

Client Project

Festive – A Division of Astral Operations Limited

Expansion of the Festive Kaalfontein Hatchery
Draft Environmental Management Programme

(EMPr) April 2019

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FESTIVE - A DIVISION OF ASTRAL OPERATIONS LIMITED

Expansion of the Festive Kaalfontein Hatchery

Draft Environmental Management Programme (EMPr)

EIA Ref No. Gaut: 002/18-19/E0221

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DEFINITIONS

Alternatives

In relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to the-

- a) property on which or location where the activity is proposed to be undertaken;
- b) type of activity to be undertaken;
- c) design or layout of the activity;
- d) technology to be used in the activity; or
- e) operational aspects of the activity;

and includes the option of not implementing the activity.

Application

An application for an Environmental Authorisation (EA).

Basic Assessment Report

A report contemplated in regulation 21 of the EIA Regulations, 2014.

Buffer Area

Unless specifically defined, means an area extending 10 kilometres from the proclaimed boundary of a world heritage site or national park and 5 kilometres from the proclaimed boundary of a nature reserve, respectively, or that defined as such for a biosphere.

Cumulative Impact

In relation to an activity, means the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may become significant when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities.

Development

The building, erection, construction or establishment of a facility, structure or infrastructure, including associated earthworks or borrow pits, that is necessary for the undertaking of a listed or specified activity, including any associated post development monitoring, but excludes any modification, alteration or expansion of such a facility, structure or infrastructure, including associated earthworks or borrow pits, and excluding the redevelopment of the same facility in the same location, with the same capacity and footprint.

Development footprint

Any evidence of physical alteration as a result of the undertaking of any activity.

EAP

An environmental assessment practitioner as defined in section 1 of NEMA.

EMPr

An environmental management programme contemplated in regulations 19 and 23 of the EIA Regulations, 2014.

Environment

The surroundings (biophysical, social and economic) within which humans exist and that are made up of:

(i) the land, water and atmosphere of the earth;



- (ii) micro-organisms, plant and animal life;
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.

Environmental Impact Assessment

A systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes Basic Assessment and Scoping and Environmental Impact Reporting.

Independent

In relation to an EAP, a specialist or the person responsible for the preparation of an environmental audit report, means-

- a) that such EAP, specialist or person has no business, financial, personal or other interest in the activity or application in respect of which that EAP, specialist or person is appointed in terms of the EIA Regulations; or
- b) that there are no circumstances that may compromise the objectivity of that EAP, specialist or person in performing such work:

excluding -

- (i) normal remuneration for a specialist permanently employed by the EAP; or
- (ii) fair remuneration for work performed in connection with that activity, application or environmental audit.

Indigenous Vegetation

Vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years.

Mitigation

To anticipate and prevent negative impacts and risks, then to minimise them, rehabilitate or repair impacts to the extent feasible.

Phased Activities

An activity that is developed in phases over time on the same or adjacent properties to create a single or linked entity.

Registered Interested and Affected Party

In relation to an application, means an Interested and Affected Party whose name is recorded in the register opened for that application in terms of regulation 42 of the EIA Regulations, 2014.

Significant Impact

An impact that may have a notable effect on one or more aspects of the environment or may result in non-compliance with accepted environmental quality standards, thresholds or targets and is determined through rating the positive and negative effects of an impact on the environment based on criteria such as duration, magnitude, intensity and probability of occurrence.

Specialist

A person that is generally recognised within the scientific community as having the capability of undertaking, in conformance with generally recognised scientific principles, specialist studies or preparing specialist reports, including due diligence studies and socio-economic studies.

Systematic Biodiversity Plan

A plan that identifies important areas for biodiversity conservation, taking into account biodiversity patterns (i.e. the principle of representation) and the ecological and evolutionary processes that sustain them (i.e. the principle of



persistence). A systematic biodiversity plan must set quantitative targets/thresholds for aquatic and terrestrial biodiversity features in order to conserve a representative sample of biodiversity pattern and ecological processes.

Watercourse

- (a) a river or spring;
- (b) a natural channel in which water flows regularly or intermittently;
- (c) a wetland, pan, lake or dam into which, or from which, water flows; and

any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse as defined in the National Water Act, 1998 (Act No. 36 of 1998); and

a reference to a watercourse includes, where relevant, its bed and banks.

Wetland

Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

ABBREVIATIONS

BAR Basic Assessment Report

BID **Background Information Document** CRR Comments and Response Report DWS Department of Water and Sanitation

FΑ **Environmental Authorisation**

EAP **Environmental Assessment Practitioner Environmental Impact Assessment** EIA EMF **Environmental Management Framework** EMPr **Environmental Management Programme**

Gauteng Department of Agriculture and Rural Development GDARD

Government Notice GN

I&AP Interested and Affected Party

IWULA Integrated Water Use Licence Application

National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended NEMA NEM:WA National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), as amended

NHRA National Heritage Resources Act, 1999 (Act No. 25 of 1999), as amended

Regulation

SAHRA South African Heritage Resources Agency



1. PROJECT TITLE

Expansion of the Festive Kaalfontein Hatchery - Gaut: 002/18-19/E0221.

2. APPLICANT DETAILS

Applicant Name	Festive – A Division of Astral Operations Limited
Contact Person	Mr Nico De Coning
Postal Address	PO Box 237, Olifantsfontein, 1665
Telephone Number	011 972 0004
Fax Number	None
Email Address	Nico.DeConing@earlybirdfarm.com

3. ENVIRONMENTAL ASSESSMENT PRACTITIONER DETAILS

Environmental Assessment Practitioner Company	Labesh (Pty) Ltd		
Contact Person	Lourens de Villiers		
Postal Address	Postnet Box 469, Private Bag X504, Sinoville, 0129		
Telephone Number	082 789 6525		
Fax Number	086 552 6837		
Email Address	admin@labesh.co.za		
Qualifications	B.Sc Earth Science (North West University)		
	Hons B.Sc Geography and Environmental Studies (North		
	West University)		
	M.Sc Water Resource Management (University of		
	Pretoria)		
Relevant experience	More than 15 years' experience conducting		
	Environmental Impact Assessment processes		

4. LOCATION OF THE PROPOSED DEVELOPMENT AND ACTIVITIES

The property for the proposed development and its associated activities is as follows:

Property/Land Parcel	21 digit Surveyor General Code	Property size
Remaining extent of Portion 7 of the Farm	T0IR00000000001700007	172.0181ha
Hartebeestfontein 17 - IR		

The project location is ±5km to the east of Tembisa, in the City of Ekurhuleni Metropolitan Municipality, Gauteng Province. The GPS coordinates for the project site are as follows:

26°01'35.96"S; 28°17'22.64"E

A locality map, provided on the next page, shows the location of the project property, at an appropriate scale.



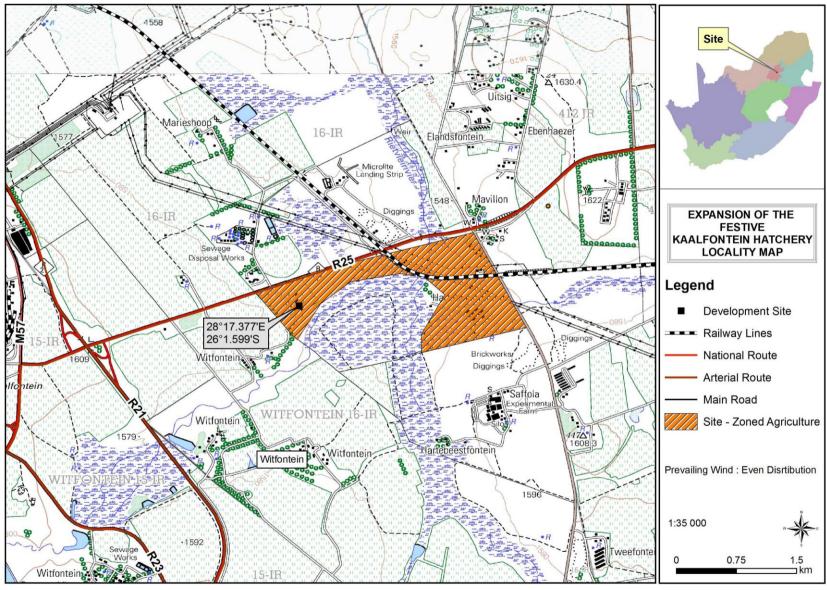


Figure 1: Site locality map



5. DESCRIPTION OF THE ASPECTS OF THE ACTIVITY THAT ARE COVERED BY THE EMPr AS IDENTIFIED BY THE PROJECT DESCRIPTION

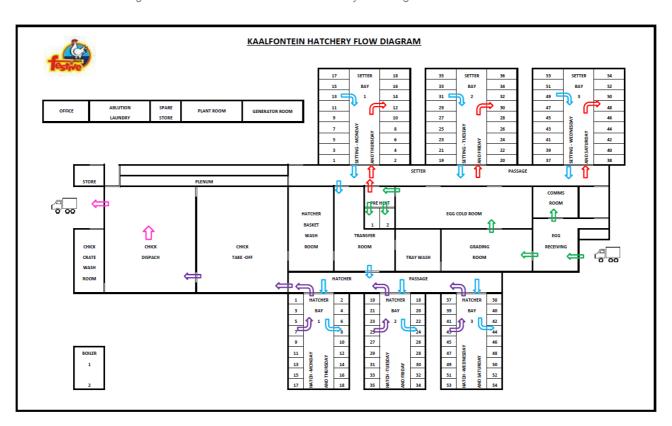
5.1 Description of the activities to be undertaken

Current operations and existing buildings on site

Astral Operations Limited is a leading, South African integrated poultry producer. Key activities consist of animal feed premixes, manufacturing of animal feeds, broiler genetics, production and the sale of day-old chicks.

The Festive Kaalfontein Hatchery currently has a throughput capacity of 1 617 408 chicks per week (at an 80% hatch rate) and consists of three (3) Setter Rooms and three (3) Hatcher Rooms, together with associated infrastructure such as offices, internal roads, parking space, manager's houses, boiler, water reservoirs, a sewage pump station, sewage mains and wastewater collection ponds. The total staff compliment is 125 personnel with 8 staff members working the night shift and 117 staff members working the day shift. The hatchery is operational six (6) days a week (Mondays to Saturdays).

Please refer to the image below for an illustration of the hatchery flow diagram:



The process at the hatchery can be summarised as follows:

- Fertilised eggs are received from Layer Farms three to four days after they have been laid by the hens;
- The eggs are graded and transferred into a cold room;
- 3. From the cold room, the eggs are taken into Setter Bays (rooms). This "setting" of eggs in the Setter Bays occurs two days per week;
- The Setter Bays are incubators where the eggs are incubated at temperatures and humidity levels that mimic natural conditions. The eggs are also turned, as a hen would turn an egg in nature;



- After 18.5 days, the eggs are removed from the Setter Bays and screened in order to remove any unfertilised eggs. The Fertilised eggs are vaccinated against poultry diseases and taken to the Hatcher Bays (rooms) in hatcher baskets:
- 6. The next day, the chicks hatch whilst in the Hatcher Bays;
- The chicks are screened to separate them from the broken shell pieces and unhatched eggs; 7.
- 8. The chicks are classified as male and female and loaded into transportation crates/boxes:
- The day-old chicks are transported off site to Broiler and/or Layer Farms where they are raised for slaughter or to lay eggs, respectively.

Trays, baskets and crates used in the process are continuously washed and disinfected.

Proposed project

The proposed expansion of the Festive Kaalfontein Hatchery from 1 617 408 chicks per week (at full capacity and 80% hatch rate) to 2 515 968 chicks per week (at full capacity and 80% hatch rate). The hatchery will remain operational at six (6) days a week (Mondays to Saturdays).

The following is proposed:

- Three new setter rooms will be built:
- Three new hatcher rooms will be built:
- New 18 strand electric fence:
- The fenced area of the hatchery will be increased from 2.8618ha to 3.5ha;
- The number of parking bays will be increased from 18 to 40 bays and a new truck parking area will be built;
- The footprint size of the hatchery buildings will be increased from 7 437m² to 10 000m²;
- Internal roads will be increased from 8 224m² to 10 110m² and two concrete turning circles will be incorporated into the internal roads (one north of the hatchery and one south of the hatchery);
- Housing onsite will be increased from 640m² to 860m²;
- A new 225kL sewer pump station will be built:
- The sewer rising main will be changed from 700m (with a 50-80mm pipe) to 700m (with 2 x new HDPE 75mm pipes);
- The water storage capacity (in onsite reservoirs) will be increased from 180kL to 589kL through the construction of a new 409kL circular zincalume steel reservoir;
- A transit facility of 600m² will be built;
- Extension of the existing ablution facilities:
- Two new spray races (120m²) and a guard house will be built;
- A wash bay will be built; and
- New interlocking paved access roads will be built from the existing access road into the northern and southern parts of the hatchery facility.

The project site is the Remaining extent of Portion 7 of the Farm Hartebeestfontein 17 - IR. The Festive Kaalfontein Hatchery is currently operational at the project site.

The project property is 1 720 181m²/172.0181ha in total. The development footprint would be 6 382m², should the development be approved.

The existing water supply to the hatchery will continue to be utilised. Water is obtained from the East Rand Water Care Company. Water usage is projected to increase from ±2 200kL per month to 3 300kL should the expansion be authorised.



The existing municipal sewage conveyance system from the hatchery will continue to be utilised.

The existing electricity supply to the hatchery will continue to be utilised.

The hatchery currently produces 87 629kg of waste on average per month. After the expansions, the hatchery would produce 131 444kg of waste on average per month.

5.1.1 Roads and Storm Water

Access

Access is currently gained to the site from the R25 using an existing entrance on the western side of the project property. New access roads will be built from the existing access road.

Surface Drainage/ Storm Water Routing

Storm water management infrastructure will ensure that stormwater runoff is channelled offsite into existing stormwater conveyance infrastructures.

5.1.2 Water Services

The existing water supply to the hatchery will continue to be utilised. Water is obtained from the East Rand Water Care Company. Water usage is projected to increase from ±2 200kL per month to 3 300kL should the expansion be authorised.

5.1.3 Sewerage

The existing municipal sewage conveyance system from the hatchery will continue to be utilised.

5.1.4 Electricity

The existing electricity supply to the hatchery will continue to be utilised.

5.1.5 Traffic

Traffic linked to the Festive Kaalfontein Hatchery will increase subsequent to the proposed expansion, if authorised.

5.1.6 Waste

The hatchery currently produces 87 629kg of waste on average per month. After the expansions, the hatchery would produce 131 444kg of waste on average per month. Waste is removed off site by a waste management company and taken to a waste management facility.



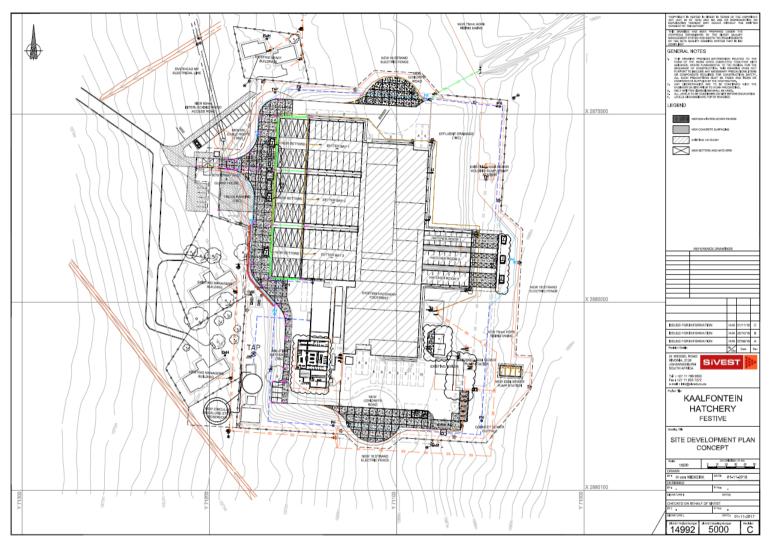


Figure 2: Facility illustration for the proposed expansion project

5.2 Listed Activities triggered by the proposed development

The following listed activities are triggered by the proposed development and therefore require Environmental Authorisation, in terms of the Environmental Impact Assessment Regulations of 4 December 2014, as amended on 7 April 2017:

Table 1.	: Listed a	activity/activities	triggered l	by the	proposed	development
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	Wording as per the Listing Notice	Description as per the project description relating
and Activity		to each listed activity
Number		
Government	Notice R983 (Listing Notice 1), as amended b	by Government Notice R327 of 7 April 2017
Activity No. 43	The expansion and related operation of hatcheries or agri-industrial facilities outside industrial complexes, where the development footprint of the hatcheries or agri-industrial facilities will be increased by 2 000 square metres or more.	Hatchery. The development footprint of the hatchery will be expanded by 6 382m ² .
Government	Notice R984 (Listing Notice 2), as amended by	by Government Notice R325 of 7 April 2017
	No activities triggered in Government Noti	
Government	Notice R985 (Listing Notice 3), as amended by	by Government Notice R324 of 7 April 2017
	The development of reservoirs, excluding dams, with a capacity of more than 250 cubic metres.	The construction of a new 409kL circular zincalume steel reservoir.
Activity No. 2	c. Gauteng v. Sites identified within threatened ecosystems listed in terms of the National Environmental Management Act: Biodiversity Act (Act No. 10 of 2004)	The site is situated within the Rietvleiriver Highveld Grassland ecosystem (Critically Endangered ecosystem).
Activity No. 4	The development of a road wider than 4 metres with a reserve less than 13,5 metres. c. Gauteng v. Sites identified within threatened ecosystems listed in terms of the National Environmental Management Act: Biodiversity Act (Act No. 10 of 2004)	The construction of roads to the hatchery. A new access roads will be built from the existing access road into the northern and southern parts of the hatchery facility. Internal roads will be increased from 8 224m² to 10 110m². The roads will be approximately 6m in width. The site is situated within the Rietvleiriver Highveld Grassland ecosystem (Critically Endangered ecosystem).

5.3 Water Use Licence Activities

No water uses occur onsite or are proposed and Water Use Registration and/or Licence applications in terms of Chapter 4 of the National Water Act, 1998 (Act No. 36 of 1998) are therefore not required for the proposed project.

5.4 Environmental sensitivity overlay map - Map at an appropriate scale that superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers.

Please refer to Figure 3 below. As the site is in a disturbed state and there are no environmental sensitivities onsite, there are no areas that should be avoided and there are also no buffers applicable to the site.



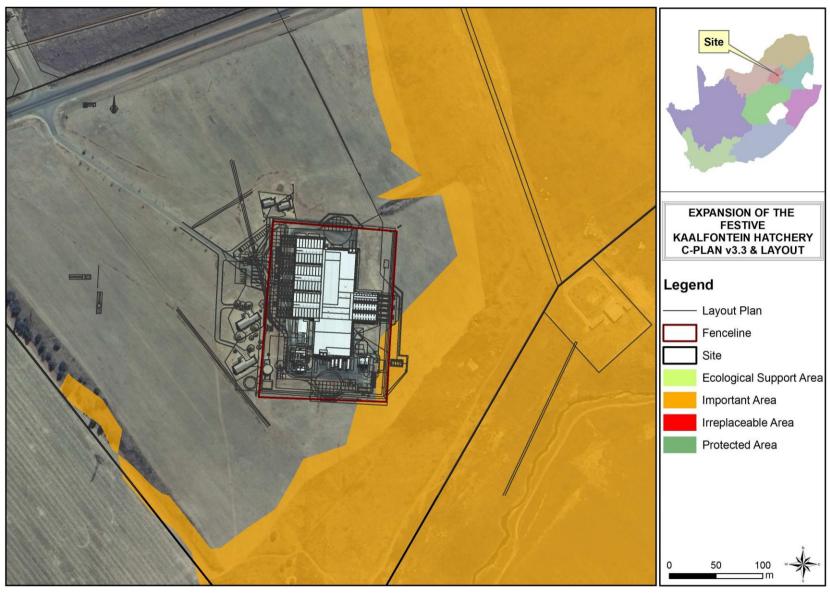


Figure 3: Sensitivity overlay map

POLICY AND LEGISLATIVE CONTEXT OF THE APPLICATION

The following legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments are applicable to the proposed development and have been considered in this Basic Environmental Impact Assessment process. The mitigation measures proposed in this Environmental Management Programme are also aligned with the provisions of the relevant sections of legislation.

Legislation

- The Constitution of South Africa, 1996 (Act No. 108 of 1996), as amended
- The National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended
- The Environmental Impact Assessment Regulations of 4 December 2014, as amended on 7 April 2017
- The National Water Act, 1998 (Act No. 36 of 1998), as amended
- The National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), as amended
- The National Heritage Resources Act, 1999 (Act No. 25 of 1999), as amended
- The National Appeal Regulations Government Notice No. R.993 of 8 December 2014

Plans

Gauteng Conservation Plan 3.3

Guidelines

Guideline on Need and Desirability in terms of the Environmental Impact Assessment (EIA) Regulations, 2010

Spatial tools

SANBI Biodiversity GIS Database

Municipal development planning frameworks

- Ekurhuleni Metropolitan Municipality Air Quality Management Plan for the Ekurhuleni Metropolitan Municipality -January 2005
- Ekurhuleni Metropolitan Municipality Agricultural Development Policy, Strategy and Process August 2002
- Ekurhuleni Metropolitan Municipality City of Ekurhuleni Integrated Development Plan 2016-2021, 2018/2019 Review
- Ekurhuleni Metropolitan Municipality Growth & Development Strategy 2025
- Ekurhuleni Metropolitan Municipality Environmental Policy and Implementation Plan 2013
- Ekurhuleni Metropolitan Municipality Energy and Climate Change Strategy 2007
- Ekurhuleni Metropolitan Municipality Local Economic Development Framework 2003
- Ekurhuleni Metropolitan Municipality Regional Spatial Development Framework: Region B 2015
- Ekurhuleni Metropolitan Municipality Environmental Management Framework for Ekurhuleni 2007

Municipal By-Laws

- Ekurhuleni Metropolitan Municipality Public Health By-Laws, 2009
- Ekurhuleni Metropolitan Municipality Solid Waste By-Laws, 2001
- Ekurhuleni Metropolitan Municipality Waste Water By-Laws, 2001
- Ekurhuleni Metropolitan Municipality Water Supply By-Laws, 2001

7. DESCRIPTION OF IMPACT MANAGEMENT OUTCOMES, MANAGEMENT STATEMENTS AND IMPACTS AND RISKS THAT NEED TO BE AVOIDED. MANAGED AND/OR MITIGATED

7.1 Impact Management Outcomes

Please refer to Table 2 under Section 8 below.

7.2 Impact Management Statements

The applicant, Festive – A division of Astral Operations Limited, commits to implementing the mitigation actions contained in this Environmental Management Programme in order to ensure that the environmental impacts from their hatchery are minimised.

7.3 Impacts and risks that need to be avoided, managed and/or mitigated

The following impacts and risks have been identified for the preferred alternative and need to be avoided, managed and/or mitigated:

Planning and Design Phase

Inadequate planning and design of the hatchery expansion that could result in environmental impacts that could have been avoided.

Pre-construction Phase

- Unauthorised access to the construction site that can pose a risk to the public in terms of their safety.
- Unsafe working conditions.
- Workers being unaware of the dangers of working at the construction site, resulting in a risk to their safety.

Surface and Groundwater

Construction Phase

- Pollution of surface and/or groundwater resources due to hydrocarbon spillages or leakages from construction
- Pollution of surface and/or groundwater resources due to spillages from chemical toilets.
- Pollution of surface and/or groundwater resources due to the incorrect management, storage and disposal of construction waste.
- Pollution of surface and/or groundwater resources due to the runoff of contaminated stormwater.
- Pollution of surface and/or groundwater resources from the mixing of concrete.
- The wastage of water resources (water supply) due to the irresponsible use of water.

Operational Phase

- Pollution of surface and/or groundwater resources due to hydrocarbon spillages or leakages from vehicles.
- Pollution of surface and/or groundwater resources due to the incorrect management, storage and disposal of waste.
- Pollution of surface and/or groundwater resources due to the runoff of contaminated stormwater.
- Pollution of surface and/or groundwater resources due to leakages from the sewerage network (pipelines) onsite.
- The wastage of resources due to the irresponsible use of water and electricity.

Post-construction and Rehabilitation Phase

Pollution of surface and/or groundwater resources due to hydrocarbon spillages or leakages from construction vehicles

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Fauna

Construction Phase

- Loss of low quality fauna habitat (degraded/disturbed vegetation cover) during site clearance.
- Disturbance of any fauna species that may be present onsite.

Operational Phase

- Disturbance of any fauna species that may be present onsite.
- Provision of artificial habitat for fauna species.

Post-construction and Rehabilitation Phase

Disturbance of any fauna species that may be present onsite.

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Flora

Construction Phase

- Loss of degraded/disturbed vegetation (Carletonville Dolomite Grassland) during site clearance.
- Spread of alien invasive vegetation.

Operational Phase

Establishment and spread of alien invasive vegetation (onsite and further than the site).

Post-construction and Rehabilitation Phase

Establishment and spread of alien invasive vegetation (onsite and further than the site).

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Wetlands

Construction Phase

Disturbance of wetland zones beyond the property boundary.

Operational Phase

Disturbance of wetland zones beyond the property boundary.

Post-construction and Rehabilitation Phase

Disturbance of wetland zones beyond the property boundary.

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Heritage Resources

Construction Phase

Disturbance or destruction of cultural and heritage resources.

Operational Phase

None anticipated.

Post-construction and Rehabilitation Phase

None anticipated.

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Palaeontological resources

Construction Phase

Very high possibility that significant fossil assemblages will be present beneath the site. The disturbance and/or destruction of the fossil assemblages.

Operational Phase

None anticipated.

Post-construction and Rehabilitation Phase

None anticipated.

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Air Quality and Noise

Construction Phase

- Generation of dust by construction vehicles.
- Release of emissions from construction vehicles.
- Generation of nuisance and noise from construction vehicles and equipment/machinery.

Operational Phase

- Release of emissions from vehicles.
- Generation of emissions, such as carbon dioxide, carbon monoxide, sulphur dioxide and nitrous oxides, from the coal hot water boiler.
- Generation of nuisance (odours) and noise.

Post-construction and Rehabilitation Phase

- Generation of dust by construction vehicles.
- Release of emissions from construction vehicles.
- Generation of nuisance and noise from construction vehicles and equipment/machinery.

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Soil

Construction Phase

- Soil pollution due to hydrocarbon spillages or leakages from construction vehicles.
- Soil pollution due to spillages from chemical toilets.
- Soil pollution due to the incorrect management, storage and disposal of waste (general and hazardous waste).
- Soil pollution of surface and/or groundwater resources from the mixing of concrete.
- Soil erosion due to the clearance of vegetation and the removal of topsoil and subsoil.
- Soil compaction to create foundations for buildings and other associated infrastructure.
- Degradation of topsoil due to incorrect storage practices.

Operational Phase

- Soil pollution due to hydrocarbon spillages or leakages from vehicles.
- Soil pollution due to the incorrect management, storage and disposal of waste (general and hazardous waste).
- Soil pollution due to leakages from the sewerage network (pipelines) onsite.

Post-construction and Rehabilitation Phase

Soil erosion due to inefficient rehabilitation of construction areas.

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Socio-economic

Construction Phase

- Generation of a number of job opportunities.
- Potential increase in crime due to the influx of workers.
- Stimulation of the local economy.

Operational Phase

- Generation of a number of job opportunities.
- Stimulation of the local economy.
- Contributing to food security in South Africa.

Post-construction and Rehabilitation Phase

- Generation of a number of job opportunities.
- Stimulation of the local economy.

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Traffic

Construction Phase

Increase in traffic volumes to the site.

Operational Phase

Increase in traffic volumes to the site.

Post-construction and Rehabilitation Phase

None anticipated.

Decommissioning Phase

No decommissioning activities are anticipated or planned for the hatchery. Therefore, no impacts have been identified or assessed as part of this Environmental Impact Assessment process.

Post-construction and Rehabilitation Phase

None anticipated.

8. DESCRIPTION OF PROPOSED IMPACT MANAGEMENT ACTIONS (ENVIRONMENTAL MANAGEMENT PROGRAMME ACTIONS)

8.1 Impact Management Outcome and Action Table

Please refer to Table 2 below.



Table 2: Environmental Management Programme - Impact Management Outcome and Action Table

Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
Planning and E				
Planning and design of the hatchery expansion.	Inadequate planning and design of the hatchery that could result in environmental impacts that could have been avoided.	To effectively plan for and design the hatchery in order to minimise operational impacts.	 Site selection The expansion infrastructure should preferably be constructed on an already disturbed site. The expansion infrastructure may not be constructed on a wetland or within a drainage line. The expansion infrastructure must preferably be constructed on a level/flat site. The site must have the correct land use zoning to enable the expansion infrastructure to be constructed and operated. Consideration must be given to the use of solar or gas energy instead of coal. Rainwater harvesting must be considered and investigated. 	ApplicantEngineer
Pre-Constructi	on Phase			
Construction site establishment.	Unauthorised access to the construction site that can pose a risk to the public in terms of their safety. Unsafe working conditions.	To secure the construction site and ensure that it is operated in a responsible manner for the duration of the construction phase.	 The construction site must be demarcated (fenced or delineated with danger tape). Permanent demarcation is preferable to prevent the public from gaining access to the site. Signage indicating that the site is a "Construction Site" and indicating the risks associated with the site must be displayed. Emergency numbers, "No-smoking" signs and "No Open Flame" signs must also be displayed at the construction site, where appropriate. Fire-fighting equipment must be placed at the construction site and must be easily accessible. 	ApplicantConstruction contractor
Appointment of workers (employees and contractors) to commence	Workers being unaware of the dangers of working at the construction site, resulting in a risk to their safety.	To adequately educate workers (employees and contractors) regarding	 Before any employees or contactors commence work at the hatchery, each individual must undergo an Induction Training session that will cover the aspects as detailed in the Environmental Awareness Plan (contained in the EMPr). Attendance registers must be completed and kept on file. Employees and contract workers must be issued with suitable Personal Protective Equipment (PPE), as applicable to each persons' job onsite. 	ApplicantConstruction contractor



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
construction activities onsite.		environmental awareness.		
Surface and C				
Construction F				
Hydrocarbon spillages or leakages from vehicles, including construction vehicles.	Pollution of surface and/or groundwater resources.	To prevent hydrocarbon spillages and/or leakages from construction vehicles and ensure that any spillages are cleaned effectively.	 Spill kits must be onsite to clean up any hydrocarbon spillages. Vehicles should regularly be inspected to ensure that any fuel or oil leaks are repaired. Drip trays should be used for any minor repairs or maintenance work done onsite. Any soil that has been contaminated by oil, diesel or petrol must be regarded as hazardous and disposed of at an appropriately licensed facility. Safe Disposal Certificates must be obtained and kept on record. 	ApplicantConstruction contractor
Spillages from chemical toilets.	Pollution of surface and/or groundwater resources.	To prevent spillages from chemical toilets and ensure that any spillages are cleaned effectively.	 Sufficient ablution facilities must be provided. Chemical toilets must be serviced regularly and must be provided with toilet paper at all times. Any spillages from the chemical toilets must immediately be cleaned and the contaminated soil disposed of as hazardous waste. 	ApplicantConstruction contractor
Incorrect management, storage and disposal of waste, including construction waste.	Pollution of surface and/or groundwater resources.	To ensure that construction waste is managed in an environmentally responsible manner.	 Construction waste must be stored in a designated area. Building rubble must be stored separately from domestic waste. Refuse bins must be provided for domestic waste. Large volumes of waste may not accumulate onsite. Waste must be taken to appropriately licensed facilities for reuse, recycling, recovery or disposal. Safe Disposal Certificates must be obtained and kept on record. No waste may be burnt or buried onsite. Building rubble must be kept clean of plastic and brick ties. 	ApplicantConstruction contractor



Aspect	Impact and Nature	Impact Management Outcomes	 Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation The applicant must comply with the Ekurhuleni Metropolitan Municipality – Solid Waste By-Laws, 2001. 	Responsible party/ person(s)
Runoff of contaminated stormwater.	Pollution of surface and/or groundwater resources.	To prevent the contamination of storm water.	 Storm water must be diverted around areas where there are pollution sources. Storm water drainage infrastructure must be regularly inspected for obstructions. No contaminated storm water may be released into the environment from the construction activities. Washing or cleaning of equipment or machinery must occur in a designated area and the contaminated wash water must be contained. Such an area could be a plastic drum, a container or a plastic lined pit. 	ApplicantConstruction contractor
The mixing of concrete.	Pollution of surface and/or groundwater resources.	To prevent the contamination of water during to concrete mixing.	 Concrete should ideally be mixed on an impermeable surface such as a concrete slab. Cement bags (new and used) must be stored under roof or in closed containers where they will not be exposed to rain. Dry concrete must be removed and disposed of together with other building rubble. Ready-mix concrete trucks may clean chutes into foundations, but not elsewhere onsite. 	ApplicantConstruction contractor
The usage of water (water supply).	Wastage of water resources due to the irresponsible use of water.	To ensure that valuable resources are not wasted.	 Water pipes and hoses should be inspected on a regular basis and any leakages should immediately be repaired. Running water taps or hoses may not be left unattended. 	ApplicantConstruction contractor
Operational Ph	ase			
Hydrocarbon spillages or leakages from vehicles.	Pollution of surface and/or groundwater resources.	To prevent hydrocarbon spillages and/or leakages from vehicles and ensure that any spillages are cleaned effectively.	 Spill kits must be onsite to clean up any hydrocarbon spillages. Vehicles should regularly be inspected to ensure that any fuel or oil leaks are repaired. 	Applicant



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
Incorrect management, storage and disposal of waste.	Pollution of surface and/or groundwater resources.	To ensure that construction waste is managed in an environmentally responsible manner.	 Waste must be managed according to its hazard classification (i.e. general vs. hazardous waste) and general and hazardous waste streams should not be mixed. Waste stored onsite must be kept in appropriate containers with lids that can be closed. Large volumes of waste may not accumulate onsite. Waste must be taken to appropriately licensed facilities for reuse, recycling, recovery or disposal (last resort). Safe Disposal Certificates must be obtained and kept on record. No waste may be burnt or buried onsite. The applicant must comply with the Ekurhuleni Metropolitan Municipality – Solid Waste By-Laws, 2001. 	 Applicant
Runoff of contaminated stormwater.	Pollution of surface and/or groundwater resources.	To prevent the contamination of storm water.	 Storm water must be diverted around areas where there are pollution sources. Storm water drainage infrastructure must be regularly inspected for obstructions. No contaminated storm water may be released into the environment from the operational activities. Washing or cleaning of equipment or machinery must occur in a designated area and the contaminated wash water must be contained. Such an area could be a plastic drum, a container or a plastic lined pit. Wash water from the wash bay must be contained and not released into the environment. Wash water from the hatchery must be contained and not released into the environment. Measures, such as sumps/cut off drains, must be put in place to ensure that no contaminated runoff can enter the clean stormwater system. 	• Applicant
Spillages from the sewerage network pipelines onsite.	Pollution of surface and/or groundwater resources.	To ensure that the sewerage network is kept in a good state of repair.	 Ablution facilities must regularly be cleaned. Should toilets run slowly or become blocked, this should be investigated to ensure that this is not due to a broken or blocked pipe underground. Any broken or blocked pipes must be repaired. 	● Applicant



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation • Alternative disposal of sewage, instead of the French drain system, should be	Responsible party/ person(s)
The usage of water (water supply) and electricity.	Wastage of resources due to the irresponsible use.	To ensure that valuable resources are not wasted.	 Consumption of water and electricity must be monitored. Use energy efficient lighting, where possible. Switch off lights, appliances and equipment/machinery when not in use. Water pipes and hoses should be inspected on a regular basis and any leakages should immediately be repaired. Running water taps or hoses may not be left unattended. High pressure hoses should be used, where possible. 	Applicant
Post-construct	tion and Rehabilitation	Phase		
Hydrocarbon spillages or leakages from construction vehicles.	Pollution of surface and/or groundwater resources.	To prevent hydrocarbon spillages and/or leakages from vehicles and ensure that any spillages are cleaned effectively.	Same mitigation measures as under construction phase.	ApplicantConstruction contractor
Fauna				
Construction F	Phase			
Site clearance.	Loss of low quality fauna habitat (degraded/disturbed vegetation cover), affecting the ecosystem, biological diversity and ecological integrity.	No management outcome as the site is in a degraded/disturbed state.	No mitigation measures required as the site is in a degraded/disturbed state.	Not applicable.



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
Construction activities.	Disturbance of any fauna species that may be present onsite.	To ensure that fauna species are not disturbed or harmed.	Fauna species may not be disturbed, captured or killed and must be avoided.	ApplicantConstruction contractor
Operational Ph	nase			
Operational activities.	Disturbance of any fauna species that may be present onsite.	To ensure that fauna species are not disturbed or harmed.	Same mitigation measures as under construction phase.	Applicant
Operational activities.	Provision of artificial habitat for fauna species.	This is a positive imp	pact and no mitigation measures are therefore required.	Not applicable.
Post-construct	tion and Rehabilitation I	Phase		
Rehabilitation activities.	Disturbance of any fauna species that may be present onsite.	To ensure that fauna species are not disturbed or harmed.	Same mitigation measures as under construction phase.	ApplicantConstruction contractor
Flora				
Construction F	Phase			
Site clearance.	Loss of degraded/disturbed vegetation (Carletonville Dolomite Grassland) during site clearance.	No management outcome as the site is in a degraded/disturbed state.	No mitigation measures required as the site is in a degraded/disturbed state.	Not applicable.
Construction activities.	Establishment and spread of alien invasive vegetation	To prevent the establishment and spread of alien	 Use only indigenous plant species for gardens and rehabilitation. Eradicate any alien invasive vegetation observed onsite. 	ApplicantConstruction contractor



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
	(onsite and further than the site).	invasive vegetation.		
Operational Ph	nase			
Operational activities.	Establishment and spread of alien invasive vegetation (onsite and further than the site).	To prevent the establishment and spread of alien invasive vegetation.	Same mitigation measures as under construction phase.	Applicant
Post-construc	tion and Rehabilitation I	Phase		
Rehabilitation activities.	Establishment and spread of alien invasive vegetation (onsite and further than the site).	To prevent the establishment and spread of alien invasive vegetation.	Same mitigation measures as under construction phase.	ApplicantConstruction contractor
Wetlands Construction F	Phase			
Construction activities.	Disturbance of wetland zones beyond the property boundary.	To prevent the disturbance of wetland zones beyond the property boundary.	 No construction workers may enter into wetland zones beyond the site boundary. No dumping of material or waste may take place beyond the construction site boundary or in wetland zones. No vehicles may enter the wetland zones. 	ApplicantConstruction contractor
Operational Ph				
Operational activities.	Disturbance of wetland zones beyond the property boundary.	To prevent the disturbance of wetland zones beyond the property boundary.	 No workers may enter into wetland zones beyond the site boundary. No dumping of material or waste may take place beyond the construction site boundary or in wetland zones. No vehicles may enter the wetland zones. Measures, such as sumps/cut off drains, must be put in place to ensure that no effluent/contaminant can enter the wetland zones. 	Applicant



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
	tion and Rehabilitation I	Phase		
Rehabilitation activities.	Disturbance of wetland zones beyond the property boundary.	To prevent the disturbance of wetland zones beyond the property boundary.	 No construction workers may enter into wetland zones beyond the site boundary. No dumping of material or waste may take place beyond the site boundary. No vehicles may enter the wetland zones. 	ApplicantConstruction contractor
Heritage Reso	ources			
Construction P	Phase			
Construction activities.	Disturbance or destruction of cultural and heritage resources.	To prevent the disturbance or destruction of cultural and heritage resources.	 If any cultural or heritage resources, sites, features or objects are exposed during the construction activities, all construction activities in the area must be stopped and a heritage specialist must be contacted to investigate the site and recommend the way forward. 	ApplicantConstruction contractor
Operational Ph	lase			
Operational activities.	None anticipated.	Not Applicable.		Not Applicable.
Post-construct	tion and Rehabilitation I	Phase		
Rehabilitation activities.	None anticipated.	Not Applicable.		Not Applicable.
Palaeontologi	ical Resources			
Construction P	Phase			
Construction activities.	The disturbance and/or destruction of the fossil assemblages.	To prevent the unregulated/ uncontrolled destruction of fossil assemblages.	 A field assessment by a qualified palaeontologist must be conducted. A Protocol of Fossil Finds must be compiled and submitted to the South African Heritage Resources Agency. The protocol must be implemented during the construction phase. 	ApplicantConstruction contractor



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
Operational activities.	None anticipated.	Not Applicable.		Not Applicable.
Post-construc	tion and Rehabilitation l	Phase		
Rehabilitation activities.	None anticipated.	Not Applicable.		Not Applicable.
Air Quality an	nd Noise			
Construction I				
Construction activities.	Generation of dust by construction vehicles.	To prevent the generation of dust.	 Implement dust suppression techniques. Limit vegetation clearance until it is necessary for soil stripping. A complaints register must be kept onsite and be easily accessible to any party who wishes to lodge a complaint. The complaints register must include the following fields: The date of the complaint; The name and surname of the person lodging the complaint; Details of the complaint; and How and when the complaint was addressed. 	ApplicantConstruction contractor
Construction activities.	Release of emissions from construction vehicles.	To minimise emissions from construction vehicles.	Regular maintenance of vehicles to minimise the release of emissions.	ApplicantConstruction contractor
Construction activities.	Generation of nuisance and noise from construction vehicles and equipment/machinery.	To prevent the generation of excessive noise.	 Noisy activities must be scheduled during times of the day that will result in the least disturbance to adjacent sensitive receptors. Noisy work must also be avoided over weekends and public holidays. No amplified music is allowed onsite. Sirens and/or hooters may only be used during emergencies and drills. Noisy work must be avoided on weekends and public holidays. Vehicles must not be left idling unnecessarily. 	ApplicantConstruction contractor



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
			 All vehicles must be regularly maintained. A complaints register must be kept onsite and be easily accessible to any party who wishes to lodge a complaint. The complaints register must include the following fields: The date of the complaint; The name and surname of the person lodging the complaint; Details of the complaint; and How and when the complaint was addressed. 	
Operational P	hase			
Operational activities.	Release of emissions from vehicles.	To minimise emissions from vehicles.	Regular maintenance of vehicles to minimise the release of emissions.	 Applicant
Operational activities.	Generation of emissions, such as carbon dioxide, carbon monoxide, sulphur dioxide and nitrous oxides, from the coal hot water boiler.	To minimise the generations of emissions from the coal hot water boiler.	 Use high-grade coal as far as possible to decrease sulphur emissions. The hot water boiler must be maintained according to the supplier's maintenance schedules to minimise emissions. Mitigation measures should be implemented at the hot water boiler to minimise particulate matter emissions. Ash should be stored in enclosed containers/areas and removed to licensed waste management facilities. 	Applicant
Operational activities.	Generation of nuisance (odours) and noise.	To minimise the generation and nuisance of odours and noise.	 Best practice measures for the poultry industry and intended to minimise and avoid the generation of offensive odours must be implemented at the hatchery. Waste generated at the hatchery mush be removed to re-use-, recycling- or disposal facilities on a regular basis, to prevent the accumulation of waste onsite. Good housekeeping must be maintained at the hatchery. Rodent bait traps and flytraps are prevalent onsite. These must be maintained at the required intervals. Noise levels at the hatchery must be kept to a minimum. 	Applicant



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
			 Noisy activities must be scheduled during times of the day that will result in the least disturbance to adjacent sensitive receptors. Noisy work must be avoided on weekends and public holidays. No amplified music is allowed onsite. Sirens and/or hooters may only be used during emergencies and drills. Vehicles must not be left idling unnecessarily. All vehicles must be regularly maintained. A complaints register must be kept onsite and be easily accessible to any party who wishes to lodge a complaint. The complaints register must include the following fields: The date of the complaint; The name and surname of the person lodging the complaint; Details of the complaint; and How and when the complaint was addressed. Complaints must be addressed within a reasonable period of time and feedback must be provided to the person who lodged the complaint. 	
Post-construc	tion and Rehabilitation I	Phase		
Rehabilitation activities.	Generation of dust by construction vehicles.	To prevent the generation of dust.	Same mitigation measures as under construction phase.	ApplicantConstruction contractor
Rehabilitation activities.	Release of emissions from construction vehicles.	To minimise emissions from vehicles.	Same mitigation measures as under construction phase.	ApplicantConstruction contractor
Rehabilitation activities.	Generation of nuisance and noise from construction vehicles and equipment/machinery.	To prevent the generation of excessive noise.	Same mitigation measures as under construction phase.	ApplicantConstruction contractor



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
Construction F	Phase			
Hydrocarbon spillages or leakages from vehicles, including construction vehicles.	Soil pollution.	To prevent hydrocarbon spillages and/or leakages from construction vehicles and ensure that any spillages are cleaned effectively.	 Use drip trays for any machinery and/or vehicle repair work. Immediately repair any leaking machinery or vehicles. Place oil drums on impermeable surfaces or plastic liners. Immediately clean any hydrocarbon spillages and dispose of as hazardous waste. Safe Disposal Certificates must be obtained and kept on record. 	ApplicantConstruction contractor
Spillages from chemical toilets.	Soil pollution.	To prevent spillages from chemical toilets and ensure that any spillages are cleaned effectively.	 Sufficient ablution facilities must be provided. Chemical toilets must be serviced regularly. Any spillages from the chemical toilets must immediately be cleaned and the contaminated soil disposed of as hazardous waste. Safe Disposal Certificates must be obtained and kept on record. 	ApplicantConstruction contractor
The incorrect management, storage and disposal of waste (general and hazardous waste), including construction waste.	Soil pollution.	To ensure that construction waste is managed in an environmentally responsible manner.	 Waste must be managed according to its hazard classification (i.e. general vs. hazardous waste) and general and hazardous waste streams should not be mixed. Waste stored onsite must be kept in appropriate containers with lids that can be closed. Large volumes of waste may not accumulate onsite. Waste must be taken to appropriately licensed facilities for reuse, recycling, recovery or disposal. Safe Disposal Certificates must be obtained and kept on record. No waste may be burnt or buried onsite. The applicant must comply with the Ekurhuleni Metropolitan Municipality – Solid Waste By-Laws, 2001. 	ApplicantConstruction contractor



Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
The mixing of concrete.	Soil pollution.	To prevent the contamination of soil during to concrete mixing.	 Concrete should ideally be mixed on an impermeable surface such as a concrete slab. Cement bags (new and used) must be stored under roof or in closed containers where they will not be exposed to rain. Dry concrete must be removed and disposed of together with other building rubble. Ready-mix concrete trucks may clean chutes into foundations, but not elsewhere onsite. 	ApplicantConstruction contractor
The clearance of vegetation and the removal of topsoil and subsoil.	Soil erosion.	To prevent soil erosion.	 Limiting vegetation clearance until it is necessary for soil stripping. Implement adequate erosion prevention measures, such as measures to dissipate runoff water velocities. Implement adequate storm water management measures. 	ApplicantConstruction contractor
Construction activities to create foundations for buildings and other associated infrastructure.	Soil compaction.	To prevent soil compaction.	 Soils should be moved when dry, as far as possible. Excessively heavy vehicles should not be used for earthmoving activities. This will minimise compaction of the soil. 	ApplicantConstruction contractor
Incorrect storage practices.	Degradation of topsoil.	To conserve/ protect topsoil.	 Topsoil and subsoil must be stored on separate stockpiles. Cover topsoil stockpiles to prevent the soil being washed away during rainfall events. Topsoil must be replaced during rehabilitation and landscaping. 	ApplicantConstruction contractor
Operational Ph		T- '		A 11
Hydrocarbon spillages or leakages from vehicles.	Soil pollution.	To prevent hydrocarbon spillages and/or leakages from	Same mitigation measures as under construction phase.	Applicant



of construction areas. rehabilitation is commenced with. Soil should be moved when dry, as far as possible. Weeds must be removed prior to soil replacement. Grass should be planted on rehabilitated areas, or these areas must be paved or concreted. No open soil may be present onsite.	Aspect	Impact and Nature	Impact Management Outcomes	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation	Responsible party/ person(s)
management, storage and disposal of environmentally responsible manner. Spillages from the sewerage network (pipelines) onsite. Post-construction and Rehabilitation of construction areas. Soil erosion. Waste is managed in an environmentally responsible manner. Ablution facilities must regularly be cleaned. Should toilets run slowly or become blocked, this should be investigated to ensure that this is not due to a broken or blocked pipe underground. Any broken or blocked pipes must be repaired. Rehabilitation must already be initiated during the construction phase, where possible. Areas for rehabilitation must be cleared of any building rubble and/or debris before rehabilitation is commenced with. Soil should be moved when dry, as far as possible. Weeds must be removed prior to soil replacement. Grass should be planted on rehabilitated areas, or these areas must be paved or concreted. No open soil may be present onsite.			ensure that any spillages are		
the sewerage network (pipelines) onsite. Post-construction and Rehabilitation Phase Inefficient rehabilitation of construction areas. Soil erosion. To prevent soil erosion. Soil should be moved when dry, as far as possible. Weeds must be removed prior to soil replacement. Grass should be investigated to ensure that this is not due to a broken or blocked pipe underground. Any broken or blocked pipes must be repaired. Rehabilitation must already be initiated during the construction phase, where possible. Areas for rehabilitation must be cleared of any building rubble and/or debris before rehabilitation is commenced with. Soil should be moved when dry, as far as possible. Weeds must be removed prior to soil replacement. Grass should be planted on rehabilitated areas, or these areas must be paved or concreted. No open soil may be present onsite.	management, storage and disposal of waste (general and hazardous	Soil pollution.	waste is managed in an environmentally responsible	Same mitigation measures as under construction phase.	Applicant
Inefficient rehabilitation of construction areas. To prevent soil erosion. To prevent soil erosion. Rehabilitation must already be initiated during the construction phase, where possible. Areas for rehabilitation must be cleared of any building rubble and/or debris before rehabilitation is commenced with. Soil should be moved when dry, as far as possible. Weeds must be removed prior to soil replacement. Grass should be planted on rehabilitated areas, or these areas must be paved or concreted. No open soil may be present onsite.	the sewerage network (pipelines)	Soil pollution.	sewerage network is kept in a good	Should toilets run slowly or become blocked, this should be investigated to ensure that this is not due to a broken or blocked pipe underground.	Applicant
rehabilitation of construction areas. • Areas for rehabilitation must be cleared of any building rubble and/or debris before rehabilitation is commenced with. • Soil should be moved when dry, as far as possible. • Weeds must be removed prior to soil replacement. • Grass should be planted on rehabilitated areas, or these areas must be paved or concreted. No open soil may be present onsite.					
 Rehabilitated areas must be monitored to ensure that rehabilitation was effective. 	rehabilitation of construction	Soil erosion.		 Areas for rehabilitation must be cleared of any building rubble and/or debris before rehabilitation is commenced with. Soil should be moved when dry, as far as possible. Weeds must be removed prior to soil replacement. Grass should be planted on rehabilitated areas, or these areas must be paved or 	Construction



Aspect	Impact and Nature	Management re Outcomes	npact Management Actions and Statements in order to avoid, modify, medy, control or stop pollution or environmental degradation	Responsible party/ person(s)		
Construction activities.	Generation of a number of job opportunities.	This is a positive impact	and no mitigation measures are therefore required.	Not applicable.		
Construction activities.	Potential increase in crime due to the influx of workers.	To prevent an increase in incidents of crime in the area.	Reference checks should be conducted on all workers before they are appointed. Workers should not be allowed to leave the construction site during the day and should be transported to and from the site on a daily basis.	ApplicantConstruction contractor		
Construction activities.	Stimulation of the local economy.	This is a positive impact	and no mitigation measures are therefore required.	Not applicable.		
Operational Ph	nase					
Operational activities.	Generation of a number of job opportunities.	This is a positive impact	is is a positive impact and no mitigation measures are therefore required.			
Operational activities.	Stimulation of the local economy.	This is a positive impact	is is a positive impact and no mitigation measures are therefore required.			
Operational activities.	Contributing to food security in South Africa.	This is a positive impact	and no mitigation measures are therefore required.	Not applicable.		
Post-construct	tion and Rehabilitation F	hase				
Rehabilitation activities.	Generation of a number of job opportunities.	This is a positive impact	and no mitigation measures are therefore required.	Not applicable.		
Rehabilitation activities.	Stimulation of the local economy.	This is a positive impact	and no mitigation measures are therefore required.	Not applicable.		
Traffic	Ness					
Construction F		To minimise the •		Annlingat		
Construction activities.	Increase in traffic volumes to the site.	To minimise the effect of an	Ensure that construction vehicles are roadworthy and that drivers comply with road rules.	Applicant		



Aspect	Impact and Nature	Impact Management Outcomes increase in traffic	Impact Management Actions and Statements in order to avoid, modify, remedy, control or stop pollution or environmental degradation • Loads must be securely fastened and may not exceed the tonnage limitations for each	Responsible party/ person(s) Construction
		volumes.	vehicle.	contractor
Operational Ph Operational activities.	Increase in traffic volumes to the site.	To minimise the effect of an increase in traffic volumes.	 Ensure that vehicles are roadworthy and that drivers comply with road rules. Loads must be securely fastened and may not exceed the tonnage limitations for each vehicle. All loads of waste must be covered before leaving the site to prevent spillages. 	Applicant
	tion and Rehabilitation			
Rehabilitation activities.	Increase in traffic volumes to the site.	To minimise the effect of an increase in traffic volumes.	 Ensure that vehicles are roadworthy and that drivers comply with road rules. Loads must be securely fastened and may not exceed the tonnage limitations for each vehicle. All loads of waste must be covered before leaving the site to prevent spillages. 	ApplicantConstruction contractor
Conditions as	s specified by the City	of Ekurhuleni Meti	ropolitan Municipality	
Construction and operational activities.	Legal non-compliance to the City of Ekurhuleni Metropolitan Municipality's requirements.	To construct and operate the hatchery in line with the City of Ekurhuleni Metropolitan Municipality's requirements.	 All applicable Environmental Health Legislation must be complied with at all times and the causing, allowing or permitting of a Health Nuisance or Health Hazard on the property is prohibited. The premises shall be designed and constructed in accordance with the National Building Regulation and Building Standards Act (Act No. 103 of 1977) as amended, and provide the sanitary and ablution facilities required by said Act and Regulations. The Tobacco Products Control Act, Act 83 of 1993, as amended, and Regulation R975, Notice relating to Smoking of Tobacco Products in Public Places, 29 September 2000, applies. All indoor or partially enclosed areas shall be non-smoking unless an approved smoking room complying with the above Regulations is provided. The Foodstuffs Cosmetics And Disinfectants Act, 1972 (Act No. 54 of 1972) as amended and Regulation R638 of 22 June 2018, Regulations Governing General Hygiene Requirements For Food Premises And The Transport Of Food promulgated under said Act shall be complied with and application shall be made to Environmental Health for a Certificate of Acceptability under the Regulation. 	 Applicant Construction contractor

8.2 Applicable Environmental Management Standards and Practices

There are no standards and/or practices applicable to the proposed development as water and dust monitoring is not required as part of this EMPr.

8.3 Applicable provisions of the NEMA, 1998, as amended, regarding closure

The provisions of NEMA, 1998, pertaining to closure are not applicable to this proposed development as the development does <u>not</u> include the prospecting, exploration or extraction of a mineral or petroleum resource.

8.4 Applicable provisions of the NEMA, 1998, as amended, regarding financial provision for rehabilitation

The provisions of NEMA, 1998, pertaining to financial provision for rehabilitation are not applicable to this proposed development as the development does not include the prospecting, exploration or extraction of a mineral or petroleum resource.

8.5 Method of monitoring the implementation of the impact management actions **Construction Phase**

An independent Environmental Control Officer (ECO) must be appointed to conduct monthly compliance audits during the construction phase of the proposed development. The audits must verify compliance with the Environmental Authorisation and this Environmental Management Programme and a formal report must be compiled after each audit. The reports must be submitted to the Competent Authority. Once the construction phase has been completed, a post-construction audit must be conducted by the independent ECO and the report also submitted to the Competent Authority.

Operational Phase

An internal ECO must be appointed to conduct monthly compliance audits during the operational phase of the proposed development and to ensure that corrective actions are implemented where required. Reports resulting from these audits do not need to be submitted to the Competent Authority.

An independent ECO must be appointed to conduct annual compliance audits during the operational phase of the proposed development. The audits must verify compliance with the Environmental Authorisation and this Environmental Management Programme and must comply with the requirements of Appendix 7 of the Environmental Impact Assessment Regulations of 2014, as amended. A formal report must be compiled after each audit and the reports must be submitted to the Competent Authority.

8.6 The frequency of monitoring the implementation of the impact management actions **Construction Phase**

Monthly independent ECO compliance audits.

Operational Phase

Monthly internal ECO compliance audits and annual external ECO compliance audits.

8.7 Persons who will be responsible for the implementation of the impact management actions

The applicant is ultimately responsible for the implementation of the impact management actions, during all phases of the development, even where the implementation of the actions may be contracted out to a third party. During the construction

phase, sub-contractors will for the most part be carrying out the required impact management actions and these actions should therefore be adequately communicated to the contractors. During the operational phase, the applicant will be mostly responsible for carrying out the required impact management actions.

The applicant must appoint a designated person for the function of internal/in-house ECO and an external, suitably qualified Environmental Assessment Practitioner for the function of external, independent ECO.

8.8 Time periods within which the impact management actions must be implemented Planning and Design Phase

The management actions for the Planning and Design Phase must be completed before the Pre-construction Phase is commenced with.

Pre-construction Phase

The management actions for the Pre-construction Phase must be completed before the Construction Phase is commenced with.

Construction Phase

The management actions for the Construction Phase must be completed prior to the completion of the Construction Phase (i.e. before the Operational Phase is commenced with).

Operational Phase

The management actions for the Operational Phase must be implemented during the Operational Phase, on a continual basis.

Post-construction and Rehabilitation Phase

The management actions for the Post-construction and Rehabilitation Phase must be completed within one year from the completion of the Construction Phase.

8.9 Mechanism for monitoring compliance with the impact management actions

Please refer to Sections 8.5 and 8.6 of this EMPr.

8.10 Program for reporting on compliance, taking into account the requirements as prescribed by the EIA Regulations, 2014, as amended

Table 3: Reporting program

Type of reporting		Reporting Frequency	Authority to report to
Construction Phase			
Monthly independ compliance audits	lent ECO	Monthly, for the duration of the construction phase	Competent Authority (GDARD)
Post-construction independent ECO com	phase phase phase	Once-off, upon completion of the construction phase	Competent Authority (GDARD)
Operational Phase			
Monthly independ compliance audits	lent ECO	N/A - Internal	N/A - Internal
Annual external ECC audits	compliance	Yearly	Competent Authority (GDARD)

9. ENVIRONMENTAL AWARENESS PLAN

The applicant will ensure that its employees are adequately informed of the environmental risks that may result from work that they conducted onsite and how these risks must be dealt with in order to avoid pollution or the degradation of the environment, through the implementation of this Environmental Awareness Plan.

The Environmental Awareness Plan for the Festive Kaalfontein Hatchery consists of two parts, namely, initial Induction Training and ongoing job-specific, Toolbox-talk Training. The same training material will be utilised during both the Induction Training and Toolbox-talk Training.

Induction Training

Before any employees or contactors commence work at the hatchery, each individual must undergo an Induction Training session. This is required during the following phases of the proposed project:

- Pre-Construction phase:
- Construction phase;
- Post-construction and rehabilitation phase: and
- Operational phase.

An attendance register must be kept by Festive and each individual who has completed the Induction Training must complete the attendance register. This will also function as an acknowledgement that each individual has understood the training received.

Toolbox-talk Training

Toolbox-talk Training must be conducted biannually during the operational phase of the proposed development and all operational employees must attend these sessions.

An attendance register must be kept by Festive and each individual who has completed the Toolbox-talk Training must complete the attendance register. This will also function as an acknowledgement that each individual has understood the training received.

Training Material

The same material will be used for both the Induction Training and Toolbox-talk Training sessions and will cover the following topics:

- What is meant by the term "environment";
- Why the environment requires protection; .
- The environmental risks that may result from work that is performed at the hatchery, during the above mentioned phases of the project;
- How the identified risks may impact upon the environment;
- How the identified risks can be mitigated;
- The protection of workers who refuse to do environmentally hazardous work, as provided for in the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended;
- Environmental Management Programme conditions that are specifically applicable to employee's work onsite;
- Fire-fighting procedures; and
- Hydrocarbon spill response procedure, including spill kit usage training.

The training can be presented in a verbal format if required.

10. SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

No specific information has been required by the Competent Authority at this stage of the application process.