



**APPLICATION FOR AUTHORIZATION SUPREME
POULTRY, REMAINDER OF FARM BELGIE 1285, FREE
STATE PROVINCE**

SUPREME POULTRY: ENVIRONMENTAL IMPACT ASSESSMENT

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Prepared for:



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Today's Impact | Tomorrow's Legacy

ABBREVIATIONS:

AI	-	Avian Influenza
AIS	-	Alien and Invasive Species
BA	-	Basic Assessment
ECO	-	Environmental Compliance Officer
EIA	-	Environmental Impact Assessment
ESA	-	Environmental Site Agent
EMP'r	-	Environmental Management Programme Report
GPS	-	Global Positioning System
IA	-	Impact Assessment

IMPACTS	Preferred Layout Alternative		No-Go Alternative
	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
Nature of impact: Handling of general waste materials on the development site.	Activity: Waste is generated on site, if not disposed of correctly it will become a nuisance within the area.		No impact will occur as the development activities will not take place.
Magnitude:	6	2	-
Duration:	4	4	-
Extent:	3	1	-
Irreplaceable:	3	1	-
Reversibility:	2	1	-
Probability:	4	3	-
Total SP:	72	27	-
Significance rating:	Medium (M)	Low (L)	-
Cumulative impact:	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Waste must not be stored on site in excess of ninety (90) days; All general waste must be disposed of at a registered landfill site as mentioned in the Section 24G Application/Report; Carcasses will be stored on site for a period of one (1) week; where after, it will be collected by lion farmers within the area; Manure emanating from the development will be collected from the breeder farm and distributed to farmers within the area; An adequate number of scavenger proof litter bins are to be placed throughout the site. Two waste bins at least must be present, one (1) for hazardous waste and one (1) for non-hazardous waste at each working site. Dumping of waste on site is prohibited; 		

	<ul style="list-style-type: none"> Waste sorting and separation must form part of the environmental induction and awareness programme, to encourage personnel to collect waste paper, glass and metal waste separately; Keep all work sites including storage areas, offices and workshops neat and tidy; Dedicate a demarcated and signposted storage area on site for the collection of waste; All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site as mentioned in the Section 24G Application/Report; Care must be taken to ensure that no waste fall off disposal vehicles on-route to the landfill. If needed, a tarpaulin can be utilised; The burning or burying of solid waste on site is prohibited. Do not burn PVC pipes or other plastic materials, as this is regarded as hazardous waste; Littering by personnel shall not be permitted; General refuse/rubbish shall be removed from site on a weekly basis to an approved registered landfill site or as soon as the waste bins are reaching full capacity; Minimise waste by sorting wastes into recyclable and non-recyclable waste; Hazardous waste must be sorted from non-hazardous waste and disposed of at a hazardous treatment facility, records and proof of disposal must be kept; and, A register must be kept of the quantities of waste disposed and proof of disposal must be available at the site office. 		
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
Nature of impact: Traffic impacts associated with the movement of vehicles within the area.	Activity: The regular movement of workers and business clients within the area increases traffic flow and impede vehicle movement.	No impact will occur as the development activities will not take place.	
Magnitude:	4	2	-
Duration:	3	3	-
Extent:	2	2	-
Irreplaceable:	1	1	-
Reversibility:	2	2	-
Probability:	5	2	-
Total SP:	60	20	-
Significance rating:	Medium (M)	Low (L)	
Cumulative impact:	-	-	
Proposed Mitigation:	<ul style="list-style-type: none"> Adequate parking must be provided for residents, visitors and business clients to ensure that vehicles are not parked within the road reserve; 		

	<ul style="list-style-type: none"> All speed limits need to be adhered to. 		
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
Nature of impact: Surface and groundwater contamination from the Hatchery and breeder Facilities as well as the stores and housing facilities.	Activity: Surface and groundwater can become contaminated due to operation of the hatchery and breeders facilities.		No impact will occur as the development activities will not take place.
Magnitude:	6	4	-
Duration:	4	3	-
Extent:	3	2	-
Irreplaceable:	4	2	-
Reversibility:	4	2	-
Probability:	4	2	-
Total SP:	84	39	-
Significance rating:	Medium-high (MH)	Low (L)	-
Cumulative impact:	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Measures must be implemented to prevent the contamination of clean run-off from the site in order to protect the degradation of the drainage areas; Stormwater must be conducted in a manner which prevent soil erosion (i.e natural areas must be landscaped in order to ensure energy is removed from run-off); Drip trays must be placed beneath all stationary operational equipment; Hazardous substances must be stored within a bund area able to contain 110% of the volume of the substance stored within; Water samples must be taken from the nearest borehole and be tested for any pollution, and monitored; Should a spill occur on an impermeable surface such as cement or concrete, the surface spill must be contained using oil absorbent materials; Infrastructure and separation dams to contain run-off from the hatchery and Breeders (if required by the department) area to contain contaminated run-off must be implemented on the premises; and, irrigation water from the dams must be of sufficient standard as stipulated by relevant legislation; The run-off should be channelled along grassed filter channel to the separation dams; Surface run-off from the Breeders and Hatchery should be collected in a drainage channel, with a sufficient cross-section. To prevent effluent being washed into a watercourse, all contaminated flow should be directed to stabilisation ponds (separation dams) for treatment; 		

	<ul style="list-style-type: none"> The separation dams should be monitored regularly for leaks and should be repaired accordingly. Wastewater from the Breeder farm houses must be lead to already existing wastewater treatment dams (if required by department). Existing irrigation operations should be maintained. The impact from irrigation with treated water on soils should be monitored and evaluated. All surfaces that are susceptible to erosion, shall be protected either by cladding with biodegradable material or with the top layer of soil being seeded with grass seed/planted with a suitable groundcover. <p>HAZARDOUS CHEMICAL STORAGE</p> <ul style="list-style-type: none"> Staff that will be handling hazardous materials must be trained to do so. All hazardous chemicals must be properly stored in a secure, banded and contained area. 	
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:		
Nature of impact: Soil Compaction	Activity: Erosion and degradation of soil surrounding the breeders and Hatchery facilities as well as the stores.	No impact will occur as the development activities will not take place.
Magnitude:	4	2
Duration:	4	4
Extent:	1	1
Irreplaceable:	3	3
Reversibility:	1	1
Probability:	4	2
Total SP:	52	22
Significance rating:	Medium (M)	Low (L)
Cumulative impact:	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> The layout of the area should be optimised to limit the erosion potential; Rehabilitate denude areas especially slopes with appropriate species and erosion protection measures (i.e. geo-textiles; rocks; topsoil mixtures as per specifications); Limit overcrowding in chicken houses; The separation dams should be monitored after rainfall to ensure that it does not flood. 	
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:		
Nature of impact: Increased risk of veld fires.	Activity: Due to the presence of personnel and machinery in natural areas, fires can occur if not managed to the correct standard.	No impact will occur as the development activities will not take place.
Magnitude:	6	4

Duration:	4	2	-
Extent:	2	2	-
Irreplaceable:	4	4	-
Reversibility:	4	4	-
Probability:	3	2	-
Total SP:	60	36	-
Significance rating:	Medium (M)	Low (L)	-
Cumulative impact:	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • The Applicant shall take all reasonable and precautionary steps to ensure that fires are not started as a consequence of the activities on site; • Ensure the work site is equipped with adequate firefighting equipment. This includes at least rubber beaters when working in veldt areas, and at least one fire extinguisher of the appropriate type irrespective of the site; • Workers must be adequately trained in the handling of firefighting equipment, and can include but not limited to: <ul style="list-style-type: none"> • Regular fire prevention talks and drills; and, • Posting of regular reminders to staff; • No open fires are permitted anywhere on site; • Do not store any fuel or chemicals under trees; • Do not store gas and liquid fuel in the same storage area (Hazardous substances to be stored in accordance with SANS); • Any fires that occur on site shall be reported to the ECO immediately and then to the relevant Authorities; • In the event of a fire, Supreme shall immediately employ such plant and personnel as is at his disposal and take all necessary action to prevent the spread of the fire and bring it under control; • Do not permit any smoking within 3m of any fuel or chemical storage area, or refuelling area. A designated smoking area must be established on site; and, • All vehicles must be fitted with at least one fire extinguisher (when applicable). 		
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
Nature of impact: Infestation of the area with Alien and Invasive Species Direct impact on Fauna and Flora as a result of vegetation clearance.	Activity: Implementation of an Alien and Invasive Management Plan in order to control and eradicate Alien and Invasive Species.		No impact will occur as the development activities will not take place.
Magnitude:	6	2	-
Duration:	4	4	-

Extent:	2	1	-
Irreplaceable:	3	3	-
Reversibility:	1	1	-
Probability:	4	2	-
Total SP:	64	22	-
Significance rating:	Medium (M)	Low (L)	-
Cumulative impact:	-	-	-
Proposed Mitigation:	<p>Clearing and Guiding Principles</p> <ul style="list-style-type: none"> • Alien control programs are long-term management projects and should include a clearing plan which includes follow up actions for rehabilitation of the cleared area; • The lighter infested areas should be cleared first to prevent seed build-up; • Pre-existing dense areas should be left for last, as they probably will not increase in density or pose a greater threat than they are currently; and, • All clearing actions should be monitored and documented to keep track of which are due for follow-up clearing. • The buildings are established in an already disturbed areas. <p>Clearing Methods</p> <ul style="list-style-type: none"> • Different species require different control methods such as manual, chemical or biological methods or a combination of the two; • Care should be taken to ensure that the clearing methods used do not encourage further invasion. As such, regardless of the methods used, soil disturbance should be kept to a minimum. The vegetative stage of the plants should also be considered before clearing; • Fire is not a natural phenomenon in the area and should not be used in general for alien control or vegetation management at the site; and, • The best-practice clearing method for each species identified should be used. The preferred clearing methods for most alien species can be obtained from the Department of Water and Agricultural Affairs (DWAF) Working for Water website: http://www.dwaf.gov.za/wfw/Control/. <p>Use of Herbicides for Alien Control</p> <p>Although it is usually preferable to use manual clearing methods where possible, such methods may create additional mechanical disturbance which may stimulate alien invasion and may also be ineffective for many woody species which resprout. Where herbicides are to be used, the impact of the eradication program on the natural environment should be minimised by observing the following:</p> <ul style="list-style-type: none"> • Area contamination must be minimised by careful, accurate application with a minimum amount of herbicide to achieve good control; 		

	<ul style="list-style-type: none"> Care must be taken to prevent contamination of water bodies. This includes special care in storage, application, cleaning equipment and disposal of containers, product and spray mixtures; Equipment should be washed where there is no danger of contaminating water sources and washings carefully disposed of in a suitable place; To avoid damage to indigenous or other desirable vegetation, herbicides that would have the least effect on the indigenous vegetation should be used; Droplet nozzles with a coarse spray pattern should be fitted to avoid drift of herbicides onto neighbouring vegetation; and, The appropriate health and safety precautions should be followed regarding the storage, handling and disposal of herbicides. 		
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
Nature of impact: Operation Activities may have a positive impact on the local and regional socio economic conditions.	Activity: The operational phase of the development creates employment opportunities for individuals from the Local Community.	No impact will occur as the development activities will not take place.	
Magnitude:	4	N/A	-
Duration:	4		-
Extent:	2		-
Irreplaceable:	0		-
Reversibility:	0		-
Probability:	5		-
Total SP:	50		-
Significance rating:	+ Medium (M)	+ Medium (M)	-
Cumulative impact:	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> Mitigation measures are not applicable as the impact is positive. 		
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
Nature of impact: Occupational Health and Safety.	Activity: During the operation phase, accidents, occupational diseases, ill health and damage to property can occur if pre-cautionary measures are not taken. Increased movement of vehicles may lead to increased accidents among local communities, site workers, construction workers (when applicable) and vehicle operators.	No impact will occur as the development activities will not take place. Cultural and Historical features of the development site will remain unaffected.	
Magnitude:	10	2	-
Duration:	4	4	-
Extent:	1	1	-

Irreplaceable:	4	4	-
Reversibility:	4	4	-
Probability:	3	2	-
Total SP:	69	30	-
Significance rating:	Medium (M)	Low (L)	-
Cumulative impact:	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Ensure that PPE is available to Personnel; • Adhere to the Occupational Health and Safety Act; • Keep the first aid kit stocked; • Issue all workers with necessary health and safety items; • Potentially hazardous areas must be demarcated with danger tape; • Appropriate signage must be placed to caution Employees and contractors not to enter certain structures without Authorisation; • Regular safety inspections must be conducted to ensure that participants are equipped with necessary safety equipment; and, • All construction personnel to wear hard hats and reflector jackets at all times (when applicable). 		
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
Nature of impact: Air Emissions	Activity: The operational phase of the development creates Air Emissions by burning coal and gas by using Heatcos and LP Gas heaters.		No impact will occur as the development activities will not take place. Cultural and Historical features of the development site will remain unaffected.
Magnitude:	4	2	-
Duration:	4	4	-
Extent:	2	1	-
Irreplaceable:	2	1	-
Reversibility:	2	1	-
Probability:	3	3	-
Total SP:	42	27	-
Significance rating:	Medium (M)	Low (L)	-
Cumulative impact:	-	-	-

<p>Proposed Mitigation:</p>	<ul style="list-style-type: none"> Ash contents need to be tested to determine if the ash can be used for reparation purposes on the farm, if it is hazardous, it should be taken to a hazardous waste facility, otherwise it may be used on the farm as with current operations. Coal ash may be given to the brick making industries where they can be refined for further use (already done by Supreme). To prevent leaching in to the soil and ground water, fly ash should be stored on a bunded area. Stockpiled coal should be watered, enclosed or covered to prevent from being blown by wind. For coal fired heatcos, dry scrubber should be used to reduce the amount of sulphur content 		
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
<p>Nature of impact: Noise nuisance generated by site operations.</p>	<p>Activity: Noise nuisance that may be created by the operation and maintenance work.</p>		<p>No impact will occur as the development activities will not take place. Noise features of the development site will remain unaffected.</p>
Magnitude:	4	2	-
Duration:	4	4	-
Extent:	1	0	-
Irreplaceable:	1	0	-
Reversibility:	1	1	-
Probability:	3	3	-
Total SP:	33	21	-
Significance rating:	Low (L)	Low (L)	-
Cumulative impact:	-	-	-
<p>Proposed Mitigation:</p>	<ul style="list-style-type: none"> Limit working hours of noisy equipment to daylight hours; and, Ensure that Employees and maintenance staff conduct themselves in an acceptable manner while on site, both during work hours and after hours. 		
IMPACTS	Preferred Layout Alternative		No-Go Alternative
	Before Mitigation	After Mitigation	
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			

Nature of impact: Dust Generation	Activity: Dust Generation		No impact will occur as the development activities will not take place.
Magnitude:	4	2	-
Duration:	2	1	-
Extent:	2	1	-
Irreplaceable:	1	1	-
Reversibility:	1	1	-
Probability:	2	1	-
Total SP:	20	6	-
Significance rating:	Low (L)	Low (L)	-
Cumulative impact:	-	-	-
Proposed Mitigation:	<ul style="list-style-type: none"> • Implement dust suppression measures by watering (or acceptable methods) areas to be cleared as well as already exposed surfaces with damaged soil particles, particularly during dry, windy periods (when becoming a problem on the farm); • Ensure all vehicles remain on designated roads; • Dust masks are to be supplied to workers; • Access roads are to be kept clean; 		
POTENTIAL IMPACTS ON GEOGRAPHICAL AND PHYSICAL ASPECTS:			
Nature of impact: Disease Control	Activity: Disease control		No impact will occur as the development activities will not take place.
Magnitude:	10	6	-
Duration:	3	3	-
Extent:	3	3	-
Irreplaceable:	4	3	-
Reversibility:	4	3	-
Probability:	4	2	-
Total SP:	96	36	-
Significance rating:	Medium-high (MH)	Low (L)	

Cumulative impact:	-	-	
Proposed Mitigation:	<ul style="list-style-type: none"> • Ensure proper water drainage around facility. • Facility must be cleaned regularly. • Concrete floors must remain sealed to limit the pooling of water. • Adequate ventilation must be ensured for the flooring, bedding and feed. • Pest control measures must be taxon-specific. • Abide to already existing AI Control and Action Plan 		

(c) **Impacts that may result from the decommissioning and closure phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase.**

The activity will not be decommissioned in the future and therefore the proposed impacts therefore were not assessed.