1. Introduction

The proposed Layer Farm Complex consists of an integrated operational area consisting of:

- Eight (8) laying sheds (75.7m x 20.5m) accommodating a maximum of 31,000 birds each.
- Fenced free range paddocks.
- Two (2) egg packing sheds.
- Internal access and manoeuvring areas.
- Associated plant and infrastructure.

This Environment Management Plan is designed to identify and assess potential environmental impacts within the layer farm and prescribe the framework for monitoring and management of such factors.

1.1 Statutory Requirements

The following Acts and documents apply to the operation of the Rearing Farm Complex and relate to this Environment Management Plan:

- Egg Standards of Australia (ESA) for Rearing and Laying Farms.
- Code of Practice for Shell Egg, Production, Grading, Packing and Distribution, August 2010.
- Code of Practice for Biosecurity in the Egg Industry Second Edition, January 2015.
- National Farm Biosecurity Manual Poultry Production, May 2009.
- National Water Biosecurity Manual Poultry Production, August 2009.
- Egg Industry Environmental Guidelines, May 2018.
- National Farm Biosecurity Technical Manual for Egg Production- 2015
- Model Code of Practice- Land Transport of Poultry standards and Guidelines- 2011
- Model Code of Practice for the Welfare of Animals- Domestic Poultry 4th Edition
- SOP 001 Bio-Security and Animal Welfare - V5.2, 29.07.2019
- OP 2.30 Quality Complaints Procedure V011 20-12-2021

2. Environmental Factors

2.1 Waste

Solid Waste will be generated from the following points:

- Spent Litter and Manure from the Sheds
- Bird Mortalities from the Sheds
- Domestic Refuse from Staff

Waste Water will be generated from the following sources:

- Shed cleaning

- Domestic Wastewater from amenities blocks

Table 1 outlines how each stream of waste will be dealt with and documented.

Table 1 – Waste Management Plan

Category of Waste	Description & Quantity	Method of Disposal	Records & Control
2.1 Manure and Spent Litter	Each shed is regularly cleared of manure. Sheds are cleaned via manure conveyors operated once per week. Stockpiling of manure and spent litter is not permitted on site.	The manure is sold and discharged directly into a truck for transportation off-site. Spent litter is also transported off-site at the end of batch. The removed manure and spent litter are generally utilised in the local area for pastoral improvement and fertilizer.	No public access is permitted and there are no manure sales to the public. SOP 093 Manure Use Guidelines Manure removal contractor must adhere to the site's strict biosecurity policy and sign in and out for every collection. Completion of Form 063 Manure Sales agreement to be completed for each collection
2.2 Bird Mortality 2.2.1 Operational Mortality	Operational Mortality refers to normal bird mortality. Normal operational mortality is 1% per cycle	A dedicated composting facility is provided on site to treat operational mortalities.	Farm Managers maintain daily records of ages, numbers and locations of mortalities.
2.2.2 Disaster Mortality	Disaster Mortality refers to a situation where all birds on the farm are condemned.	As per instructions from the Chief Veterinary Officer and/or per the Pace Farm Mass Bird Disposal (Disaster Mortality) Plan. SOP 090.1 Guidelines for Euthanasia if Layer Hens	Records will be maintained by Farm Manager of all steps in the Mass Bird Disposal (Disaster Mortality) Plan.

		during an emergency situation	

Category of Waste	Description & Quantity	Method of Disposal	Records & Control
2.3 Domestic Refuse	Domestic refuse is generated at employee amenities.	Domestic refuse is to be placed in enclosed skip bins and transported to landfill facility by local waste removal contractor. Recyclable Waste such as plastic, paper, cardboard, and waste metal is to be separated from refuse and stored in designated collection bins. Recyclable materials are to be removed from the farm by a licensed contractor on a regular / as needed basis.	Domestic waste is monitored.
2.4 Wastewater 2.4.1 Shed Cleaning	Layer sheds are depopulated, dry cleaned/vacuumed, wet cleaned with a high pressure washer and sanitised at the end of each batch using the minimal amount of water.	Not applicable - Sheds have a bund wall that will hold all water used are then left open to dry via evaporation.	The Farm Manager maintains records for each rearing shed cleaning.
2.4.2 Domestic Wastewater	Domestic wastewater is generated from the toilets, showers and laundry of the amenities buildings.	Domestic wastewater is treated onsite via standard septic systems.	Septic systems to be maintained and inspected in accordance with maintenance specifications.

2.2 Air Emissions

Potential environmental impacts to air may be from the following sources:

- Odour
- Feathers
- Dust

Table 2 outlines how each environmental factor will be controlled and documented.

Category of Impact	Description & Quantity	Method of Prevention	Records & Control
2.2.1 Odour	Odour may be generated from poultry manure. It should be noted that the Layer site is situated in a rural area, with the closest sensitive receptor > 500m from the nearest shed and odour modelling has indicated compliance with the relevant criteria	Maintain dry litter within the sheds through the management of moisture levels, ventilation, temperature and removed of wet or caked litter as required. Limit external water sources from entering the sheds. Undertake regular inspections of sheds to monitor the above factors.	A complaints procedure is in place with a register to record, address and rectify any complaints that are made.
2.2.2 Manure	Each shed is regularly cleared of manure. Sheds are cleaned via manure conveyors operated once per week. Sheds are also manually cleaned of manure at the end of each cycle.	As the manure is air dried before removal, there is very little odour associated with it. Stockpiling of spent litter or manure on site is not undertaken	A complaints procedure is in place with a register to record, address and rectify any complaints that are made.

Category of Impact	Description & Quantity	Method of Prevention	Records & Control
2.2.3 Dust	Dust may be released to the surrounding environment through the unloading of feed grain, shed clean out, or through sudden mass bird movement.	Grain is unloaded into contained silos in an enclosed, indoor area to prevent the release of grain dust into the outside air. Shed clean out and manure collection is not undertaken in adverse weather conditions where the risk of dust generation or transfer is high. Improvements in bird management and low stocking densities combine to reduce the risk of sudden mass bird movement.	A complaints procedure is in place with a register to record, address and rectify any complaints that are made.

2.3 Chemical Storage

Potential environmental impacts may result from the release of chemicals to the environment. **Table 3** outlines how each environmental factor will be controlled and documented.

Category of Impact	Description & Quantity	Method of Prevention	Records & Control
2.3.1 Chemicals	Only small amounts of chemicals are stored on site to assist with operational activities.	Chemicals are stored on site in a specified chemical storage area in accordance with the applicable Material Safety Data Sheets (MSDS) and regulated by the Site Manager under supervision of the WH&S Manager as outlined in the Pace Farm Environmental Management System document. The chemical storage area is appropriately bunded and the volume of chemicals are kept at an operational minimum.	Chemical storage is documented and checked regularly by the site manager.

2.4 Noise Emissions

Potential environmental impacts may result from the excessive operational noise emissions.

Table 4 outlines how each environmental factor will be controlled and documented.

Category of Impact	Description & Quantity	Method of Prevention	Records & Control
2.4.1 Noise	The nearest rural dwelling is located > 500m away from the nearest shed. As noise emissions are generally consistent with other rural activities (e.g. vehicle movements), occur during day time periods and are appropriately setback from rural dwellings, adverse noise impacts from the operation are not expected.	While the farm operates 24 hours a day and 7 days a week, ensure the major components of the operation including facility maintenance, delivery and dispatch, typically occur between 6am – 7pm. Where circumstances (e.g. mechanical breakdown or animal welfare requirements dictate) require variances to typical hours, undertake activities in a manner which minimises noise emissions, e.g. trucks to be turned off while standing on site and staff noise to be kept to a minimum.	A complaints procedure is in place with a register to record, address and rectify any complaints that are made.

2.5 Range Area Management

Potential environmental impacts may result poor management of the external range areas.

Table 4 outlines how each environmental factor will be controlled and documented.

Category of Impact	Description & Quantity	Method of Prevention	Records & Control
2.4.1 Nutrient Runoff	Poorly managed free range areas may result in environmental impact due to nutrients run off from range areas.	Within the sheds, removal of Manure and Spent Floor litter (as per Table 1 above, is to be undertaken to separate ~86% of the Manure from the range areas. Range Area Management actions are to be implemented in the following zones: **Zone 1 (0-10m from Shed)** • Construction of a 1.5m wide concrete apron around the sheds with a 1.5m wide eave to divert run off from the apron. Aprons can be swept clean, and manure collected if build up is occurring. • Construction of a compacted gravel area extending ~ 9m from the apron in the high traffic areas to prevent bird scratching, erosion and nutrient run off. • Construction of contour banks upslope flow from the sheds site to convey flows to downstream areas.	Farm manger to undertake regular inspections of range area to monitor highly trafficked areas. Where denuded areas are identified, use fencing or spelling, to allow recovery. Monitor soil nutrients to ensure nutrient application and removal rates are sustainable.

		Zone 2 & 3 (10M+ from the shed) • Retention of ground covers, trees and planting within the range area to protect range areas from erosion an absorb nutrients. • Planting of additional vegetation / pastures within the range areas. • Farm managers to move external shade structures to allow pasture to recover in highly traffic areas. • Construction of contour banks with scour protection at discharge points to control overland flows, slow velocities reduce sediments load and minimise the risk of erosion. • Retention of Vegetated Filter Strips (VFS) along the downstream edges of range area. VFS are small areas of well-maintained, thick ground covers as a secondary control measure (insurance policy) for further filtering of unexpected run-off.	