVISIONS

6.1. INTRODUCTION

The purpose of this section is to provide measures to ensure –

- operations adhere to applicable legislation;
- operations do not pose a risk to the environment;
- operations do not pose a risk to the health and safety of workers;
- operations do not pose nuisance a risk to neighbors;
- necessary records are kept;
- necessary Registers are kept;
- notifiable incidents are reported to the relevant authorities;
- a remedial response strategy is in place to deal with accidental spills and emergencies.

Focus is on operational aspects, but measures are also provided for managing key potential (limited) construction phase impacts.

Provisions made in the 3 other OEMPs have not been duplicated. Instead, the reader is referred to the relevant OEMPs where applicable.

6.2. ROLES AND RESPONSIBILITIES

6.2.1. Steinthal Estate Board

As the registered landowner, and would be ultimately responsible for ensuring adherence to all provisions made in this OEMP.

Direct responsibilities would include:

- Ensuring legal compliance in terms of NEMA, NEM:WA and NWA;
- Ensuring material implementation of all the measures made in this OEMP;
- Implementation of soil and water quality monitoring programmes (WWMP);
- Ensuring co-ordination between the abattoir and related activities (e.g. broiler farming, composting, wastewater treatment);
- Ensuring no chickens are mistreated, as provided in the Animals Protection Act;
- Inspecting the abattoir on a monthly basis, and keeping a record of all site inspections;
- Keeping of Complaints and Incidents Registers;
- Reporting notifiable incidents to the relevant authorities;
- Implementing the Remedial Response Strategy, as required; and
- Ensuring annual audits against key performance indicators (KPIs) defined in this OEMP are carried out.

Past experience on Steinthal has indicated the crucial importance of regular site inspections by the SEB. Provision is therefore made for monthly inspections by the SEB.

- A record of inspections should be included in the annual audit. The audit should assess the frequency of inspections, and responses and timeframes in dealing with issues noted during inspections.
6.2.2. Abattoir Manager

At this stage it is unclear whether the SEB will operate and manage the abattoir itself, or lease out operations to an outside party. In this OEMP, the Abattoir Manager would function as the proxy of any operator, whether the SEB or a lessee. The Abattoir Manager would be responsible for day to day operations.

Key operator/management responsibilities defined in terms of applicable legislation include:

- General duty of care towards environment, in terms of NEMA;
- Ensuring the abattoir is properly licensed in terms of R918 and the Poultry Regulations, and that licensing conditions are adhered to;
- Ensuring operational practices conform to the provisions of the Poultry Regulations at all times;
- Ensuring traffic associated with the abattoir do not cause obstructions on the Schoonderzicht servitude road;
- Exercising duties in terms of hygiene management, as defined in R.10 of R918 of 1999;
- Exercising duties towards ensuring health and safety of workers, as defined in terms of S.8 of OHSA;
- Ensuring the facility and equipment are maintained in good working order;
- Keeping of operational records, as required in terms of the Meat Safety Act (S. 11 (e));
- Effecting ongoing operational and OHS staff training;
- Appointment of accredited meat inspectors;
- Appointment of a Health and Safety Representative, in terms of S.17 of OHSA;
- Provision for first aid arrangements, including ensuring at least one person with a valid first aid competency certificate is available at all times;
- Reporting incidents, accidents, etc to the SEB;
- Notifying the DA: VPH of controlled diseases.

The Abattoir Manager, or a suitably qualified substitute, must be available on-site at all operational hours.

Note that the CWDM: EM would need to be notified of any changes in management/managers within 30 days, and a new Certificate of Acceptance obtained in terms of R 918 of 1999.

6.2.3. Meat inspectors

The Meat Safety Act (S. 11 (b)) and Poultry Regulations (Part VI) provide for the appointment of one or more qualified meat inspectors at all abattoirs, such to be approved by the PEO. Key requirements for a meat inspector are defined in R. 83 of the Poultry Regulations. Key responsibilities would include:

- Ante-mortem inspections;
- Process point inspections;
- Notifying management of controlled diseases.

5.2.4. Health and Safety Representative

Section 17 of the OHSA obliges every employer with more than 20 employees in employment at a specified workplace, to appoint a Health and Safety Representative (HSR),
for a specified period, in writing. The duties of the HSR are set out in S. 18, and essentially relate to ensuring the ongoing efficacy of OHS measures implemented.

5.2.5. First aid provider

In terms of the 2005 OHSA Draft Safety Requirements Regulations (7 (4)) every employer with more than 10 people is obliged to employ someone with a valid certificate of competency in first aid, who should be available at all working hours at the place of work.

6.3. ACTIVITIES PRIOR TO COMMISSIONING

This section provides an overview of aspects which would need to be addressed prior to the abattoir becoming operational. A number of aspects would also require ongoing management as long as activities remain operational (see Objectives 1-11 below).

The SEB would be responsible for ensuring the aspects below are addressed prior to slaughtering activities resuming, either directly, or by ensuring such is affected by any lessee:

Table 6.1. Activities Prior to Commissioning

<table>
<thead>
<tr>
<th>ASPECT</th>
<th>ACTION</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. UPDATE OEMP</td>
<td>• Update with any relevant conditions of approval specified by DEA&amp;DP and not currently addressed in OEMP.</td>
<td>Once S24G process has been completed.</td>
</tr>
<tr>
<td>2. PENDING ZONING APPLICATION</td>
<td>• Inform Witzenberg authorities of outcome of S24G process;</td>
<td>Once S24G process has been completed.</td>
</tr>
<tr>
<td></td>
<td>• Obtain relevant Zoning Certificate</td>
<td></td>
</tr>
<tr>
<td>3. APPROVAL OF PLANS</td>
<td>• Submit abattoir plans to Witzenberg Council for approval.</td>
<td>Once rezoning has taken place.</td>
</tr>
<tr>
<td></td>
<td>• Ensure any required amendments are also approved by the PEO (DA: VPH) in writing;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Obtain a Registration Certificate from the PEO in terms of S. 2 (1) of the Poultry Regulations.</td>
<td></td>
</tr>
<tr>
<td>4. CONSTRUCTION</td>
<td>• Appointment of accredited contractor(s);</td>
<td>Once plans have been approved.</td>
</tr>
<tr>
<td></td>
<td>• Implementation of measures outlined in S. 6.4. below.</td>
<td></td>
</tr>
<tr>
<td>5. FINISHES, FITTINGS, ETC</td>
<td>• Appointment of accredited contractor(s);</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Work to be carried out according to minimum specifications set out in Part B of the Poultry Regulations and R.5 of R 918.</td>
<td></td>
</tr>
<tr>
<td>6. EQUIPMENT</td>
<td>• Abattoir to be equipped with all relevant process equipment, as required in terms of</td>
<td></td>
</tr>
<tr>
<td>ASPECT</td>
<td>ACTION</td>
<td>TIMEFRAMES</td>
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<td>-----------------------------</td>
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</tr>
<tr>
<td>the Poultry Regulations (Part B); Procurement of all required protective and hygienic clothing required in terms of (R. 54 of the Poultry Regulations, as well as the Draft OHSA Safety Regulations (R. 2).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ACCESS CONTROL</td>
<td>• Perimeter fencing should be constructed as per building plan; • All perimeter gates should be fitted with locks; • All outer doors to the abattoir building should be fitted with lockable doors.</td>
<td></td>
</tr>
<tr>
<td>8. SIGNAGE</td>
<td>• Prominent, weatherproof signs should be affixed on entrance gates indicating that the premises is a bio-security control area, with restricted access; • Prominent, weatherproof signs should be affixed at the entrances to the abattoir building, indicating all applicable requirements for entering food premises and avoiding cross-flow contamination.</td>
<td></td>
</tr>
<tr>
<td>9. SUPPORTING INFRASTRUCTURE</td>
<td>• Ensure provision has been made for implementing upgrades to ETP prior to generation of wastewater; • Ensure provision has been made for construction of licensed composting facility prior to generation of any solid waste.</td>
<td>Prior to commissioning</td>
</tr>
<tr>
<td>10. WASTE MANAGEMENT</td>
<td>• Confirm arrangements with waste processing service providers; • Ensure provision has been made for suitable bins to collect, transport and temporarily store putrescible waste; • Ensure separate, suitable vehicles are available for the transport of edible product and waste.</td>
<td></td>
</tr>
<tr>
<td>11. BACKUP GENERATOR</td>
<td>• Provision should be made for a dedicated back-up generator to ensure all fridges and freezers and other essential process equipment remain supplied with power during power failures; • No fuel should be kept on site, but drawn from the Estate’s farm tanks.</td>
<td></td>
</tr>
<tr>
<td>12. MANAGEMENT</td>
<td>• Ensure that a suitably qualified person is</td>
<td></td>
</tr>
<tr>
<td>ASPECT</td>
<td>ACTION</td>
<td>TIMEFRAMES</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Appointment of Abattoir Manager; OEMP provisions; Co-coordinating farming components</td>
<td>• appointed as Abattoir Manager; • Provide Abattoir Manager with a copy of the OEMP, and ensure all management provisions are understood; • Ensure other operations managers (Composting, Broilers, etc) are aware of applicable parts of this OEMP. • Ensure cross-cutting activities (e.g. composting, disposal of mortalities) are properly co-ordinated between components by providing clear channels of communication at the outset.</td>
<td></td>
</tr>
<tr>
<td>13. HYGEINE MANAGEMENT SYSTEMS</td>
<td>• The 14 x documented HMS which are outlined in R 53 (a- n) of the Poultry Regulations must be prepared in consultation with, and to the approval of, the PEO.</td>
<td></td>
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<tr>
<td>• 14 x HMS</td>
<td></td>
<td></td>
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<tr>
<td>14. STAFF TRAINING</td>
<td>• Ensure that staff has been trained in accordance with the provisions of Objective 10 below, prior to work being undertaken.</td>
<td></td>
</tr>
<tr>
<td>• Routine tasks; • OHS; • Emergencies; • Incidents.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. RECORD KEEPING</td>
<td>Ensure physical provision is made for the measuring and recording of all necessary process information, including: • Water meters, scales, etc to record process inputs and outputs; • Documenting templates.</td>
<td></td>
</tr>
<tr>
<td>• Measuring; • Recording.</td>
<td></td>
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</tr>
<tr>
<td>16. PUBLIC COMPLAINTS REGISTER</td>
<td>• Physical provision has to be made for a ledger according to provisions made in S. 6.16 below.</td>
<td></td>
</tr>
<tr>
<td>17. INCIDENTS REGISTER</td>
<td>• Physical provision has to be made for a ledger according to provisions made in S. 6.17 below.</td>
<td></td>
</tr>
</tbody>
</table>
6.4. CONSTRUCTION ACTIVITIES

Relatively minor construction work would be required to upgrade the existing abattoir and yard to approved plan. The measures provided in Table 6.2. below are aimed at ensuring that construction activities are carried out in a responsible way. The SEB would be ultimately responsible for appointing and supervising all contractors and sub-contractors.

Table 6.2. Construction phase measures

<table>
<thead>
<tr>
<th>ITEM</th>
<th>ASPECT</th>
<th>PROVISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CONTRACTORS</td>
<td>Checks</td>
<td>• Once plans have been approved, existing electrical, fresh water and waste water connections should be checked.</td>
</tr>
</tbody>
</table>
|            | Appointment           | • Suitable (sub-) contractors should be appointed to ensure structures and infrastructure comply to specifications, built, electrical and otherwise;  
|            |                       | • Appointees should comply with all OHSA requirements;  
|            |                       | • Preference should be given to contractors from the local community (Tulbagh, Witzenberg, CWDM). |
|            | Supervision           | • Work would have to be supervised on an ongoing basis to ensure it is executed according to plan, and that the provisions below are implemented on-site. |
|            | Signing off           | • Work should only be signed off once plans have been signed off by a building inspector. |
| 2. SITE    | Limiting impacts      | • Care should be taken to limit impacts to the abattoir site.  
|            |                       | • Care should be taken in choosing suitable locations for stockpiling building material and rubble/building waste on the site.  
|            |                       | • Vehicles should stick to existing roads as far as possible;  
|            |                       | • Care should be taken not to damage existing infrastructure (e.g. buried pipelines). |
|            | Neat operations       | • At the end of each working day, materials and waste should be neatly and securely stockpiled.  
|            |                       | • If building sand is required, heaps should be kept covered to prevent blow-outs. |
|            | Post-construction     | • At the end of construction activities, the site must be in a neat condition, with no waste or left-over construction material present.  
|            |                       | • All wastes should be removed and disposed of responsibly (see below). |
| 3. TRAFFIC | Schoonderzicht road   | • No stationary vehicles or avoidable construction activities may block the servitude road at any given time. |
## 4. WASTE

<table>
<thead>
<tr>
<th>ASPECT</th>
<th>PROVISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos waste</td>
<td>• If any asbestos waste is present, the contractor should ensure the requirements of the 2001 OHSA Asbestos Regulations (R. 155 of 2002) are adhered to, specifically:</td>
</tr>
<tr>
<td></td>
<td>o R. 17 dealing with protective worker clothing; and</td>
</tr>
<tr>
<td></td>
<td>o R. 20 which deals with the safe disposal of asbestos waste.</td>
</tr>
<tr>
<td>Construction waste</td>
<td>• All waste must be neatly managed and stockpiled during activities;</td>
</tr>
<tr>
<td>Rubble</td>
<td>• All material should be disposed of at a licensed facility at a licensed facility.</td>
</tr>
<tr>
<td>Waste minimization</td>
<td>• Where possible and safe, rubble should be re-used or recycled rather than landfilled.</td>
</tr>
</tbody>
</table>

## 5. WASTE WATER

<table>
<thead>
<tr>
<th>ASPECT</th>
<th>PROVISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paints, solvents, etc</td>
<td>• No chemical waste, including paints and solvents, should be washed to drain;</td>
</tr>
<tr>
<td></td>
<td>• Liquid chemical waste and containers should be safely disposed of at a licensed facility by the relevant (sub) contractor.</td>
</tr>
</tbody>
</table>

### 6.4.1. Monitoring and auditing

Any incidents, emergencies or complaints arising from construction activities should be recorded accordingly in the Incidents and Complaints Registers.

- The first annual OEMP audit should include assessment of the relevant Registers. The audit should also assess whether effective post-construction clean-up activities have taken place. The safe disposal of all construction waste should be accounted for, and no denudation, waste or rubble should be visible on the sites.

### 6.5. ONGOING LEGAL COMPLIANCE

As may be seen in Table 5.1, operation of the abattoir would be subject to a large number of - often very specific – legal requirements. Provisions in this section focus on general requirements, but imply adherence to specific ones. Key specific requirements are dealt with under applicable Objectives 2-11 below.

In order to ensure operations do not pose a risk to the environment, the conditions of environmental authorization must be implemented, and adhered to at all times. S.28 of NEMA also obliges the SEB and abattoir operator to exercise a general duty of care towards the environment at all times, including the prevention and remediation of pollution or other damage.

Operational certification is required in terms of both the Poultry Regulations (R. 153 of 2006), as well as the Regulations Governing General Hygiene Requirements for Food Premises and the Transport of Food (R. 918 of 1999).
also provide detailed mandatory requirements with regard to the construction, outfitting and operating of abattoirs. It is the duty of the operator to ensure that conditions are adhered to, and that of the SEB to verify such by inspection.

The implementation of OHS measures is mandatory in terms of OHSA. Animals may not be treated inhumanely at any time, as provided for in the Animals Protection Act. The abattoir operator would be directly responsible for implementing the relevant measures. The SEB is responsible for verifying implementation.

NEMA, NMA, OHSA, the Meat Safety Act as well as the Animal Health Act imposes a duty of reporting notifiable incidents/ controlled diseases within specified timeframes (See Section 6. 20 below).

### OBJECTIVE 1
### ONGOING LEGAL COMPLIANCE

| Aspects/ Component/s | Conditions of S24G approval;  
|                       | General duty of care (NEMA)  
|                       | Operating permits and licenses;  
|                       | General OHS safety provisions;  
<table>
<thead>
<tr>
<th></th>
<th>Notifiable incidents.</th>
</tr>
</thead>
</table>
| Potential Impacts/ Risks | Cancellation of licenses/ permits;  
|                        | Suspension of operations;  
|                        | Legal prosecution.  |
| Key Activity/risk sources | Implementation of conditions of approval;  
|                          | Valid licenses/ permits and applicable conditions;  
|                          | Implementation of OHS measures;  
|                          | Recording and documenting;  
|                          | Updating in response to new/ changed legal requirements.  |
| Target/Objectives | Operations adhering to applicable legal requirements at all times.  |

#### MITIGATION: ACTION/CONTROLS

<table>
<thead>
<tr>
<th></th>
<th>RESPONSIBILITY</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conditions of environmental authorization must be implemented, and adhered to at all times.</td>
<td>STEINHAL ESTATE BOARD (1; 5; 7; 9)</td>
<td>1 – 9. Ongoing.</td>
</tr>
<tr>
<td>2. No activities may be carried out without a valid Registration Certificate in terms of R. 2 (1) of</td>
<td>OPERATOR/ POULTRY MANAGER (2-9)</td>
<td>2-4. Certificates and slaughter permit to be obtained prior to start of</td>
</tr>
</tbody>
</table>
the Poultry Regulations.

3. Specified permitted slaughter totals and other conditions which the PEO may specify in terms of R. 5 (a) of the Poultry Regulations.

4. No activities may be carried out without a valid Certificate of Approval as Food Handling Premises, in terms of R.3 of R 918 of 1999.

5. Copies of all key applicable legislation should be kept on file, and all applicable sections understood, and highlighted for future reference purposes, including at least –
   - The 2006 Poultry Regulations;
   - R. 918 of 1999;
   - OHSA;
   - The Animal Health Act.

6. Operations should at all times be conducted in a way which bespeaks a duty of care towards the environment, natural resources, the welfare of birds, and the health and safety of staff and the general public.

7. Records of all key operational aspects must be kept on file, as required in terms of the Meat Safety Act S. 11 (e).

8. Notifiable incidents should be reported according to the procedures in S. 6.16 below, and Remedial Response Plans implemented, as provided for in Section 6.19.

9. The OEMP should be updated with any new/changed applicable legal requirements.

<table>
<thead>
<tr>
<th>Recording/ Documenting</th>
<th>Updated file of all key applicable legislation; Valid operational certificates in terms of R. 918 and the Poultry Regulations; Records of all key operational aspects relating to the abattoir, as per S. 11 (e) of the Meat Safety Act; All correspondence with authorities regarding the operation of the abattoir; All notifiable incidents.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conditions of S24G authorization have been</td>
<td>8. Notifiable incidents within timeframes set out in S. 6.19 below. 9. OEMP legal requirements updates at least once a year.</td>
</tr>
</tbody>
</table>
Key Performance Indicators (KPIs)

1. Implemented.
2. Valid certificates and slaughtering permit in terms of the Poultry Regulations.
3. Valid certificate in terms of R. 918.
4. No Notices, etc have been issued by any authority with regard to abattoir activities.
5. Where notifiable incidents have occurred, proper reporting and response procedures were implemented, as provided for in S. 19-20 below.
6. Applicable legislation is reviewed at least once a year, and updates are made in response to new requirements.
7. Recording/documenting requirements are being met.

Monitoring/ Auditing

• Annual auditing against KPIs

6.6. WATER USE/ DEMAND MANAGEMENT

South Africa is an arid country with a growing population. Global climate change is likely to exacerbate water scarcity in coming decades in the Western Cape (Western Cape Draft Strategic Plan, 2011). Water demand management is therefore of key importance for all water users in South Africa.

Operations at the abattoir would use up to ~6 630 m$^3$ per year, mainly for washing and cleaning purposes. As noted in the 2001 DWAF Abattoir Waste Guidelines, the washing to drain of solid waste is one of the most wasteful common practices associated with abattoirs, and should be avoided by means of proper handling of edible and waste fractions to ensure minimal spillage onto floors and work surfaces. Further demand management measures would include regular fresh water pipeline/connections, and water using equipment checks. In addition, the use of appropriate cleaning substances and hot water could reduce water consumption during cleaning.

OBJECTIVE 2
WATER WISE OPERATIONS

| Aspects/ Component/s | • Use of process washing and cleaning water. |
|                       | • Fresh water connections. |
| Potential Impacts/ Risks | • Irresponsible use of a scarce vital resource. |
| Key Activity/risk sources | • Leaking pipelines and connections; |
|                           | • Inadequate metering; |
|                           | • Wasteful cleaning practices. |
| Mitigation: Target/Objective | • Pipelines and connections maintained in leak |
free condition;
• All water use metered and recorded;
• Water-wise washing and cleaning practices adhered to.

<table>
<thead>
<tr>
<th>MITIGATION: ACTION/CONTROLS</th>
<th>DIRECT RESPONSIBILITY</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fresh water pipelines and connections should be kept in a leak free condition. Pipelines and connections on the premises should be regularly checked, on an ongoing basis.</td>
<td>STEINTHAL ESTATE BOARD (1-3)</td>
<td>1-3. Initial checks and installation of meters, alarms, and valves prior to start of activities.</td>
</tr>
<tr>
<td>2. Alarms and/or ball valves should be fitted to prevent wastage.</td>
<td>ABATTOIR MANAGER (3-9)</td>
<td>4-9. Ongoing.</td>
</tr>
<tr>
<td>3. The abattoir should be fitted with water meters, and records of water use should be kept.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Water using equipment should be regularly checked to ensure early leak/ wastage detection and remedial action.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Washing of waste solids into drain should be avoided. Good carcass handling practices should ensure that as few scraps as possible end up on floors and work surfaces.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Brooms and mops should be used instead of hoses to clean floors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Hot water should be used for cleaning to decrease volumes of water and cleansing chemicals needed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Limit use of water-using equipment to only when absolutely necessary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Train all staff to use water sparingly.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Recording/ documenting**

- Fresh water use (totaled monthly).

**Key Performance Indicators (KPIs)**

1. Fresh water infrastructure and connections on premises leak free and undamaged upon inspection.
1. Meters, valves, etc are installed and in properly working condition.
2. Metered water use totals indicate stable or managed downwards trend.
3. Sufficient cleaning equipment is provided and
in good working order.

4. Recording/ documenting requirements are being met.

**Monitoring/ Auditing**
- Annual auditing against KPIs.

#### 6.7. WASTEWATER MANAGEMENT

Operations at the abattoir would generate up to ~6 630 m$^3$ wastewater per year – approximately 45% of the Estate’s total wastewater generation. Abattoir wastewater potentially contains high levels of organic pollutants, and therefore requires careful management. Key management objectives include the reduction of pollutants and contaminants loads, and ensuring all abattoir wastewater drains into a wastewater enclosed treatment system.

The use of potentially polluting chemicals would be mainly associated with soaps, detergents and disinfectants. Products which pose no or very little risk to the environment are widely available. The Material Safety Data Sheets (MSDS) of all products should be checked prior to use. Classified hazardous substances should be avoided.

With regard to contaminants management, specific attention should be paid to best practice guidelines outlined in the 2001 DWAF Abattoir Waste Guidelines (see: Section 5.4.4). Key practices would include solids and blood separation, and pre-discharge screening for fats and solids. Other drains and screens on the Estate should also be checked and cleaned on a regular basis to ensure inorganic matter does not cause any obstructions, etc.

Wastewater generating activities should only start once the proposed ETP upgrades have taken place, and the WWMP monitoring programmes have been implemented. Please refer to Sections 6.8. and 6.10 of the WWMP for monitoring requirements and remedial responses with regard to the Tierkloof stream.

#### OBJECTIVE 3

**THE SAFE AND RESPONSIBLE DISPOSAL OF WASTE WATER**

<table>
<thead>
<tr>
<th>Aspects/ Component/s</th>
<th>Wastewater containment;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contaminants separation;</td>
</tr>
<tr>
<td></td>
<td>Chemicals use.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Impacts/ Risks</th>
<th>Irresponsible use of scarce resource;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overloading of ETP (potential knock-on odour and public health impacts);</td>
</tr>
<tr>
<td></td>
<td>Pollution of local soils, and water resources, specifically the Tierkloof stream;</td>
</tr>
<tr>
<td></td>
<td>Failure to report and respond to Incidents.</td>
</tr>
<tr>
<td>Key Activity/risk sources</td>
<td>Mitigation: Target/Objective</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------</td>
</tr>
</tbody>
</table>
| • Leaky connections to ETP system;  
   • Use of harmful chemicals;  
   • Inadequate blood separation;  
   • Inadequate solids screening. | • All wastewater discharges only into ETP system;  
   • Use of avoidable harmful chemicals avoided;  
   • Blood is captured and not disposed of with wastewater;  
   • Solids are screened out from ETP system;  
   • All leaks and accidental spills dealt with appropriately. |

<table>
<thead>
<tr>
<th>MITIGATION: ACTION/CONTROLS</th>
<th>DIRECTLY RESPONSIBLE</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The provisions of the WWMP must be implemented prior to any wastewater being generated, and for as long as wastewater is generated.</td>
<td>STEINTHAL ESTATE BOARD (1; 5; 13)</td>
<td>1-11. As long as operational.</td>
</tr>
<tr>
<td>2. All wastewater must be captured in an enclosed system and drain exclusively to the ETP system.</td>
<td>ABATTOIR MANAGER (1-12).</td>
<td>2. Existing pipelines and connections should be checked prior to any wastewater being discharged.</td>
</tr>
<tr>
<td>3. Pipelines and connections to ETP should be kept in a leak free condition. Pipelines and connections on the premises should be regularly checked, on an ongoing basis.</td>
<td></td>
<td>4. Product screening prior to use.</td>
</tr>
<tr>
<td>4. MSDS should be checked for all products used in operations, and only detergents, soaps and disinfectants which pose no or little harm to the environment should be used as far as possible.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. MSDS for all products used must be kept on file.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Sodium-based products should be avoided to keep sodium absorption rate (SAR) levels low.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Where unavoidable, poisons should only be applied and managed by an accredited pest control service provider;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. ETP COD (oxygen demand) levels could be managed/reduced by replacing citric acid-based products with phosphoric acid based ones in washing process.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. EC (conductivity) reduction could be achieved by eliminating products with non-essential plant elements, and replacing them with e.g. phosphoric-acid based products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Blood should be collected during slaughter and</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Boland Environmental Consultants CC.
not disposed along with wastewater. Collected blood should be stored and disposed off-site as provided for under Objective 4 below).
11. Suitable waste bins should be provided at all operations to ensure unsuitable objects are not washed to drain (see Objective 4 and 5 below).
12. Traps, drains and screens should be cleaned on a regular basis. Solid matter should be treated as slaughter waste, and disposed of along with other compostable slaughter waste (see Objective 4 below).
13. All major accidental spills or leaks which may have a detrimental impact on the environment must be reported in terms of NEMA S. 30 and S.19-20 of the NWA.

| Key Performance Indicators (KPIs) | 1. Monitoring programmes provided for in WWMP implemented.  
| | 2. All wastewater discharges exclusively into ETP system.  
| | 3. Waste water infrastructure and connections on premises leak free and undamaged upon inspection.  
| | 4. MSDS indicates use of non-harmful products.  
| | 5. Poisons are exclusively used and handled as part of a pest control program provided by an accredited pest control service provider.  
| | 6. Blood is captured and disposed of separately from wastewater;  
| | 7. Solids are screened out and disposed of separately.  
| | 8. Recording/documenting requirements are being met.  

| Monitoring/ Auditing | • Annual auditing against KPIs.  

| Recording/ documenting | • MSDS of all chemical and veterinary products used, including after use is discontinued (ongoing);  
| | • Incidents/emergencies in Incidents Register.  

6.8. HIGHLY PUTRESCIBLE WASTE

Operations would produce and handle three categories of solid waste, namely highly putrescible waste, compostable feathers, and small quantities of general waste. As with all waste, the key management objectives would need to be aligned with the key principles of the NWMS, including implementation of the waste management hierarchy principles.

Highly putrescible waste constitutes the highest risk category, and requires measures aimed mainly at nutrients recovery and safe disposal. This waste category would include inedible carcass offal, condemned material/ carcasses, as well as frozen poultry blood. In addition, the abattoir would be directly responsible for the safe temporary storage and disposal of broiler mortalities from broiler operations on the Estate.

Highly putrescible waste holds significant pollution, bio-security, public health and nuisance risks. Risk exposure is associated with collection, temporary storage, transport and disposal. Proper separation from plucked feathers would be key to avoiding nuisance and other impacts at the composting facility.

Note that detailed mandatory requirements apply to the collection, handling, storage (bins and freezing), transport and disposal of highly putrescible broiler waste in terms of Part VIII of the Poultry Regulations.

Until another disposal method is approved in writing by DEA&DP and the PEO, all highly putrescible waste must be temporarily frozen in a dedicated freezer, and safely disposed off at a suitably licensed off-site waste facility. Where possible landfilling should be avoided. Blood, scraps and inedible offal would likely be acceptable to suitably licensed composting facilities near Tulbagh, such as Tommi’s Abattoir (Hermon). Due to high odour and scavenging risks, condemned portions or carcasses, including mortalities from broiler farming activities, would likely only be suitable for landfilling at a suitably licensed facility (e.g. Vissershok CCT).

The Abattoir Manager would be directly responsible for the temporary storage, transport and disposal of all highly putrescible broiler waste, including mortalities from farming operations.

Coordination with the Broiler Manager would be required in terms of accepting and recording of mortalities; with the Composting Manager in terms of accepting and recording highly putrescible waste screened out at composting facility.

<table>
<thead>
<tr>
<th><strong>OBJECTIVE 4</strong></th>
<th>THE SAFE HANDLING AND DISPOSAL OF HIGHLY PUTRESCIBLE WASTE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspects/ Component/s</strong></td>
<td>Legal requirements; Inedible offal; Blood; Condemned material; Broiler mortalities; Waste returned from composting facility.</td>
</tr>
<tr>
<td><strong>Potential Impacts/ Risks</strong></td>
<td>Suspension of activities;</td>
</tr>
</tbody>
</table>
| Key Activity/risk sources | • Adherence to legal requirements;  
|                         | • Collection and containment;  
|                         | • Safe and proper temporary storage;  
|                         | • Turnaround times;  
|                         | • Safe and proper transport;  
|                         | • Safe and proper disposal.  |

| Mitigation: Target/Objective | • Waste management strategy complies with legal requirements for handling, storage, transport and disposal;  
|                             | • Appropriate turnaround times in collection, transport, freezing and disposal;  
|                             | • Effective waste tracking system implemented;  
|                             | • Effective cooperation between Poultry, Abattoir and Composting Managers.  |

<table>
<thead>
<tr>
<th>MITIGATION: ACTION/CONTROLS</th>
<th>DIRECT RESPONSIBILITY</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
</table>
| 1. The SEB must ensure that clear lines of communication and co-operation are established between the relevant operations managers (Poultry, Abattoir, Composting), and that all are aware of provisions applicable to their individual operations.  
2. Unless formally authorized by DEA&DP and the PEO: VPH, no highly putrescible broiler waste may be disposed of on Steinthal, and may only be disposed of at (an) appropriately licensed off-site facility/ ies, municipal or otherwise.  
3. Where possible, waste should be treated for nutrients recovery instead of landfilling.  
4. A Hygiene Management Plan for handling slaughter waste must be compiled in terms of R. 53 (m) of the Poultry Regulations, and adhered to.  
| STEINTHAL ESTATE BOARD (1-3; 13) | POULTRY MANAGER (2-13) | 1-13. As long as operational.  |
5. Bins used for the collection and storage during slaughtering operations must comply with R.18 of the Poultry Regulations.
6. Where applicable, individual waste streams destined for the same means of disposal (e.g. composting or landfilling) should be binned together.
7. Highly putrescible waste redirected from the composting facility (see: Composting OEMP) is likely to consist of carcasses, portions and mortalities, and should be binned along with such material.
8. Bins for temporary storage (freezing) and transport should conform to the requirements of R. 89 of the Poultry Regulations.
9. Binned waste should be temporarily stored by freezing in a dedicated waste fridge. The freezer must conform to structural and maintenance requirements, as provided for in Part II (B) 1 and Part II (C) 3 of the Poultry Regulations.
10. Bins should be labeled by date, and waste should not allowed to accumulate for more than a week.
11. Vehicles carrying waste to final disposal must comply with the requirements of R. 5 (b) and R. 94 of the Poultry Regulations.
12. A waste recording and tracking system should be implemented to keep track of waste volumes generated and disposed.
13. Major accidental spills during handling or transport should be dealt with as Incidents in terms of NEMA S.30.

<table>
<thead>
<tr>
<th>CO-ORDINATION WITH BROILER (5) AND COMPOSTING MANAGERS (7) REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. At least weekly disposal.</td>
</tr>
</tbody>
</table>

**Recording/ documenting**

- Waste volumes by disposal method, recorded prior to loading for disposal, (totaled monthly);
- Waste volumes from broiler operations (as above);
- Proof of final disposal (landfill invoices per volume), volumes totaled monthly.

**Key Performance Indicators (KPIs)**

1. Documented proof that all waste is exclusively disposed off-site, and at (a) suitably licensed waste management facility/ ies.
2. Documented proof that preference is given to non-landfilling options in disposal;  
3. Adequate provision is made for sufficient, undamaged, and legally compliant bins for capture, temporary storage and transport. 
4. Clear arrangements for shared responsibilities are in place between various operations managers, specifically with regard to presentation of waste to abattoir, handling, storage, transport and disposal; as well as dealing with waste returned from the composting facility. 
5. Waste is stored at the abattoir in a dedicated waste freezer, in compliance with the requirements of the Poultry Regulations. 
6. Waste is disposed of at least on a weekly basis. 
7. Vehicles transporting waste conform to relevant requirements of the Poultry Regulations. 
8. Recording/ documenting requirements are being met. 

**Monitoring/ Auditing** 
- Annual auditing against KPIs. 

### 6.9. OTHER SOLID WASTE

Other solid waste would consist of plucked feathers and general solid waste. Plucked feathers would be safe for co-disposal at the Estate’s composting facility. Care should however be taken to ensure feathers are not contaminated with putrescible material.

General waste is likely to consist mainly of small amounts of plastic waste associated with damaged plastic crates, product containers, etc. Avoiding waste generation and managing potential litter/site neatness impacts would be key approaches.

By making use of re-usable crates, waste generation could be minimized. Appropriate containers (e.g. drums) should be provided for the temporary on-site storage of all general waste, including damaged bags, crates and equipment, and items generated by workers (wrappers, etc). Waste should be collected on a weekly basis and disposed of along with the Estate’s other general waste for municipal collection.

Note that slaughtering activities should only start once a WML has been obtained, and the composting site has been constructed. No plucked feathers should composted or disposed of anywhere else on Steinthal.

### OBJECTIVE 5

**TO MINIMIZE WASTE GENERATION AND ENSURE PROPER DISPOSAL**
| Aspects/ Component/s                  | Waste minimization;  
|                                      | Composting of plucked feathers;  
<table>
<thead>
<tr>
<th></th>
<th>Central collection and disposal of general waste.</th>
</tr>
</thead>
</table>
| Potential Impacts/ Risks             | Suspension of activities;  
|                                      | Legal prosecution/ fines;  
|                                      | Litter and pollution impacts;  
|                                      | Nuisance impacts (litter). |
| Key Activity/risk sources            | Use of crates and containers;  
|                                      | Transport and disposal of plucked feathers;  
|                                      | On-site collection of general waste (bins, etc);  
|                                      | Collection for central disposal of general waste;  
|                                      | Co-ordination of activities on Estate. |
| Mitigation: Target/Objective         | Waste generation is avoided by making use of reusable crates, bins, containers etc as far as possible;  
|                                      | All feathers disposed of by composting at the Estate’s composting facility;  
|                                      | Adequate provision in place for drums, bins etc to  
|                                      | All general waste disposed of along with Estate’s general waste for municipal collection on a weekly basis;  
|                                      | Effective cooperation with Estate’s central disposal function and Composting Manager. |

**MITIGATION: ACTION/CONTROLS**

<table>
<thead>
<tr>
<th></th>
<th>DIRECT RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Re-usable crates, bins, etc should be used in as far as possible.</td>
<td>STEINTHAL ESTATE BOARD (4;5; 7-8)</td>
</tr>
<tr>
<td>2. Crates, etc should be taken proper care of to ensure maximal re-use.</td>
<td>ABATTOIR MANAGER (1-8)</td>
</tr>
<tr>
<td>3. Where possible, empty HDPE containers should be returned to cleaning supplies service providers for re-use.</td>
<td>Coordination with COMPOSTING MANAGER Required (4-5)</td>
</tr>
<tr>
<td>4. Plucked feathers should be captured separately from other waste, and taken to the Estate’s composting facility at the end of every working day. Actions should be co-ordinated with composting activities to ensure</td>
<td></td>
</tr>
</tbody>
</table>

**TIMEFRAMES**

1-8. As long as operational.
no material is left unprocessed at the composting facility for longer than 48 hours.

5. Material should be transported to the composting site in closed plastic mesh weave bags (to prevent blow-outs), safely stowed on the bed of a vehicle with an enclosed loading bed (to prevent spills).

6. Drums for general waste must be kept on the premises, and facilities and placement should conform to the requirements of R918 with regard to waste storage.

7. Waste should be disposed of via municipal collection along with the Estate’s waste once a week;

8. Waste too large to handle by municipal collection must be disposed of at a licensed municipal landfill site.

| **Recording/ documenting** | • Volume of feathers presented for composting, totaled monthly;
| • General waste volume, totaled monthly. |

| **Key Performance Indicators (KPIs)** |
| 1. Premises in neat and tidy condition upon inspection. |
| 2. Provision is made for re-usable crates, bins, containers, etc in as far as possible. |
| 3. Provision is in place for the separate collection and disposal of feathers. |
| 4. Adequate provision for suitable waste bins/ drums on the premises for the collection of waste. |
| 5. Clear arrangements are in place to ensure weekly central collection. |
| 6. Recording/ documenting requirements are being met. |

| **Monitoring/ Auditing** | • Annual auditing against KPIs. |

**6.10. FOOD SAFETY**

The Steinthal abattoir would produce slaughtered broilers and edible offal for further off-site processing. No portioning, packing or other processing activities would be undertaken on Steinthal. Edible product would be temporarily stored at the abattoir (overnight), and transported in sterilized crates/ containers to the relevant third party downstream processing facility.
The abattoir sector is regulated by detailed overlapping Regulations in terms of the Health Act and the Meat Safety Act - both Acts essentially aimed at ensuring food safety. Certification in terms of both is required before any slaughtering activities may start (see Objective 1 above). The Abattoir Manager (operator) would be directly responsible for the implementation of legal requirements. The SEB would be responsible for ensuring all activities are carried out with the necessary certification.

**Poultry Regulations**

The Poultry Regulations (R. 153 of 2006) provide a detailed framework for the establishment and operation of abattoirs. All provisions are essentially aimed at ensuring food safety, and that operations do not pose a public health risk. Most of the 104 regulations are directly applicable to the Steinthal abattoir (see Section 5.5.2. above), and require mandatory implementation/adherence. Provisions with regard to the handling of waste and wastewater are discussed under Objectives 3-5 above.

Part II. B (Regulations 8-28) sets minimum requirements with regard to structural, infrastructural, internal fitment, equipment and services required to operate a facility which would not endanger public health.

Part II. C (R. 29-46) deals specifically with Hygiene Management Practices which must be implemented during activities. Specific requirements are made with regard to handling offal, cutting and processing, chilling and freezing, loading for transport, and sanitation.

Part III (R. 47-53) addresses Hygiene Management and Evaluation Systems (HMS). The general duties of the abattoir operator are set out in R.47. R.48 makes provision for a document management system to be kept. In terms of specific provisions, the operator of the abattoir is obliged to provide the PEO with an approved schematic plan of the facility (49), a flow diagram of the slaughter process (50), as well as a list of key potential safety hazards (51). The operator is further obliged to prepare 14 written Hygiene Management Programmes (52) outlined in R. 53 (a-n).

Part IV (R. 54-61) deals with Hygienic Requirements for Persons entering Abattoirs. Specific provisions are made with regard to access control (54), staff health checks (55-56), protective clothing (57), treating injuries which may contaminate food (58), mandatory showers and hand washing (59), prohibited behavior (60). Regulation 61 obliges the owner/operator to train all workers in the above matters.

Part VI (R. 72-82) provides detailed requirements with regard to meat inspections, including with regard to the acceptance of birds and ante-mortem inspections (A); general meat inspection provisions and inspection points (B), and dealing with partially recoverable condemned carcasses (C). Requirements for persons doing meat inspections are set out in (D).

Part VII (R.85-88) deals with mandatory marking of edible product prior to dispatch.

**R 918 of 1999**

General requirements for the operation of the abattoir as food handling premises and for the transport of edible product are set out in R. 918 of 1999 in terms of the Health Act (1977).

Key provisions relate to minimum standards and requirements for food practices (R. 5), standards and requirements for facilities on premises (6), for food containers (7), storage
and temperature control (8), and protective clothing (9). The general duties of management (10) and food handling staff (11) are also outlined. Regulation 13 sets minimum requirements for the transport of edible products.

The abattoir would be subject to ongoing inspections from the Department of Agriculture (PVH) in terms of the Meat Safety Act, as well as the CWDM: EH in terms of R. 918.

### OBJECTIVE 6
OPERATIONS WHICH DO NOT POSE A FOOD SAFETY RISK

<table>
<thead>
<tr>
<th>Aspects/ Component/s</th>
<th>Potential Impacts/ Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural requirements; Hygienic practices; Hygiene Management Systems; Staff and persons entering the abattoir; Meat inspections and certification; Waste management; Transport of edible product.</td>
<td>Public health risk to consumers; Loss of required certification in terms R 153 and R 918; Closure and job losses; Legal prosecution.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Activity/risk sources</th>
<th>Mitigation: Target/Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abattoir not built to plan approved by PEO; Abattoir not fitted and equipped according to minimum legal requirements; Activities taking place without necessary certification; Inadequate provision for carrying out hygienic practices; Implementation of Hygiene Management Programmes (HMP); Inadequate provision for meat inspections and marking, including suitably qualified inspectors; Inadequate provision for safe storage of product; Inadequate provision for safe transport.</td>
<td>All applicable requirements in terms of the Poultry Regulations adhered to at all times. All applicable requirements in terms of R 918 adhered to at all times.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MITIGATION: ACTION/CONTROLS</th>
<th>DIRECT RESPONSIBILITY</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. The abattoir should be constructed according to plans approved by the PEO.
2. Finishes, fittings, facilities, equipment and services must conform to the minimum requirements and standards set out in Part II (B) of the Poultry Regulations, and R.5 & 6 of R. 918.
3. Provision must be made for the implementation of hygienic management practices, as provided for in Part II (C) of the Poultry Regulations.
4. The 14 x HMPs specified in R. 53 must be drawn up in consultation with the PEO, and approved HMPs implemented from the start of operations. Note that the HMPs also provide for maintenance programmes.
5. Qualified Meat Safety Inspectors must be appointed, and meat checks implemented, as provided for in terms of Part VI of the Poultry Regulations.
6. Sampling programmes for ongoing laboratory analysis of meat samples must be drawn up and implemented in consultation with the PEO, as per R. 47 (c) of the Poultry Regulations.
7. No slaughtering activities may commence without appropriate certification in terms of the Meat Safety Act and R 918 (see Objective 1 above).
8. Workers and visitors must comply with the requirements of R.54 of the Poultry Regulations. All persons entering operational spaces in the abattoir must wear protective clothing as specified in R. 57.
9. Workers must be trained to comply with all hygiene management requirements made in terms of R 55-60 of the Poultry Regulations.
10. Daily health checks must be carried out, and only workers complying with requirements of R.
56 may be allowed to work.

11. Sick and diseased birds must be screened out during ante-mortem inspections. Suspicion of a listed controlled disease must be reported to the PEO (see Objective 7 below).

12. Meat must be marked according to the provisions of Part VII of the Poultry Regulations.

13. The storage of edible product must conform to the provisions of R. 8 of R 918 and R. 71 of the Poultry Regulations, including with regard to separate chilling from waste.

14. Vehicles used for the transport of edible product, and the conditions of transport must comply with the provisions of R.13 of R 918.

15. Documenting requirements must be met in terms of R.47-52 of the Poultry Regulations.

<table>
<thead>
<tr>
<th>Recording/ documenting</th>
</tr>
</thead>
<tbody>
<tr>
<td>The following recording documenting requirements are made in terms of the Poultry Regulations:</td>
</tr>
<tr>
<td>• Results of ongoing sampling/ laboratory analysis programme (47 (c));</td>
</tr>
<tr>
<td>• Process document management system and recordings (48);</td>
</tr>
<tr>
<td>• Copy of schematic plan of abattoir (49);</td>
</tr>
<tr>
<td>• Copy of slaughter process flow-diagram (50);</td>
</tr>
<tr>
<td>• List of potential hazards and preventative measures (51-2);</td>
</tr>
<tr>
<td>• 14 x HMPs (53);</td>
</tr>
<tr>
<td>• Medical records for all staff (55);</td>
</tr>
<tr>
<td>• Training records/ certificates for staff in hygiene management practices (61).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Performance Indicators (KPIs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Valid certification in terms of the Meat Safety Act and R 918 in place.</td>
</tr>
<tr>
<td>2. Facility inspection indicates implementation of relevant provisions of R 153 and R 918.</td>
</tr>
<tr>
<td>3. Approved HMS are in place and implemented.</td>
</tr>
<tr>
<td>4. Authority inspection reports indicate generally satisfactory adherence to legal requirements.</td>
</tr>
<tr>
<td>5. No Notices, etc have been received from authorities.</td>
</tr>
<tr>
<td>6. Where authorities indicate that actions are required to implement/ adhere to applicable legislation, such actions are carried out within specified timeframes.</td>
</tr>
</tbody>
</table>
7. Provision is made for separate and appropriate vehicles for transporting edible product, as per R 918 (13).

8. Recording/ documenting requirements are being met.

**Monitoring/ Auditing**

- Annual auditing against KPIs.

---

**6.11. BIO-SECURITY**

The abattoir would accept broilers from Steinthal’s farming operations as well as from external growers. The facility therefore holds bio-security risks for Steinthal’s flocks as well as for other growers, and the poultry industry in general.

The Meat Safety Act and the Poultry Regulations make provision for access control, as well as for the screening of birds accepted for slaughter (initial inspections as well as ante-mortem inspections). Also note that many of the provisions made for food safety are also applicable to maintaining bio-security.

In terms of the Meat Safety Act, the Poultry Regulations, the Animal Diseases Act and the Animal Health Act, the incidence of a listed controlled disease must be reported to the PEO immediately, and all directives implemented as required. The list of controlled diseases may be updated by the Minister by Gazetted Notice, and it is important that Steinthal keeps up with new listings.

Unprocessed birds from external growers potentially hold a risk to Steintal’s flocks, and should not be accommodated in Steinthal’s facilities under any circumstances.

---

**OBJECTIVE 7**

**OPERATIONS WHICH DO NOTPOSE A BIO-SECURITY RISK**

<table>
<thead>
<tr>
<th>Aspects/ Component/s</th>
<th>Potential Impacts/ Risks</th>
<th>Key Activity/risk sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access control;</td>
<td>Risk to health of Steinthal’s flocks;</td>
<td>Vector control (flies, rodents, scavengers);</td>
</tr>
<tr>
<td>Vector control;</td>
<td>Risk to health of flocks of external growers;</td>
<td>Screening of Health Declarations of growers;</td>
</tr>
<tr>
<td>Unprocessed birds from abattoir;</td>
<td>Outbreak of controlled disease – with impacts for broader poultry industry;</td>
<td>Provision for ante-mortem inspections and handling of diseased birds;</td>
</tr>
<tr>
<td>Reporting of controlled diseases.</td>
<td>Legal persecution (failure to report a controlled disease).</td>
<td></td>
</tr>
</tbody>
</table>

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### Mitigation: Target/Objective

- Perimeter fencing and access control measures are in place.
- Only suitable birds are accepted for slaughtering;
- All birds are subjected to ante-mortem inspections;
- Highly putrescible waste is dealt with as provided for under Objective 4;
- No unprocessed birds from external growers are housed in Steinthal facilities;
- Effective cooperation between Poultry and Abattoir Managers;
- All incidences of controlled diseases reported and responded to, as per legal requirements.

### MITIGATION: ACTION/CONTROLS

<table>
<thead>
<tr>
<th>ACTION/CONTROLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The premises should be enclosed with perimeter fencing in good condition, as provided for on plans approved by the PEO. Lockable gates should be provided.</td>
</tr>
<tr>
<td>2. No broilers may be accepted for slaughter without a valid Declaration of Health from the grower, as required in terms of R. 72 (1) of the Poultry Regulations.</td>
</tr>
<tr>
<td>3. Ante-mortem inspections must be carried out by a qualified inspector, and birds screened according to the provisions of R. 73-74).</td>
</tr>
<tr>
<td>4. Condemned birds not suffering from a controlled disease, must be disposed of as highly putrescible waste, and handled, stored and disposed of as provided for under Objective 4.</td>
</tr>
<tr>
<td>5. An accredited pest control service provider should be appointed to implement fly and rodent management programmes at the</td>
</tr>
</tbody>
</table>

### DIRECT RESPONSIBILITY

- STEINTHAL ESTATE BOARD  
  (1; 9; 11-12)
- ABATTOIR MANAGER  
  (1-12)

### TIMEFRAMES

- 1-12: Ongoing.
- 1; 3; 5; 7: material provision required prior to start of activities.
6. No worker or visitor may enter or leave the abattoir without prior disinfection of shoes and hands;
7. Workers must take disinfectant showers daily prior to work as well as after work in the abattoirs' shower facilities.
8. Birds raised by external growers and which could not be processed by Steinthal abattoir, should be returned to their places of origin. Such birds should not be mixed with Steinthal’s flocks or housed in Steinthal’s broiler houses.
9. Clear lines of communication and co-operation should be established between the Poultry and Abattoir Managers, and both should be aware of OEMP provisions applicable to their individual operations;
10. The Broiler and Abattoir Manager should share information on an ongoing basis with regard to the detection of notifiable diseases and related matters, and dealing with unprocessed birds from the abattoir.
11. The suspicion of controlled diseases should be reported to the PEO: VPH immediately, as provided for in S. 17 (1-3) of the Animal Health Act, and responded to in the manner prescribed by the PEO upon notification.
12. A copy of the list of notifiable diseases should be kept, and regularly updated in accordance with any applicable Gazetted Notices in terms of the Animal Diseases Act as well as the Animal Health Act.

<table>
<thead>
<tr>
<th>CO-ORDINATION WITH BROILER MANAGER REQUIRED (8-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Reported to SEB and PEO immediately upon suspicion/detection.</td>
</tr>
<tr>
<td>12. List to be updated upon notification by PEO; alternatively at least once a year, during annual audit.</td>
</tr>
</tbody>
</table>

### Recording/ documenting

- Copies of Declarations of Health from all growers prior to accepting birds, including relevant details as per R 72 (2) of the Poultry Regulations;
- Fly and rodent management programmes;
- Updated list of controlled diseases in terms of the Animal Diseases Act.
### Key Performance Indicators (KPIs)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Premises is fenced in, and fencing in good repair upon inspection.</td>
</tr>
<tr>
<td>2.</td>
<td>Fly and rodent management programmes are in place for vector control.</td>
</tr>
<tr>
<td>3.</td>
<td>Records indicate only birds presented with the necessary Declarations of Health are accepted for slaughter.</td>
</tr>
<tr>
<td>4.</td>
<td>Ante-mortem screening is carried out by a qualified inspector, according to provisions of provisions of Poultry Regulations.</td>
</tr>
<tr>
<td>5.</td>
<td>Highly putrescible waste, including condemned birds, is treated as provided for under Objective 4.</td>
</tr>
<tr>
<td>6.</td>
<td>The incidence of controlled diseases have been reported and responded within specified timeframes.</td>
</tr>
<tr>
<td>7.</td>
<td>No mature broilers from external growers (unprocessed by abattoir) are kept in broiler houses at any given time.</td>
</tr>
<tr>
<td>8.</td>
<td>Recording/ documenting requirements are being met.</td>
</tr>
</tbody>
</table>

### Monitoring/ Auditing

- Annual auditing against KPIs.

### 6.12. HUMANE TREATMENT OF BIRDS

The humane treatment of broilers at abattoirs is mandatory in terms of the Meat Safety Act S. 11 (h) and the Poultry Regulations (S. 62-67).

The 2006 Poultry Regulations make comprehensive provision for the implementation of specific requirements with regard to the offloading and pre-killing accommodation of broilers, ante-mortem inspections (S.64), and the hanging, stunning and killing of birds (S. 65-67). Implementation of these requirements is mandatory, and should provide the key management framework.

Provisions in both the Meat Safety act as Regulations specifically require adherence to the provisions of the Animals Protection Act of 1962. The Act is aimed at preventing avoidable cruelty to animals, including broilers. In terms of the Act, the Abattoir Manager and staff, as well as the SEB would both be jointly responsible for ensuring the welfare of broilers accepted for slaughter.

### OBJECTIVE 8

**BROILERS TREATED IN A HUMANE WAY AT ALL TIMES**

- General treatment by staff;
- Offloading and pre-killing;
### Potential Impacts/ Risks
- Unnecessary harming of sentient beings;
- Suspension of Abattoir certification/ permits;
- Legal prosecution.

### Key Activity/risk sources
- Mistreatment by staff;
- Handling during offloading;
- Ineffective ante-mortem screening to prioritize slaughter of injured birds;
- Provision of inadequate shelter prior to killing;
- Birds not killed within 4 hours after offloading;
- Inadequate equipment for hanging, stunning and killing;
- Unprocessed birds.

### Mitigation: Target/Objective
- Operations bespeaking of general duty of care towards broilers and of causing no/ preventing avoidable pain and suffering to birds;
- Operations in compliance with S. 64-67 of the Poultry Regulations;
- Operations comply with applicable provisions of the Animals Protection Act S.1.

### MITIGATION: ACTION/CONTROLS

<table>
<thead>
<tr>
<th>ACTION/CONTROLS</th>
<th>DIRECT RESPONSIBILITY</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No birds may be ill-treated, harmed or terrified during any part of operations, and operations should at all times adhere to the general provisions of S.1 of the Animals Protection Act.</td>
<td>ABATTOIR MANAGER (1-6)</td>
<td>1-6. As long as operational.</td>
</tr>
<tr>
<td>2. Only birds transported in appropriate vehicles under appropriate conditions, in compliance with the provisions of S. 1 (m) of the Animals Protection Act, should be accepted for slaughter. The Abattoir Manager should document all such instances in the Incidents Register.</td>
<td>Coordination with BROILER MANAGER Required (2)</td>
<td></td>
</tr>
<tr>
<td>3. Birds presented at the abattoir should be treated according to the provisions of R.64 of the Poultry Regulations with regard to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provision for shade and ventilation prior to offloading;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Handling of crates during</td>
<td></td>
</tr>
</tbody>
</table>

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offloading;
• Ante-mortem inspections to screen out injured birds for euthanization and priority slaughter;
• Processing of all birds within 4 h of offloading.

4. Birds must be hung, stunned and bled according to the provisions of S. 65-7 of the Poultry Regulations.
5. Provision should be made for adequate equipment, in good functioning order, to implement S. 65-67 measures, including working stunners and serrated killing blades.
6. Birds which are unlikely to be processed within 4 h should be returned to their owners, and such incidences noted in the Incidents Register.

### Recording/ Documenting

- Incidents of staff mistreatment;
- Birds not accepted for slaughter (details);
- Birds returned to owners (details);
- Regular inventory checks of key hanging, stunning and bleeding equipment.

### Key Performance Indicators (KPIs)

1. The way birds are treated by all staff upon inspection bespeaks of general duty of care towards broilers and of causing no/ preventing avoidable pain, suffering or harm.
2. Adequate structural provision is made for providing shelter from the elements and heat stresses to birds prior to and after offloading.
3. Arrangements are in place to ensure birds are processed within 4 h of offloading.
4. Arrangements are in place to ensure priority screening of injured birds for euthanizing and priority slaughter.
5. Adequate equipment, in good functioning order, is available to implement requirements of S. 65-67 of the Poultry Regulations.
6. Recording/ documenting requirements are being met.

### Monitoring/ Auditing

- Annual auditing against KPIs.
6.13. NUISANCE RISK MANAGEMENT

Operations during 2007 lead to significant nuisance impacts on neighbors, especially Schoonderzicht. Inappropriate solid waste management practices lead to odour complaints, public health concerns from the authorities, and significant friction with neighbors. In addition, inconsiderate use of the Schoonderzicht servitude road by the former lessee, lead to substantial friction with the owners of Schoonderzicht.

OBJECTIVE 9
OPERATIONS DO NOT CAUSE A PUBLIC NUISANCE

| Aspects/ Component/s                              | • Fly control;  
|                                                  | • Rodent control;  
|                                                  | • Scavenger control;  
|                                                  | • Odours;  
|                                                  | • Visual and site appearance;  
|                                                  | • Shared road use.                     |
| Potential Impacts/ Risks                         | • Authority Notices and prosecution;  
|                                                  | • Public health risk (vectors);  
|                                                  | • Friction with neighbors;  
|                                                  | • Private litigation.                  |
| Key Activity/risk sources                       | • Inadequate provision for fly, rodent and scavenger control;  
|                                                  | • Inadequate housekeeping practices, including regular cleansing;  
|                                                  | • Improper collection, handling and disposal of putrescible waste;  
|                                                  | • Site neatness and litter control;  
|                                                  | • Maintenance and upkeep of abattoir structure;  
|                                                  | • Inconsiderate use of Schoonderzicht servitude road.               |
| Mitigation: Target/Objective                     | • Fly and rodent management programmes are in place;  
|                                                  | • Wastewater disposal managed according to provisions under Objective 3 above;  
|                                                  | • Solid waste managed according to provisions under Objectives 4-5, including with regard to processing turnaround times;  
|                                                  | • Abattoir structure maintained in good state of repair, including neatly painted outside;  
|                                                  | • Abattoir screened from neighbors and servitude road by appropriate plantings;  
<p>|                                                  | • Use of Schoonderzicht servitude road does not result in obstructions. |</p>
<table>
<thead>
<tr>
<th>MITIGATION: ACTION/CONTROLS</th>
<th>DIRECT RESPONSIBILITY</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In order to discourage flies and scavengers and avoid odor risks, highly putrescible waste should be handled and disposed of as provided for under Objective 4.</td>
<td>STEINTHAL ESTATE BOARD (3; 6; 7)</td>
<td>1-8. As long as operational.</td>
</tr>
<tr>
<td>2. An accredited pest control service provider should be appointed to implement and manage fly and rodent control programmes on the premises.</td>
<td>POUlTRY MANAGER (1-5; 8)</td>
<td>3. Pest control service provider to be appointed prior to stocking to provide written pest control/management programmes to be implemented.</td>
</tr>
<tr>
<td>3. General solid waste should be handled as provided for under Objective 5. The site should be kept in a neat and litter-free condition at all times.</td>
<td></td>
<td>6-7. Initial maintained and planting to be done prior to stocking.</td>
</tr>
<tr>
<td>4. If use is made of security lighting at night, use should be made of down lighting lamps to avoid impacts on residences on adjacent properties.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Provision for regular maintained and upkeep of the abattoir structure should be made broiler houses should be made, and the structure kept in a neatly painted condition.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Indigenous, water-wise trees and shrubs should be established, as appropriate, in order to screen the facility from receptors along the Schoonderzicht road and residential uses on Bella Vista and Schoonderzicht;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. No stationary vehicles associated with operations may at any time cause an obstruction on Schoonderzicht access road;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. All reasonable requests made by the owners of Schoonderzicht Estate to co-ordinate times of use are respected.</td>
<td></td>
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</tr>
</tbody>
</table>

**Recording/ documenting**

- Public complaints (Complaints Register);
- Any nuisance related correspondence with authorities;
- Pest control programmes (details);
• Damage and repairs to abattoir structure/ infrastructure (Incidents Register).

### Key Performance Indicators (KPIs)

1. No complaints logged in Complaints Register.
2. No nuisance-related Notices, etc. were issued by authorities.
3. Where complaints or notices have been received, relevant issues were addressed in an appropriate manner, within a reasonable timeframe.
4. Fly and rodent control programmes implemented by accredited pest control service provider.
5. Sites are neat and tidy upon inspection, with no visible waste other than in bins.
6. Abattoir structure in a good state of repair, and neatly painted.
7. Appropriate indigenous shrubs and trees have been established to provide adequate visual screening with regard to residential uses on Bella Vista and Schoonderzicht.
8. Security lighting suitably shaded or down-lighting to prevent impacts on adjacent properties.
9. Recording/documenting requirements are being met.

### Monitoring/ Auditing

• Annual auditing against KPIs.

### 6.14. STAFF TRAINING

Adequately trained staff in all applicable operational, OHS and emergency matters is the key to implementing virtually all of the OEMP objectives.

All staff should be trained in basic matters prior to undertaking work. The Abattoir Manager would be directly responsible for ensuring training. The SEB is responsible for ensuring the Manager implements the required training.

### OBJECTIVE 10

**STAFF IS PROPERLY TRAINED IN ALL BASIC OPERATIONAL AND OHS MATTERS**

<table>
<thead>
<tr>
<th>Aspects/ Component/s</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational tasks;</td>
<td></td>
</tr>
<tr>
<td>Legal requirements and OEMP provisions;</td>
<td></td>
</tr>
<tr>
<td>Hygiene management;</td>
<td></td>
</tr>
<tr>
<td>Health and Safety;</td>
<td></td>
</tr>
<tr>
<td>Responding to emergencies;</td>
<td></td>
</tr>
<tr>
<td>Responding to Incidents.</td>
<td></td>
</tr>
</tbody>
</table>
### Potential Impacts/ Risks

- Wasteful/ inefficient operations;
- Environmentally harmful/ risky practices;
- Avoidable harm to broilers;
- Compromised bio-security;
- Compromised hygiene management, and public health concerns;
- Injury to health, maiming or death of workers;
- Harm to adjacent communities or properties;
- Legal prosecution.

### Key Activity/risk sources

- Inadequate training in all relevant matters;
- Failure to ensure all staff is trained prior to undertaking work.

### Mitigation: Target/Objective

All staff is sufficiently trained to –

- understand their individual duties and responsibilities;
- perform key operational tasks,
- understand and implement the relevant provisions of this OEMP;
- understand and adhere to basic hygiene management requirements in terms of the Poultry Regulations (61) and R 918 (11);
- understand workplace hazards and are able to implement safe practices, including the wearing of protective gear;
- respond to emergencies, in the manner outlined in Section 6.17 below.

### MITIGATION: ACTION/CONTROLS

<table>
<thead>
<tr>
<th>All workers should be trained -</th>
<th>DIRECT RESPONSIBILITY</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand and perform their key operational duties and responsibilities in an effective manner.</td>
<td>POULTRY MANAGER (1-5)</td>
<td>1-6. As long as operational.</td>
</tr>
<tr>
<td>2. In the safe and effective use of relevant equipment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To avoid key environmental risks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. In hygienic workplace and personal on-site practices, as provided for in R.61 of the Poultry Regulations and R. 11 of R 918.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. To identify key workplace hazards</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
and implement corresponding safe practices, including the use of protective clothing, as provided for in OHSA.

6. All workers should be trained to be able to respond to emergencies, including with regard to the use of firefighting equipment, direct first aid emergencies, and following notification procedures (see Section 6.18 below).

7. Records of all relevant training certificates must be kept on file.

**Recording/ documenting**

- Training records in terms of Poultry Regulations (61);
- Training certificates in terms of OHSA.

**Key Performance Indicators (KPIs)**

1. All workers are able to demonstrate –
   - A knowledge of key operational aspects;
   - A knowledge of key provisions of OEMP Objectives;
   - Safe use of equipment;
   - Basic bio-security measures;
   - Basic hygiene management measures;
   - Safe handling of potentially harmful workplace substances;
   - Proper use of protective clothing;
   - Knowledge of how to respond to emergencies.

2. Recording/ documenting requirements are being met.

**Monitoring/ Auditing**

- Annual auditing against KPIs.

### 6.15. OCCUPATIONAL HEALTH AND SAFETY

The OHSA and Regulations impose a number of legal requirements upon the employer, including with regard to providing a safe working place, adequate training, protective gear (S.8), as well as the notification of incidents (S.24), and provision of first aid (2005 Draft Regulations). These provisions are mandatory.

Section 17 of the OHSA obliges every employer with more than 20 employees at a specified workplace, to appoint a Health and Safety Representative (HSR), for a specified period, in writing. The duties of the HSR are set out in S. 18, and essentially relate to ensuring the ongoing efficacy of OHS measures implemented.
In terms of the 2005 OHSA Draft Safety Requirements Regulations (7 (4)) every employer with more than 10 people is obliged to employ someone with a valid certificate of competency in first aid, who should be available at all working hours at the place of work.

Key OHS aspects addressed below include hazard identification and avoidance, the safe use of equipment and substances, worker access to adequate safety gear and first aid, and responses to emergencies and notifiable incidents.

**OBJECTIVE 11**

**TO ENSURE OPERATIONS DO NOT AFFECT THE HEALTH & SAFETY OF WORKERS**

<table>
<thead>
<tr>
<th>Aspects/ Component/s</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General OHSA provisions;</td>
<td></td>
</tr>
<tr>
<td>Training;</td>
<td></td>
</tr>
<tr>
<td>Equipment;</td>
<td></td>
</tr>
<tr>
<td>Use of chemicals and medicines;</td>
<td></td>
</tr>
<tr>
<td>Protective clothing;</td>
<td></td>
</tr>
<tr>
<td>Access to hot showers;</td>
<td></td>
</tr>
<tr>
<td>Access to first aid;</td>
<td></td>
</tr>
<tr>
<td>Notifiable Incidents in terms of OHSA.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Impacts/ Risks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury to health, maiming or death of workers;</td>
<td></td>
</tr>
<tr>
<td>Significant adverse socio-economic impacts on affected worker households;</td>
<td></td>
</tr>
<tr>
<td>Legal prosecution.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Activity/risk sources</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate staff training in operational as well as OHS matters (see above);</td>
<td></td>
</tr>
<tr>
<td>Inadequate equipment;</td>
<td></td>
</tr>
<tr>
<td>Inadequate protective clothing/ gear;</td>
<td></td>
</tr>
<tr>
<td>Unsafe use of chemicals, poisons, medicines, etc;</td>
<td></td>
</tr>
<tr>
<td>Inadequate access to first aid;</td>
<td></td>
</tr>
<tr>
<td>Inadequate firefighting equipment;</td>
<td></td>
</tr>
<tr>
<td>Responses to emergencies;</td>
<td></td>
</tr>
<tr>
<td>Failure to report notifiable incidents in terms of OHSA S.24 and 2005 Draft Regulations.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation: Target/Objective</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations bespeak of a general duty of care exercised towards the health and safety of staff;</td>
<td></td>
</tr>
<tr>
<td>Staff is trained to perform all operational tasks in a safe manner;</td>
<td></td>
</tr>
<tr>
<td>Adequate provision is made for all key equipment;</td>
<td></td>
</tr>
<tr>
<td>Chemicals, medicines and poisons are handled in a responsible manner;</td>
<td></td>
</tr>
<tr>
<td>Staff is trained to respond to emergencies</td>
<td></td>
</tr>
</tbody>
</table>
in an appropriate manner;
- Adequate provision is made for staff access to first aid and a qualified first aid provider.
- OHS matters at the abattoir are coordinated by an HSR (20 staff or more).

<table>
<thead>
<tr>
<th>MITIGATION: ACTION/CONTROLS</th>
<th>DIRECT RESPONSIBILITY</th>
<th>TIMEFRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All workers must be trained to safely perform operational tasks and respond effectively to emergencies;</td>
<td>ABATTOIR MANAGER (1-10)</td>
<td>1-10. As long as operational.</td>
</tr>
<tr>
<td>2. All workers should be made aware of key OHS hazards in handling equipment, chemicals waste, etc;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Workers must be provided with adequate protective clothing and gear to enable them to perform all their tasks in a safe manner. Gear would include gumboots, masks and goggles (cleaning and handling manure) and gloves (handling of waste);</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Workers should be provided with adequate equipment, in proper functioning order to perform all key tasks.</td>
<td></td>
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</tr>
<tr>
<td>5. All hazardous chemicals must be safely stored away under lock and key. Only the Manager or designated staff should have access. All substances must be handled strictly in accordance with the relevant MSDS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Provision should be made for a qualified first aid provider to be available at all operational hours, as well as for adequate first aid equipment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. If the abattoir workforce exceeds 20 employees, a Health and Safety Representative (HSR) must be appointed, as provided for in S.17 of OHSA.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. An accredited fire fighting service provider should advise on and provide the necessary firefighting equipment. A maintenance programme provided should be provided by the service provider.</td>
<td></td>
<td>6-7. Appointment of first aid worker and HSR from when work starts being undertaken, as applicable.</td>
</tr>
<tr>
<td>9. Emergencies must be responded to as provided for under Section 6.18 below.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. All notifiable incidents defined in S. 24 of OHSA must be reported, including serious injury, maiming, exposure to a known harmful substance, or death. 10. SEB and Authorities to be notified immediately.

**Recording/ Documenting**

- MSDS of all chemical products used on file (archived once use is discontinued);
- Emergencies in which health and safety of a worker was endangered (Incidents Register);
- Notifiable Incidents, in terms of OHSA S.24

**Key Performance Indicators (KPIs)**

1. No OHS related emergencies of incidents recorded.
2. All workers trained in OHS and emergency response matters (Objective 10).
3. Adequate provision is made for sufficient equipment, in good working order, for staff to carry out all operational tasks safely and effectively.
4. Adequate provision is made for protective clothing and gear, including boots, masks, goggles and gloves.
5. Chemicals, medicines, etc are safely stored in a lockable facility with limited access.
6. Staff have access to a qualified first aid provider during all operational hours.
7. An HSR has been appointed in terms of OHSA (>20 workers), and is functioning as provided for in terms of OHSA.
8. Staff are able to demonstrate knowledge of proper emergency procedures to be followed in case of emergencies (Section 6.18).
9. Recording/ documenting requirements are being met.

**Monitoring/ Auditing**

- Annual auditing against KPIs.

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6.16. COMPLAINTS REGISTER

Physical provision should be made for a Complaints Register prior to the start of operations. The Register must be kept specifically for the Abattoir, and for as long as it remains operational.

The Register should include a physical ledger to log public complaints, as well as provision for the documentation of all e-mails or letters of complaint. The basic details of letters or e-mailed complaints should be physically entered into the ledger by the Applicant.
The ledger should be kept at the Estate’s administration building, and should be accessible to all members of the public during normal workday hours.

The Register must record at least the following:

- Nature of complaint;
- Name of complainant/ authority;
- Date;
- Likely cause;
- Responses to address complaints, outcomes, as well as all relevant timeframes.

The Register should be included in the annual audit. The audit should assess the adequacy of recording, responses and timeframes.

### 6.17. INCIDENTS REGISTER

Physical provision should be made for an Incidents Register prior to the start of operations. The Register must be kept specifically for the Abattoir, and for as long as it remains operational.

In addition to Notifiable Incidents (see S. 6.18 below), the Register should also record the following:

- Emergencies (Section 6.17. below);
- Serious mistreatment of birds;
- Any major damage to infrastructure;
- Breaches in bio-security;
- Birds returned to owners;
- Any major equipment failure.

The Register must record at least the following:

- Date;
- Nature of incident/ event;
- Notification of authorities, as applicable.
- Details of remedial actions taken, including measures implemented, outcomes and associated timeframes.

The Register should be included in the annual audit. The audit should assess adequacy of recording, as well as effectiveness of measures taken within reasonable timeframes.

### 6.18. EMERGENCIES

Emergencies are situations which require immediate/ prompt action to prevent or contain damage to the health and safety of people, the environment and/ or property.

Potential emergency situations would include:

- Fire in abattoir;
- Power failures;
- Worker injury;
• Medical emergency.

Key principles in responding to emergencies are the following:

• The health and life of people should be prioritized over all else;
• All responses should bespeak a general duty of care towards the environment;
• Actions should be co-ordinated between all relevant role-players.

Key provisions for responding to emergencies include:

1. Workers should immediately notify the Abattoir Manager, proxy, or the SEB of any emergencies;

2. The Abattoir Manager and/ or SEB must co-ordinate an effective and prompt response;

3. The SEB and all operations Managers should have at their immediate disposal a list of all key relevant emergency telephone numbers, including:
   • Of other operations managers/ the SEB;
   • The Tulbagh SAPS;
   • Witzenberg fire fighting;
   • Local ambulance service;
   • ESKOM;
   • Neighbors on Schoonderzicht, Witzenberg, and Bella Vista.

4. Key emergency services should be notified immediately in case an ambulance or fire fighting service, etc is required;

5. In case of fire, use of firefighting equipment should be made, and the SAPS, fire fighting services and potentially affected neighbors should be notified;

6. Emergencies should be recorded in the Incidents Register;

7. Emergencies which resulted in Notifiable incidents should also be reported and further dealt with as provided for in 6.18 below.

6.19. NOTIFIABLE INCIDENTS

The Abattoir Manager would be responsible for immediately reporting all Notifiable Incidents to the SEB. The SEB would be responsible for co-coordinating reporting and remedial responses.

Incidents, as defined in key applicable legislation, must be reported to the relevant authorities within legally specified timeframes (Table 6.3).

<table>
<thead>
<tr>
<th>INCIDENTS</th>
<th>LEGISLATION</th>
<th>SECTIONS</th>
<th>KEY AUTHORITIES</th>
<th>TIME FRAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Major spills, leaks or emissions into environment; Fires</td>
<td>NEMA</td>
<td>S.30</td>
<td>• DEA&amp;DP     • DWA     • CWDM: EM</td>
<td>Prescribed reporting within 14 days.</td>
</tr>
<tr>
<td>• Spills or leak which</td>
<td>NWA</td>
<td>S. 19-20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Boland Environmental Consultants CC.
### INCIDENTS

<table>
<thead>
<tr>
<th>INCIDENTS</th>
<th>LEGISLATION</th>
<th>SECTIONS</th>
<th>KEY AUTHORITIES</th>
<th>TIME FRAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>may affect ground or surface water resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Suspicion of any chicken infected with a listed controlled disease in terms of the Animal Diseases Act (1984)</td>
<td>Meat Safety Act</td>
<td>S. 11 (g)</td>
<td>• DA: VPH (PEO)</td>
<td>Immediately upon detection</td>
</tr>
<tr>
<td></td>
<td>Poultry Regulations (2006)</td>
<td>S. 73 (3)</td>
<td>• WCP Department of Health</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Animal Diseases Act</td>
<td>Gazetted Notices</td>
<td>• CWDM: EM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Animal Health Act</td>
<td>S.17. (1) (c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Accident or event associated with abattoir workplace or operations which lead to death, maiming or serious injury of a worker.</td>
<td>OHSA</td>
<td>S.24</td>
<td>WCP Department of Labor</td>
<td>Prescribed reporting within 7 days.</td>
</tr>
<tr>
<td></td>
<td>OHSA General Administrative Regulations (2003)</td>
<td>R. 8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note that in terms of NEMA and the NWA, the Tulbagh SAPS and fire fighting services have to be notified immediately in case of fires, major spills, life threatening situations, etc, as applicable. In addition, all neighbors which may be affected should be notified.

In instances of controlled diseases, the PEO would advise on isolation, quarantine and any other measures which would need to be implemented.

Note that NEMA 30 (3) would require an initial assessment of scale and significance to be undertaken prior to authorities being notified, such within 14 days of the Incident having taken place. Remedial Response Plans (RPP) in terms of NEMA S.30 or the NWA should be developed according to requirements stipulated by any relevant authority body, and implemented within specified time frames.

### 6.20. REMEDIATION RESPONSE STRATEGY

The Remediation Response Strategy (RSS) is triggered by any Incident, as defined in terms of NEMA S. 30 or the NWA S. 19-20.

Key to the implementation of the RSS is the timeous and suitable notification of appropriate authorities (see above). Note that in terms of NEMA S. 30 (3) the notification at 14 days would need to include an initial assessment.

### 6.20.1. Remedial Response Plans

Where indicated as a requirement by the authorities upon reporting, a suitable specialist should be appointed to prepare an RRP. An RRP should be tailored to the nature of the Incident/ event, and should further –

- Comply with any requirements specified by the authorities;
• Take into consideration any applicable baseline information (e.g. Tierkloof water quality);
• Take into consideration information from the initial assessment;

An RRP should at the minimum address the following:

• Identify and assess the extent and significance of damage, pollution, etc.
• Identify likely causes and responsible components.
• Advise on temporary arrangements to prevent further pollution from occurring;
• Advise on operational measures to prevent pollution from recurring;
• Advise on rehabilitation measures as may be applicable;
• Provide monitoring provisions to ensure successful implementation takes place.

RRPs should be only implemented with specialist input, and after proper consultation with DEA&DP and/ or other key relevant authorities.
SECTION 7: AUDITING AND REPORTING

7.1. INTRODUCTION

This section makes provision for auditing, reporting, and responses to key audit findings/recommendations.

7.2. AUDITING

The Steinthal Estate Board (SEB), as the registered landowner, is responsible for carrying out an annual audit to ensure implementation and ongoing effectiveness of management provisions.

A qualified Environmental Assessment Practitioner (EAP) should be appointed to carry out audits at annual intervals, as measured from the end of the previous subject auditing period.

Audit reports should be finalized no more than three months after the last day of each audit period.

7.2.1. Terms of Reference

The Terms of Reference (ToR) should include the following minimum requirements –

1. Auditing and reporting against identified KPIs for Management Objectives 1-11;
2. Auditing and reporting against Complaints and Incidents Registers;
3. Verification that operations are carried out in compliance with all relevant legal requirements, including any new ones, and if not, advising the SEB on the necessary steps to be taken;
4. Providing an assessment of overall Compliance against KPI’s;
5. Identify key problem areas, and make recommendations on how to address them;
6. Make recommendations with regard to OEMP updates, including significant changes in baseline profiles and additional management objectives and monitoring programmes, if required.

7.2.2. Initial audit

In addition to the ToR under 7.2.1. above, the initial audit should also include an assessment of adherence to objectives provided for the construction phase (Section 6.4).

Assessment should be based on:

- the Complaints and Incidents Registers;
- building plans signed off by buildings inspector;
• records for operations indicate no slaughtering activities commenced prior to initial requirements set out in Section 6.3. had been met; and
• the absence of building rubble on the site.

7.3. REPORTING

The SEB must make the following provisions for record keeping and disclosure:

1. Keep a complete file of all auditing reports;
2. Upon request, make auditing reports available to authorities.
3. Upon request, provide any authority body with report copies.
SECTION 8. UPDATING OF OEMP

8.4. INTRODUCTION

This section contains provisions with regard to the updating of the OEMP in its current and subsequent formats. Key triggers and responses are outlined.

The Steinthal Estate Board (SEB), as the registered landowner, is responsible for ensuring the implementation of proper responses.

Amendments to the OEMP should only be carried out by a qualified Environmental Assessment Practitioner (EAP).

8.5. INITIAL UPDATES

The OEMP in its current format should be updated to reflect the following:

- Any conditions of authorization DEA&DP or any other authority may impose;
- Updated baseline information, as applicable to Sections 3, if significantly different to current.

DEA&DP comments and conditions should be incorporated as soon as such are available.

Baseline data could be updated a year after proposed activities have commenced, and actual metered volumes and a longer term sampling/monitoring data record had become available.

8.6. UPDATES IN RESPONSE TO AUDITS

Recommended OEMP updates specified by the auditing EAP should be implemented within specified timeframes.

The OEMP should also be updated during the annual audit to reflect any changed legal requirements, as may be applicable.
APPENDIX A: LIST OF SOURCES

Legislation, norms and policy

- GRN 718 of 2009: NEM: WA (59/2008): List of Waste Management Activities that have, or are likely to have, an impact on the Environment.
- GRN 918 of 1999: Regulations Governing General Hygiene Requirements for Food Premises and the Transport of Food in terms of the Health Act, Act 63 of 1977.

Reports and published sources

- Mucina and Rutherford (2006). The Vegetation Map of South Africa, Lesotho and Swaziland. Published by SANBI.

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- Pieterse, Dr Elsje (telephonic, June 2009). University of Stellenbosch, Department Animal Sciences.
- Taljaard, Mr. Hennie (e-mail 07-03-12). Head Planner: Witzenberg Local Municipality.