SUBMISSION IN SUPPORT OF PLANNING PERMIT APPLICATION

Proposed Broiler Farm – Unit 3

Farrell Lane, Rosedale

April 2022
(2560R06)

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PROPOSED BROILER FARM

FARRELL LANE, ROSEDALE

April 2022

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1 INTRODUCTION

This submission has been prepared in support of our client's planning permit application for the use and development of the land at Farrell Lane, Rosedale for the purposes of a 400,000 bird broiler farm and manager's dwelling.

The subject land is currently used for grazing of cattle. The proposed broiler farm will use only a small portion of the property and the balance will continue to be used for grazing purposes.

It is submitted that the proposal is consistent with the Planning Policy Framework, the Local Planning Policy Framework, the zoning and overlay provisions and the particular provisions contained within the Wellington Planning Scheme. It complies with all aspects of the Victorian Code for Broiler Farms 2009 and the Odour Environmental Risk Assessment (OERA) demonstrates that the proposal will not increase the risk of adverse odour impacts at the nearest sensitive receptors.

The application is summarised in Section 2. The subject land and its environs are described in Section 3. Section 4 discusses the proposal. The Victoria Code for Broiler Farms 2009 is addressed in Section 5. Planning policies and controls including the Planning Policy Framework, local planning policies and particular policies and controls are discussed in Section 6. Section 7 addresses other approvals, legislation and codes of practice. Section 6 identifies and discusses the various planning considerations pertaining to the proposal. Conclusions are presented in Section 9.

2 THE APPLICATION

It is the applicant's intention to establish a 400,000 bird broiler farm and manager's dwelling on the subject land. The farm will consist of 9 sheds, each capable of housing 44,444 broiler chickens. It forms part of a Farm Cluster as defined in the Victorian Code for Broiler Farms 2009 due to its separation distance as prescribed by Formula 1 of the Code (page 18) intersecting with the separation distance of the broiler farm located to the north west (Farm 1) and the approved broiler farm to the north east (Farm 2) (Planning Permit No. P185.2019).

The application includes:

- Use and development of the land for a 400,000 bird conventional broiler farm.
- Use and development of the land for a dwelling.
- Buildings & works including nine chicken sheds fitted with stub stacks on duty fans, a machinery shed, staff amenities building, 14 feed silos, 6 LPG tanks, a vehicle wheel wash and three water tanks.
- Access road construction; and
- Construction of a new dam.

The siting and design of the farm accords with the objectives and standards of the Victorian Code for Broiler Farms 2009.

The siting and design of the chicken sheds is shown on the following plans:

- Figure 1 – Location and Topographic Plan
- Figure 2 – Farm Context Plan
- Figure 3 – Site Plan
- Figure 4 – Farm Layout
- Figure 5 – Floor Plan & Elevations - Broiler Shed

The siting of the dwelling is shown on Figure 4 – Farm Layout and the details of the dwelling are shown on the accompanying Dwelling Plans.

3 THE SITE AND SURROUNDS

3.1 THE SITE

3.1.1 Location

The site is located on the western side of Farrell Lane, approximately 1kilometre south of the Rosedale – Longford Road. This is shown on Figure 1 – Location and Topographic Plan.

3.1.2 The land

The subject land is made up of Lot 2 LP141161(Certificate of Title Vol 09483 Folio 442) and Lot 1 PS304693 (Certificate of Title Vol 10047 Folio 461).

The land's Certificates of Title are presented in Appendix 1. It is 69.89 hectares (175 acres) in size. It forms part of a larger 346,26 ha (865 Acre) property owned by the permit applicant. The subject land and surrounding land are shown on Figure 2 – Farm Context Plan.

The property is gently undulating with generally a gentle fall to the north west. There are 2 minor overland flow paths running through the land in a generally north westerly direction. There are some small farm dams located throughout the property.

3.1.3 Access

Access to the property is currently available from the Farrell Lane. It is intended service the proposed farm by constructing a new access road to the proposed sheds from the access road servicing Farms 1 and 2 in the location shown on Figure 3 – Site Plan and Figure 4 – Farm Layout Plan. Farms 1 and 2 gain access from the Rosedale - Longford Road which is a high quality sealed rural road running between Rosedale and Longford.

3.2 SURROUNDING LAND

The surrounding land is primarily open farmland on larger properties. Land use activities are mainly grazing. There is a substantial area of forestry plantation located to the east and south east as can be seen on Figure 2 – Farm Context Plan. An area of rural living development is located approximately 2.7 kilometres to the west of the proposed farm site.

There is a small allotment of unreserved Crown Land located at the western boundary of this land. This land locked parcel is fenced within, and is used as part of, this private land.

The closest off-site dwelling to the proposed sheds is located 1,233 metres to the south. The next closest off-site dwelling 1,552 metres to the west. Other dwellings to the west are at least 1,918 metres away. Dwellings to the north are at least 2,319 metres distant. All other dwellings, including the rural living dwellings to the west, are at least 2.9 kilometres from the proposed sheds.

4 PROPOSAL

It is the applicant's intention to establish a 400,000 bird broiler farm and manager's dwelling. The proposal will consist of 9 sheds each capable of housing 44,444 birds.

The application includes:

- Use and development of the land for a broiler farm.
- Use and development of the land for a dwelling.
- Buildings & works including nine chicken sheds fitted with stub stacks on duty fans, a machinery shed, staff amenities building, 14 feed silos, 6 LPG tanks, a vehicle wheel wash and three water tanks.
- Access road construction, and
- Construction of a new dam.

The farm has been sited and designed in accordance with the provisions of the Victorian Code for Broiler Farms 2009.

4.1 CHICKEN SHEDS (SIZE, SITING & DESIGN)

Location

The broiler farm will be located in the north eastern part of the property as shown on Figure 2 – Farm Context Plan and Figure 3 – Site Plan. The sheds will run in an east - west direction as shown on Figure 4 – Farm Layout.

The sheds will be sited:

- A minimum of 920 metres from the Rosedale – Longford Road to the north
- 286 metres from the property boundary to the east (Farrell Lane)
- Approximately 212 metres from the southern property boundary, and
- Approximately 210 metres from the western property boundary.

Figure 3 – Site Plan and Figure 4 – Farm Layout show the location and layout of the sheds and associated infrastructure.

Shed size

The proposed sheds will each measure 168.0 metres by 17.3 metres (internal). The height of the sheds will be 2.9 metres to the eaves and 4.3 metres to the ridgeline. The sheds will have an internal floor area of 2,906 m^2 each and a combined floor area of 26,154 m^2. The sheds will be spaced 17.4 metres apart.

Shed floor

Shed floors will be raised above natural surface level and will be approximately 0.6 metres above the adjacent open earth drains. The shed floors will be concrete. This will ensure that the shed floor remains absolutely dry and also that there is no moisture uptake from the surrounding soil.

Shed construction

The sheds will be constructed with 600 mm high concrete dwarf walls with colorbond clad polystyrene sandwich panels located above. There will be mini vents located within the side walls. Extractor fans will be located at the eastern end of the sheds. Cooling pads located on the side walls at the opposite end of the sheds to the fans. Control rooms will be constructed at the western end of the sheds.

The sheds will be similar to those shown on Photos 1 - 3 presented in Appendix 2.

Shed ventilation

The proposed sheds will be of a state-of-the-art "minimum ventilation tunnel vent" design. In this design, ventilation of sheds is provided by the continuous drawing of air through the sheds by the use of fans. This shed design and operation represents 'best practice' technology.

In this type of design there are two components to the ventilation process:

Tunnel Ventilation:

This involves the use of a bank of extractor fans, which are located at one end of each shed and draw fresh air into the sheds. This air is drawn through the length of the sheds and expelled by the fans. The number of fans in operation at any one time depends on the rate of air exchange required and the amount of cooling needed. Photos 4 & 5 in Appendix 2 show typical examples of these fans.

Minimum Ventilation:

This involves the constant exchange of air through the sheds via the use of fans. Typically, minimum ventilation is employed during the initial brooding period, at night or when ambient temperatures are low. When minimum ventilation is employed, there is always a minimum amount of ventilation occurring in the sheds to ensure an adequate air exchange rate to maintain acceptable temperature, air quality and humidity levels in the sheds. Fresh air is drawn in via a series of adjustable "mini air vents" which are located along the sidewalls of the sheds. Photos 6 & 7 (Appendix 2) show typical examples of these. In this instance, minimum ventilation will be provided by the two duty fans at the end of the sheds.

The two duty fans will be fitted with stubs stacks which will protrude 0.5 metre above the ridgeline of each shed. The photograph presented in Appendix 3 shows an example of stub stacks. The use of stub stacks increases the dispersion of odours

emitted from the sheds, particularly at night. This results in significant reductions in peak odour concentrations at sensitive uses in the vicinity.

Evaporative cooling pads will be located on the sidewalls of the shed at the opposite end to the tunnel ventilation fans. Photo 3 in Appendix 2 shows a typical cooling pad. Air enters the sheds via these pads when cooling is required. At higher temperatures, water is circulated through the evaporative cooling pads and the air drawn through is cooled in the same manner as for an evaporative air conditioning system. The evaporative cooling pads sit external to the shed in drip trays and are kept moist by the recirculating water system.

Temperature control

Gas burner heaters will facilitate heating of the sheds. The minimum level of airflow through the sheds will be maintained during times of heating.

Tunnel ventilation (airflow) control and subsequent temperature and environment control will be automated via the use of a computerised control facility that can be constantly monitored either at the sheds or from a remote location such as the operator's residence. There are several internal temperature sensors located inside the sheds and an outside weather station which combine to form part of this control facility. In tunnel mode, the sheds are in effect sealed or airtight to ensure optimum performance of the ventilation system.

In the cooler periods of the year, or when the birds are young, minimum ventilation is maintained primarily by the use of minimum ventilation extractor fans with fresh air being drawn through the adjustable mini vents along the sides of the sheds.

In warmer weather when it is desirable to exchange larger volumes of air in the sheds to maintain the desired level of minimum ventilation, a larger number of the extractor fans at the end of the sheds are used. Air can be drawn in through the cooling pads with or without the water being circulated through the pads, depending on the extent of cooling required.

Materials

The cladding material proposed for the chicken sheds and machinery shed is to be selected from the 'colorbond' range in a pale green colour. The roofs of the sheds will be custom orb. It is essential that the roofs are clad in custom orb for bird health reasons and for energy efficiency. The custom orb does not absorb as much heat as colorbond materials, thus maintaining cooler conditions in the sheds during hot weather. The sheds will be similar to those shown in Photos 1 – 3 in Appendix 2.

The shed sidewalls will consist of dwarf solid concrete walls to a height of 0.60 metres, sunk 0.15 metres below surface level to eliminate vermin entry. The shed walls will have small adjustable minimum vents which are used to allow air to enter the sheds during the minimum ventilation phase. The opening and closing of the vents will be controlled by the automated system.

The proposed silos will be constructed of galvanized steel. This material does not retain heat like coloured surfaces and this is essential in preventing the stored feed

from overheating and spoiling. The type of silo to be used is shown in the Photo 1 presented in Appendix 2.

Landscaping / visual screening

A landscape buffer will be established around the shed complex as shown on Figure 3 – Site Plan, Figure 4 – Farm Layout and the accompanying Landscape Plan. The forestry plantation on the east side of Farrell Lane will provide screening of views from the east. The landscaping of the approved farm to the north west, and the landscaping to be provided along the Longford – Rosedale Road boundary and around Farm 2 as shown on Figure 2 – Farm Context Plan, will provide screening from the north and north west.

This screen planting is proposed to consist of selected indigenous trees and shrubs to create an upper and lower story screen. The species selected are from the relevant EVCs for the site.

The accompanying Landscape Plan provides details of the proposed planting regime and maintenance measures.

Lighting

External lighting will be provided at the end of each shed. This lighting will only be used while mature bird pick up is occurring. This lighting will be baffled to ensure that light does not spill beyond the landscape buffer.

4.2 FARM SITE OPERATION

The following describes the activities associated with the operation of the proposed broiler farm.

4.2.1 Cycle of production

Birds will be brought onto the site in batches approximately every 65 days. A batch will generally arrive over a 2 – 3 day period. It is anticipated that 5.6 batches per annum will be grown.

The proposed production cycle for each shed on the farm involves a growing period of approximately 7- 8 weeks and approximately a 10 to 14 day period for shed clean up and turn around.

Birds are generally removed from Day 34 through to approximately Day 50 at varying market related weights. Typical bird removal arrangements would be removal of approximately a third of the birds at about Day 34, a similar number about a week later and removal of the remaining birds at the end of the batch. These times may vary a little subject to market demands.

In accordance with animal health and welfare standards bird mass within the shed will not exceed 40 kg per square metre of shed area.

4.2.2 Feed

14 x 45 tonne silos will be constructed on the site as shown on Figure 4 – Farm Layout Plan. These are to be located at the western end of the sheds.

Feed for the birds will be delivered by enclosed bulk delivery trucks and will be blown through a totally enclosed system from the trucks into the feed silos. From the silos, the feed is augered through an enclosed ducted system into an automatic feeding system within each shed. Typical feeders are shown in Photos 8 & 9 in Appendix 2.

4.2.3 Water

Drinking water to the sheds is to be provided from the large dam to be constructed to the north of the shed complex as shown of Figure 4 – Farm Layout. This will collect the runoff from the shed roofs and surrounding hard stand areas. This dam water can be supplemented by water from a bore on the property.

Water will be appropriately treated and initially stored in the three large storage tanks and then fed into an automatic watering system within the sheds. This system will be fitted with dripless drinking nozzles otherwise known as nipple drinkers in accordance with latest best practice. Typical nipple drinkers are shown in Photos 9 - 10 presented in Appendix 2.

These systems are fitted with automatic cut-off devices to ensure that the birds only receive one droplet of water every time they peck at the button. This ensures that overflowing and flooding of the deep litter cannot occur.

Water meters are used to gauge water consumption and will alert farm management if consumption is outside of the predetermined levels. Each water tank will also have a water alarm to alert the operators when levels become low. The three water storage tanks will also provide a backup water supply and water for firefighting purposes.

Each water tank will be fitted with a separate ball or gate valve and coupling to suit CFA requirements (64 mm CFA 3 thread per inch male fitting).

4.2.4 Litter Management

The floors of the proposed sheds will be concrete. Prior to the introduction of the birds to the sheds, a 6 to 8 centimetre layer of wood shavings, sawdust, rice hulls or similar material (deep litter) will be distributed over the entire shed floor. The purpose of the deep litter is to decompose the droppings of the birds via micro-organic activity. This deep litter is removed from the sheds at the end of each batch and taken off-site. The spent litter is replaced with new material prior to the arrival of new birds.

4.2.5 Vermin control

Vermin control is an important part of poultry farm management. In this instance, the fully enclosed feed delivery, storage and distribution systems will ensure that there is no spillage of feed and thus no attraction of vermin. As previously stated, the solid concrete side walls will be recessed 0.15 metres below the floor level. This, plus the concrete floors will eliminate the entry of vermin into the shed. The sheds will be made bird proof to ensure that no transmission of disease from wild birds to poultry can occur.

In addition to these design control measures, the management regime will also include the regular use of target specific, environmentally safe rodent bait stations around the exterior walls and end doors of the sheds. The bait stations will be inspected regularly. Practices that may encourage rodents such as uncollected rubbish, long grass and feed spills will be avoided.

4.2.6 Removal of dead and diseased birds

The proper removal of dead and diseased birds is an important management factor, from both the point of view of flock health and also external environmental considerations. It is proposed that dead and diseased birds will be collected on a daily basis and stored in the freezer to be located in the machinery shed. Contractors will remove the frozen birds off-site as required.

4.2.7 Odour control

Odour can arise from the poor management of chicken farming operations, primarily from damp litter, poor temperature control and shed ventilation and poor bird management. Odours can also arise from improper on-site disposal of dead birds. On rare occasions, digestive upsets in the birds may also lead to odour generation.

Proper deep litter placement will occur in the shed at a depth of 6 to 8 centimetres, which is the ideal depth to allow proper micro-organic activity which in turn decomposes the bird droppings. In addition, the litter will be kept in a dry condition by the fact that the shed floor will concrete and have been built up above adjacent surface levels with compacted clay, thus ensuring no moisture seepage into the shed. The watering system proposed to be used will be fitted with automatic cut-off devices to ensure that overflowing and flooding of the deep litter does not occur. One of the daily management tasks will be to undertake routine checking (3-4 times daily) of the litter and the drinkers in the shed, and if any damp litter is found, to remove it and replace it with fresh litter.

The health and consequently the growth of the birds determine the financial return to the broiler grower and the processor. Proper bird management will entail correct stocking of the shed in terms of bird densities, appropriate environmental conditions within the sheds and the proper provision of water, feed and medication. Failure to achieve this could lead to poor bird health and growth and potentially litter contamination, which in turn could give rise to odour problems.

Proper temperature control and ventilation of the sheds will be achieved through the computer controlled tunnel ventilation system that includes internal and external temperature sensors.

The accompanying Environmental Management Plan also assists in the management and monitoring of the shed environment and hence odour control.

4.2.8 Bird pickup

The grown birds are proposed to be picked up normally between 7.00 pm and 7.00 am, although daytime pick-ups, particularly during the morning can occur. Bird pickups usually occur in the dark to ensure minimal disturbance and damage to the birds, and also to ensure that they will be delivered fresh to the processing plant.

Birds are generally picked up on 3 occasions between Days 34 and 52. This may vary a little depending on market requirements. Birds will be caught within the sheds and placed in crates that are loaded on pallets. These pallets will be removed from the sheds via forklifts and loaded onto trucks.

4.2.9 Shed clean up

Upon the removal of birds, equipment will be raised up and bobcats or front-end loaders will be used to remove the deep litter from the sheds. Once the litter is removed, the interior of the shed and the equipment will be washed and sanitised using high pressure sprays that do not produce any free flowing water. During this time, regular maintenance is undertaken on the shed and equipment.

Following these tasks, fresh litter will be placed in the shed and any equipment replaced in preparation for the arrival of new birds.

4.2.10 Waste water

High pressure, low volume, sprays will be used to clean and sanitise the interior of the sheds. No free flowing water will be generated during the cleanup of the sheds. No contaminated or waste water will be discharged from the sheds at any time.

4.2.11 Power failure

Power and phase failure alarms will be fitted in the sheds and manager's dwelling to detect any power malfunction. These alert the grower in the event of an electricity supply problem. The alarm will operate at the manager's residence and will also be connected to a pager and mobile phone autodialler. As part of the routine management procedure, these alarms will be regularly tested. In the event of a power malfunction, the farm will have an emergency diesel generator(s) capable of covering all electrical power requirements to maintain normal operating conditions. This will start automatically upon any power failure.

4.2.12 Biosecurity

The sheds and their immediate environs, including the amenities and machinery buildings, are located within the biosecurity precinct of the farm. All persons

entering this area must adhere to the processor's biosecurity protocols which include changing into clean clothes and boots upon entry. This minimises the opportunity for contamination from external sources including other poultry farms.

A vehicle wheel wash is to be installed in the access road into the farm. All vehicles must pass through the wheel wash prior to entering the farm biosecurity area.

4.3 ACCESS

Access to the proposed broiler farm will be from Rosedale - Longford Road via the approved access point and internal farm road servicing Farms 1 and 2. The location of the gravel farm access road is shown on Figure 2 – Farm Context Plan.

The local road network is described in detail in the Traffic Engineering Assessment prepared by the Traffix Group which is presented in Appendix 4.

The intersection of the farm access road with the Rosedale - Longford Road will be upgraded to facilitate the traffic generated by the proposal. It will be constructed to handle B-double trucks. Any gate at the entrance will be setback 40 metres which ensures that no vehicles need to be parked on Rosedale - Longford Road.

A rural basic right-turn treatment is proposed for approaching eastbound vehicles. The treatment will provide a 3.3 metre widening of the carriageway to allow for through traffic to pass vehicles turning right at the intersection. A rural basic left-turn treatment is proposed for approaching westbound vehicles. The treatment will provide widening of the shoulder on the approach to the intersection.

The functional layout plan of this intersection is shown in Appendix B of the Traffic Engineering Assessment prepared by Traffix Group Pty Ltd.

4.4 VEHICLE VISITS

A number of trucks will be required to service the farm. The anticipated truck visits are provided in the following table.

	Broiler farm (5.6 batches / annum) 400,000 birds	
Function	**Visits / batch**	**Visits / annum**
Day Old Chicks	8	44
Gas Deliveries	4	22
Litter In	16	90
Litter out	24	134
Feed deliveries	58	325
Bird pick ups	62	347
Total	172	962

'Maintenance Vehicles' – Maintenance and service vehicles will be required to attend the site on an infrequent basis and as such cannot be readily quantified.

It is anticipated that up to approximately 962 trucks per year will be required to service the farm. This equates to about 19 truck visits per week. Most of the trucks picking up the mature birds will normally arrive at and depart the farm between early evening and about 7.00 am. These night time visits make up about 36% of all truck visits. The remaining vehicles visiting the farm will normally do so during daylight hours.

Trucks will access the site from the Rosedale - Longford Road via the Princes Highway at Rosedale.

4.5 SCREEN PLANTING & LANDSCAPING

The sheds will be located 1120 metres from Rosedale - Longford Road and 286 metres from Farrell Lane. The proposed landscaping and the distance of the sheds from roads and neighbouring dwellings reduces the visual impact of the proposal on the locality and nearby residences.

Landscaping will be undertaken on the site as shown on Figure 4 – Farm Layout and the accompanying landscape plan. The landscape buffer will also be located along the Rosedale – Longford Road frontage as part of the development of Farm 2.

This screen planting is proposed to consist of selected indigenous native trees and shrubs to create an upper and lower story screen. The species chosen are derived

from EVC 3 – Damp Sands Herb-rich Woodland, EVC 53 – Swamp Scrub, EVC 55 – Plains Grassy Woodland and EVC 132 – Plains Grassland. These EVC's are all represented on the subject land.

The estimated cost of undertaking the landscaping is provided in Appendix 5.

4.6 STORMWATER MANAGEMENT

The sheds are fully enclosed with the concrete floors raised above surrounding surface levels, thus prohibiting any stormwater entering the sheds.

Stormwater flows that do not emanate from the shed complex area will be diverted around the area and discharged to pastures as is the current situation.

External to the proposed chicken sheds, stormwater from the roofs of the sheds, hardstand areas, access roads and the immediate vicinity of the sheds will be directed via table drains into the new dam to be located towards the north of the shed complex.

The proposed dam will have two functions. It will act as a water supply for the birds, cooling requirements and landscape watering. Its second function is to act as a retarding basin for rainfall events of 1 in 10 year recurrence interval as prescribed by the Broiler Code. This retardation storage will be provided above an outlet pipe which will be designed to restrict the outflow rate from the dam to less than the current rate for a pastured area of the same size as the shed complex area.

Flows from the outlet pipe will be discharged to a contoured swale from where it will be dispersed to pasture consistent with current flow conditions on the property.

The stormwater management system as described ensures that there will be no increase in runoff flows over and above existing conditions and that there is no risk of contamination of these runoff flows.

Water Technology Pty Ltd have undertaken a flood impact assessment of the proposal. Their report titled *Flood Impact Assessment of a proposed Poultry Farm Expansion at Rosedale – Longford Road, Rosedale, Victoria* is presented in Appendix 6. This was undertaken to assess whether the proposed development would have any adverse flooding impacts in the area, particularly on neighbouring properties.

The conclusions of the assessment state:

"The flood modelling results and analysis presented in this report demonstrate:

- In 1% AEP event, the site and the road will be flooded to depths less than 500 mm.
- Velocities at the site are low and do not present a safety concern during a 1% AEP event.
- The site and access road has low flood hazard.

- The proposed development is unlikely to have any adverse impacts on peak flood levels or velocities and will not divert floodwater and change the current flood behaviour to the detriment of neighbouring properties.

- The proposed development should incorporate a fill pad raised above ground to the 1% AEP flood level and the floor levels set at 0.3 m above the 1% AEP flood level.

- The raised fill pad will reduce the floodplain storage. The loss of floodplain storage due to the proposed earthworks is estimated to be around 2,910 m3. As per DELWP guidelines, the amount of compensatory cut required is 3,786 m3 which was compensated by the proposed dam having a volume of 98,250 m3. The capacity of the dam is sufficient to cater the roof runoff in a 1% AEP event and loss of storage. This loss of storage has been shown to have no impact on offsite flood levels.

4.7 DWELLING

The manager's dwelling is proposed to be located to the north of the western group of sheds as shown on Figure 4 – Farm Layout. The details of the dwelling are provided on the dwelling plans presented in the Figures at the rear of this submission.

All weather access will be provided by the farm access road servicing the broiler farms. An on-site wastewater management system will be installed in accordance with the appropriate permit from Council and will be in accordance with the requirements of the Environment Protection Regulations.

Roof runoff and tank storage will provide the potable water for the dwelling. Water for firefighting purposes can be supplied from the retention dam. The dwelling will be connected to the reticulated electricity supply servicing the farm.

5 THE VICTORIAN CODE FOR BROILER FARMS 2009

The Victorian Code for Broiler Farms 2009 (the Code) is an Incorporated Document in the planning scheme. A definition of Broiler Farming is included in the planning scheme and a Broiler Farming Policy is contained within the Planning Policy Framework as a policy document.

The Code adopts the following terms:

Boundary setback: *the fixed setback of at least 100 metres required between the nearest external edge of any new broiler shed (or litter stockpile /compost pile) and the broiler farm boundary.*

Boundary setbacks mitigate visual amenity issues, and the immediate impact of odour dust and noise emissions from broiler sheds on the amenity of the surrounding area.

Separation distance: *the distance from the nearest external edge of the new or existing broiler shed to the nearest external edge of the sensitive use (that is, the nearest external edge of the house) on land beyond the broiler farm property. It excludes sensitive uses directly associated with the broiler farm operations e.g. dwellings on the broiler farm property.*

The separation distance is required to minimise the risk of routine and abnormal odour and dust emissions from the broiler sheds adversely impacting on nearby sensitive uses.

The Code has four categories of poultry farm permit applications based upon whether the boundary setback and separation distance requirements can be met. The farm classes are defined as follows:

Class A farm: *A broiler farm is classified as Class A if all of the following apply:*

- *The farm capacity is less than or equal to 400,000 birds*
- *The minimum separation distance requirement is fully contained within the broiler farm boundary.*

Class A farms are exempt from third party notification and appeal rights under the *Planning and Environment Act 1987.*

Class B farm: *A broiler farm is classified as Class B if all of the following apply:*

- *The farm capacity is less than or equal to 400,000 birds*
- *The development can meet the minimum separation distance requirement but this distance is not fully contained within the broiler farm boundary.*

The separation distance is calculated in accordance with the formula at page 18 of the Code. In the case of a 400,000 bird farm, the required separation distance is 686 metres.

Third party notification and appeal rights apply to Class B farms.

Special Class farm: *A broiler farm is classified as Special Class if any of the following apply:*

- *The farm capacity is greater than 400,000 birds, or*
- *The development is unable to meet the separation distance requirement but a reduction in the separation distance is warranted through the adoption of odour reduction technology on farm.*

An Odour Environmental Risk Assessment (Odour ERA) must be completed in accordance with Section 6 of the Code and notification of the application must be given to the EPA.

Farm Cluster: *A broiler farm is classified as a Farm Cluster (or part of a farm cluster) if all of the following apply:*

- *the minimum separation distance requirement(as defined by Formula 1) overlaps with the minimum separation distance requirement of any existing broiler farm, a broiler farm approved by a planning permit or a proposed broiler farm that is the subject of a permit application that has been lodged with the responsible authority*
- *The combined farm capacity of the broiler farms with overlapping minimum separation distances (as defined by Formula 1) is greater than 400,000 birds.*

An Odour Environmental Risk Assessment (OERA) must be completed in accordance with Section 6 of the Code and notification of the application must be given to the EPA.

The Code contains six best practice elements of broiler farm siting, design and operation against which all applications are to be assessed. These are:

PART 1 Location, farm size and setback requirements

Element 1 (E1): Location, siting and size

PART 2 Farm design

Element 2 (E2): Farm Design, Layout and Construction

Element 3 (E3): Traffic, site access, on farm roads and parking

Element 4 (E4): Landscaping

Element 5 (E5): Waste Management

PART 3 Farm operation and management

Element 6 (E6) Farm operation and management

The Code defines Objectives, Standards and Approved Measures for each of the elements as follows:

Objectives: *An objective describes the desired outcome to be achieved from the completed development and operation of the broiler farm. All permit applications must satisfy the objectives for each element.*

Standards: *A standard contains the requirements to meet the objective. In most cases, a standard is expressed as a design or operational requirement. All permit applications must comply with all relevant standards.*

Approved measures: *An approved measure is an approach, action, practice or method that permit applicants should incorporate into their development proposal to comply with the standard. Where the development proposal adopts all the approved measures for a standard, the application is deemed to comply with the standard.*

Alternative measures: *Development proposals will usually meet an approved measure. Circumstances of a particular development proposal may however provide a need or an opportunity to propose alternative ways of meeting the objectives and standards. The responsible authority may consider an alternative measure if the applicant can demonstrate that the relevant Code objectives and standards can still be met with equivalent or superior performance. Responsible authorities should consider development proposals that include new technology and innovative approaches if these can be demonstrated to satisfy Code requirements.*

All broiler farm planning permit applications (regardless of the farm classification) are required to meet the objectives and standards of the 6 Elements of this Code.

Approved measures are approaches deemed to comply with a standard. They are not mandatory. A permit application may propose an alternative measure(s) as long as the applicant can demonstrate to the responsible authority's satisfaction that the relevant Code objectives and standards can still be met with equivalent or superior performance.

Comment:

The subject application is for a 400,000 bird conventional broiler farm. The farm will be contracted to grow chickens for Inghams Enterprises.

The Code's required setback and separation distances are identified in the following table.

400,000 Bird Farm	Required (metres)	Proposed (metres)
Boundary setback	100	210
Separation distance	686	Part of farm cluster

The prescribed separation distance for this 400,000 farm (686 metres) overlaps with the prescribed separation distance for the existing broiler farm to the north west and the approved broiler fam permitted by Planning Permit No. P185.2019 on land to the north. Therefore, the farm is classified as being part of a farm cluster. An OERA must be submitted with the permit application.

The siting and design of the farm complies with the approved measures and hence the standards and objectives of the Code.

Assessment of the proposal against the requirements of the Code is provided in Appendix 7. This includes a table showing compliance with all of the approved measures contained within the Code. As a consequence of compliance with the measures, the proposal is deemed to comply with the required standards and objectives of the Code. This in turn achieves the appropriate protection from any potential adverse impacts on amenity.

5.1 ODOUR ENVIRONMENTAL RISK ASSESSMENT (OERA)

Pollock Environmental Consulting Pty Ltd in conjunction with Air Environment Consulting Pty Ltd has undertaken odour impact modelling and an Odour Environmental Risk Assessment (OERA) of the proposed farm (Farm 3), as well as the existing farm (Farm 1) to the north west and the approved farm (Farm 2) to the north. The results of this modelling and OERA are presented in the report titled *Odour Impact Assessment – Rosedale East Broiler Farm* (March 2022) contained within Appendix 8 (OERA report).

Farm 1 comprises 8 sheds and is permitted to house 400,000 birds, with 50,000 birds in each shed. However, the RSPCA density standards require that only 44,444 birds are housed in each shed. Therefore, the total farm capacity is restricted to 355,552 birds. This farm is to have stub stacks fitted to the duty fans prior to the placement of birds on Farm 2).

Farm 2 will consist of 9 sheds, each housing 44,444 birds with a total capacity of 400,000 birds. This farm will have stub stacks fitted to the duty fans prior to commencement.

The odour modelling was undertaken on the basis two scenarios. Scenario 1 modelled Farms 1 and 2. Scenario 2 modelled Farms 1, 2 and 3. Modelling was undertaken on the basis that stub stacks are fitted to the duty fans on all sheds on all

farms for night time ventilation. Also, all sheds would have a maximum stocking capacity of 44,444 birds in accordance with RSPCA stocking densities.

The odour impact assessments were undertaken based on EPA's approved regulatory AERMOD dispersion modelling. The OERA provided for both scenarios is based on the methodology outlined in EPA Victoria's guideline *Odour Environmental Risk Assessment for Victorian Broiler Farms (Publication 1643, January 2017)* [OERA guideline].

Stage 1 of the risk assessment requires the use of air dispersion modelling to determine whether the proposal is compliant with the criterion for odour of five Odour Units (OU), 3 minute averaging, at the 99.9th percentile at the property boundary. The modelling found that both scenarios will not be compliant with this criterion. (Note: Experience has demonstrated that, except for extremely large properties, broiler farms of the size proposed will not meet the 5 OU criterion.)

A second stage assessment (OERA) is required where the criterion cannot be met beyond the property boundaries. This assesses the level of odour risk likely to be experienced at nearby sensitive receptor locations.

The OERA guideline categorises risk as follows:

> *Low risk* – means the proposed development is unlikely to create adverse odour amenity problems.
>
> *Medium risk* – means the proposed development may create some adverse odour amenity problems. (The guideline states that with "*... good environmental management planning, contingency planning and engagement with neighbours, a responsible authority may support proposals assessed as medium risk on the basis that actual odour impacts will be quickly dealt with*".)
>
> *High risk* – means that adverse odour amenity problems are likely to arise as a result of the proposed farm.

Air Environment in their modelling report (Appendix A in OERA report) comment at page 19 that the OERA guideline is significantly more stringent than the separation distances specified in the Broiler Code. This issue and the implications that follow was addressed in a Position Paper prepared by GHD (GHD 2013) for the Victorian Chicken Meat Council as part of stakeholder review of the proposed OERA guideline. The GHD report is presented in Appendix 9.

As part of the OERA, eight (8) residences were identified in proximity to the farms as shown in Figure 2 of the OERA report. The peak odour impacts at each were examined for both Scenario 1 (existing and approved farms) and Scenario 2 (existing, approved and proposed farms). A risk assessment was then conducted for both scenarios.

An explanation of the terminology used in the odour modelling and OERA is given in the following table.

Terminology	Explanation
Odour Unit	The detectability of an odour is a sensory property that refers to the theoretical minimum concentration that produces an olfactory response or sensation. This point is called the odour threshold and defines one odour unit (OU). (Source: Department of Environment and Conservation NSW, 2006, Technical notes — Assessment of odour from stationary sources in NSW, November 2006. p. 4) An odour at a concentration of one odour unit, measured by an odour panel within an odour laboratory (where the laboratory airspace is odourless), would not be perceivable in the ambient air environment.
Odour Intensity	Odour intensity is the perceived strength of an odour. It is described in categories which progress from "not perceptible", then "very weak", then "weak", through to "extremely strong". For broiler farms, with odour concentrations below 2.5 OU, the perceived odour intensity is considered to be "very weak" and below 7.0 OU it is considered to be "weak". (Source: Department of Environmental Protection WA, 2002, Odour Methodology Guideline, p. 3). The relationship between odour concentration and perceived intensity is logarithmic rather than linear. An odour level needs to more than double (or halve) before the perceived odour intensity is registered to have increased (or decreased). It is widely accepted that in the outdoor ambient air, a given odorant blend needs to exceed 2 to 3 OU before it can be recognised from the background ambient palette of odour (typically ranging from 2 to 9 OU). (Source: Pollock, T. & Asimakis, M, 2017. Odour environmental risk assessment as applied to the broiler industry. CASANZ 2017 Conference, Brisbane)
3-min averaging & 99.9 percentile	An atmospheric dispersion model produces one-hour average odour predictions at ground level for each hour of the year. There are 8760 predictions made at each model grid point, one for each hour of the year-long simulation. The 99.9th percentile value for a grid point represents the 9th highest prediction experienced throughout the year for that location. The peak three-minute average predictions are derived from the dispersion modelling. These provide an estimate of the odour concentration during the 'worst' of the 20 three-minute periods occurring during any given hour. These short-term fluctuations in odour level are due to atmospheric turbulence, and for a 3-minute average, the accepted ratio of 3-minute peak to I hour average is 1.82:1.
Odour event	An odour event is any hour in which the modelling predicts an odour to occur. An incidence of odour may occur for a few seconds or may continue for a longer period. The odour concentration reported is that for the 3-minute period with the highest odour concentration in the hour in which odour is predicted to occurs. If an odour persists for multiple hours, then the highest 3-minute period in each hour would be identified and each hour counted as an event (Odour persisting for 2 hours would be treated as two separate odour events).

Terminology	Explanation
Intensity classification	• *Not Perceptible* – Applies to areas where predicted maximum odour concentrations are less than 0.9 OU. • *Very Weak* – Applies to areas where predicted maximum odour concentrations are between 0.9 OU and 2.5 OU. • *Weak* – Applies to areas where predicted maximum odour concentrations are between 2.5 OU and 7 OU. • *Moderate* – Applies to areas where predicted maximum odour concentrations are between 7 OU and 19 OU. • *Strong* – Applies to areas where predicted maximum odour concentrations are between 19 OU and 52 OU.
Risk categories	Low risk equates to: • 10 – 44 odour events per year in the range of 1 – 5 OU Medium Risk equates to: • 10 – 44 odour events per year in the range of 6 – 9 OU, or • 45 or more odour events per year in the range of 1 – 5 OU, High Risk equates to: • 10 – 44 odour events per year of greater than 10 OU, or • 45 or more odour events per year of greater than 6 OU,

5.1.1 Scenario 1 – odour impact assessment

The predicted odour concentrations for Scenario 1 are shown in Figure 4 of the OERA report and presented in Table 1. The 5 OU isopleth is centred over the farm and extends beyond the property boundary to the north and east. No sensitive receptors are predicted to experience odour concentrations at or above the 5 OU criterion.

5.1.2 Scenario 1 – odour environment risk assessment

The results of the OERA are shown in Figure 6. Residences R3 and R4 fall within the low risk category, while the remaining receptors are within a medium level of risk. The area of medium risk approaches the Rosedale township, but does not impact on it.

5.1.3 Scenario 2 – odour impact assessment

The predicted odour concentrations for Scenario 2 are provided in Figure 5 of the OERA report and presented in Table 1. The 5 OU isopleth is larger in extent than Scenario 1 and extends beyond the property boundary. No sensitive receptors are predicted to experience odour concentrations at or above the 5 OU criterion. The

maximum predicted peak odour concentration is 3.9 OU at Receptor 5 (R5). The 2 OU isopleth approaches the edge of the Rosedale township but does not impact on it.

5.1.4 Scenario 2 – odour environment risk assessment

The results of the OERA are shown in Figure 7. The risk ratings for each receptor remains the same as for Scenario 1. Residences R3 and R4 fall within the low risk category, while the remaining receptors are within a medium level of risk. The area of medium risk is elongated and just encroaches over the eastern edge of the Rosedale township.

5.1.5 Perceived odour intensity

Odour intensity is the perceived strength of an odour. It is described in categories which progress from "not perceptible", then "very weak", then "weak", through to "extremely strong". The relationship between odour concentration and perceived odour intensity is specific for each type of odour. This is discussed in Section 6.1 of the Air Environment report. For broiler farms, Table 8-1 indicates that for odour concentrations below 2.5 OU, the perceived odour intensity is considered to be "very weak" and below 7.0 OU it is considered to be "weak".

The perceived odour intensities for Scenario 1 are shown in Figure 1, while those for Scenario 2 are presented in Figure 2.

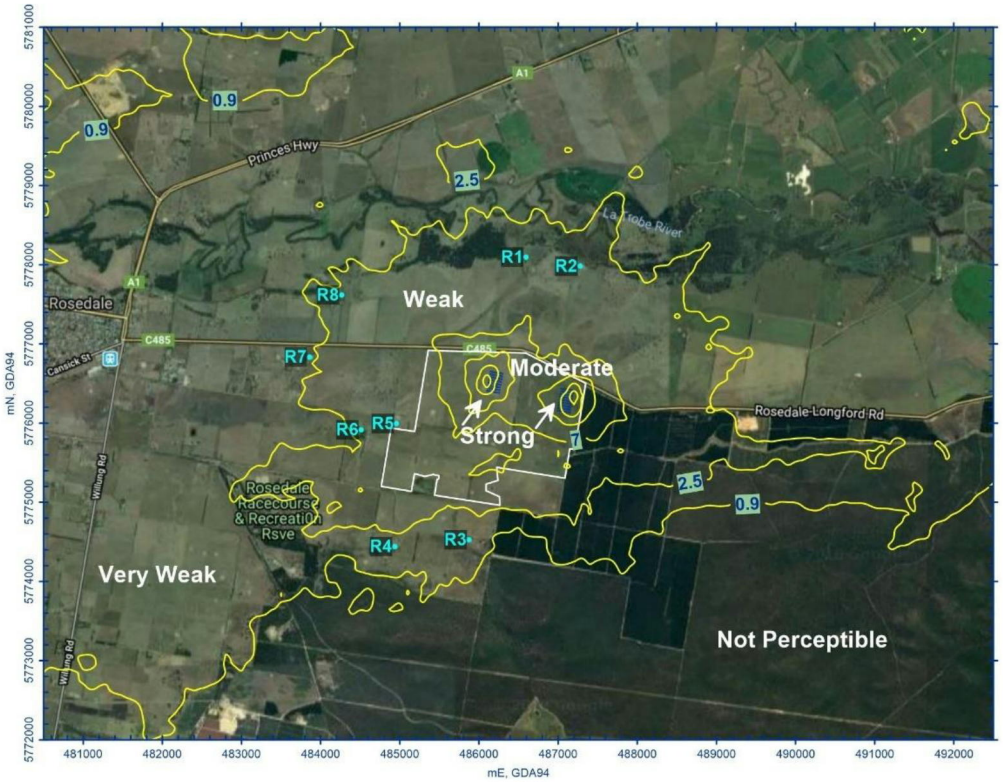

Figure 1 – Scenario 1 Perceived Odour Intensity (3 min average 99.9th percentile)

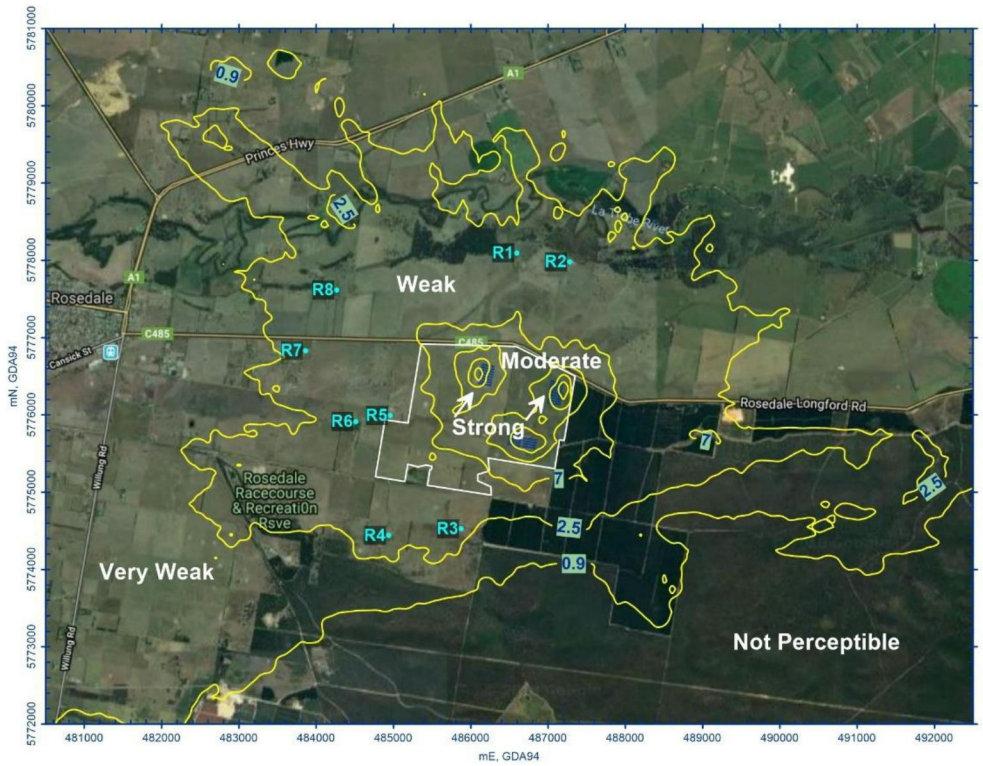

Figure 2 – Scenario 2 Perceived Odour Intensity (3 min average 99.9th percentile)

When the Scenario 1 perceived peak odour intensity results shown in Table 8-2 in the Air Environment report are compared with those for Scenario 2 in Table 8-3, it is evident that the addition of the proposed farm does not change the perceived odour intensity experienced at sensitive receptors R1, R2, R5, R6 and R8. These remain weak. The perceived odour intensity experienced at sensitive receptors R3, R4 and R7 changes from the very weak category to the weak category. This comparison is also evident in the preceding Figures 1 and 2.

5.1.6 OERA conclusions

The results of the odour modelling and Odour Environmental Risk Assessment are summarised in the table below.

	Scenario 1			Scenario 2		
Location	**Peak Odour Conc (OU)**	**Perceived Odour Intensity**	**Risk Level**	**Peak Odour Conc (OU)**	**Perceived Odour Intensity**	**Risk Level**
R1	3.4	Weak	Medium	3.1	Weak	Medium
R2	3.4	Weak	Medium	3.4	Weak	Medium
R3	1.7	Very Weak	Low	3.4	Weak	Low
R4	1.3	Very Weak	Low	3.0	Weak	Low
R5	3.0	Weak	Medium	3.9	Weak	Medium
R6	3.2	Weak	Medium	3.6	Weak	Medium
R7	2.4	Very Weak	Medium	2.9	Weak	Medium
R8	2.8	Weak	Medium	3.4	Weak	Medium
Rosedale Township	< 2.0	Very Weak	Low	< 2.0	Very Weak	Low

Despite the increase in predicted peak odour concentration at each receptor location, the perceived odour intensity remains weak and the risk level remains unchanged at each receptor with the addition of the proposed farm module.

While, according to the EPA's OERA guideline, the area of medium risk for Scenario 2 encroaches to the edge of the Rosedale township area (Figure 8-4), the peak odour concentration is below 2 OU (Figure 8-3) and therefore the perceived odour intensity experienced is very weak. Residents may occasionally experience a very weak odour but are unlikely to be able to differentiate this from ambient odours. It is widely accepted that in the outdoor ambient environment, a given odorant blend needs to exceed 2 to 3 OU before it can be recognised from the background ambient palette of odour (typically ranging from 2 to 9 OU).

The OERA demonstrates that the proposed new farm presents minimal additional risk to disamenity due to odour at all sensitive receptors (residences) in the vicinity of the proposed farm.

6 PLANNING CONSIDERATIONS

The following is a review of planning issues that may be associated with the proposed use and development.

Any proposal involving a broiler farm must be assessed against the Broiler Code.

6.1 VICTORIAN CODE FOR BROILER FARMS 2009

The Broiler Code requires the consideration of an application against the elements of the Code, namely:

Element 1 (E1): Location, siting and size

Element 2 (E2): Farm Design, Layout and Construction

Element 3 (E3): Traffic, site access, on farm roads and parking

Element 4 (E4): Landscaping

Element 5 (E5): Waste Management

Element 6 (E6) Farm operation and management

A detailed assessment of the application against the Victorian Code for Broiler Farms 2009 is presented in Appendix 7.

Consideration of the various elements of the Broiler Code is discussed below.

6.2 LOCATION, SITING AND SIZE

6.2.1 Amenity protection

The Code uses three interrelated requirements to avoid negative impacts from odour, dust, noise, light spill and visual amenity. These are:

- The provision of the **boundary setback** (the distance between the broiler sheds and the farm property boundary)
- The provision of the **separation distance** (the distance between the broiler sheds and existing or potential sensitive uses)
- The utilization of **best practice** in the design, siting, operation and management of the broiler farm. This includes the implementation of an approved environmental management plan (EMP).

The proposed Farm 3 has been sited in accordance with the requirements of the Victorian Code for Broiler Farms 2009 for a 400,000 bird farm. The proposed farm complies with the specified minimum boundary setback of 100 metres.

In the absence of Farms 1 and 2, the specified separation distance for a 400,000 bird farm would be 686 metres. This requirement would be met by the proposed farm. However, this distance overlaps with the separation distance for Farms 1 and 2 and therefore the Code categorises the farm as part of a Farm Cluster. Consequently, an OERA must be undertaken to demonstrate that there are adequate separation distances to the nearest sensitive uses.

Air Environment Consulting Pty Ltd has undertaken an OERA for the farm. The OERA demonstrates that the proposed new farm presents minimal additional risk to disamenity due to odour at all sensitive receptors (residences) in the vicinity of the proposed farm.

The siting of the sheds and associated infrastructure on the allotment ensures that they are adequately separated from existing and planned residential and rural living areas, sensitive uses and the chicken farm property boundaries.

The operation of the farm will be conducted in accordance with the approved EMP.

Consequently, there will be minimal, if any, adverse impacts on the surrounding area, as the three interrelated requirements of the Code are satisfied.

6.2.2 Waterway protection

There are no designated waterways in the vicinity of the proposed sheds. There are 1% AEP flow paths running to the north east and south of the proposed sheds site.

All drainage from the sheds and their environs will be directed into the new retarding dam to be located to the north of the sheds. This is consistent with the requirements of the Broiler Code. It will ensure that flows leaving the development site will not exceed that from the undeveloped site.

The flood impact assessment undertaken by Water Technology (Appendix 6) concluded that the proposed development is unlikely to have any adverse impacts on peak flood levels or velocities and will not divert floodwater and change the current flood behaviour to the detriment of neighbouring properties.

6.2.3 Protecting the visual quality of the landscape

The broiler sheds and associated infrastructure will be screened by a landscape buffer of trees and shrubs along the Rosedale – Longford Road frontage, as well as the landscaping to be provided by Farms 1 and 2. The forestry plantations on the eastern side of Farrell Lane will provide screening from the east. The buffers are shown on Figures 3 and 4 and the accompanying landscape plan. These will provide effective upper and lower screening of the buildings and works as they mature and minimise their visual impact on the landscape.

The proposed sheds are located a minimum of 920 metres to the south of the Rosedale – Longford Road. Views from the road will be substantially screened by the landscape buffers to be planted along the boundary and around all 3 farms. The setback from the road will diminish any views. Apart from the road, the sheds are remote from any areas frequently accessed by the general public. Any potential views of the sheds from external publicly accessed areas will be from substantial distances away which will mitigate these views.

The visual qualities of the landscape will be minimally impacted by the proposed sheds and infrastructure.

6.2.4 Biosecurity

The proposed farm is setback from Farm 1 to the north west by 630 metres and Farm 2 to the north by 525 metres. All 3 farms will be contracted to Inghams Enterprises. They have a biosecurity guideline that farms in the same ownership be separated by 500 metres. This setback distance is complied with.

Therefore, there is minimal risk of disease transmission arising from the proposed farm.

6.2.5 Future use and development of neighbouring land

The OERA demonstrates that the proposed new farm presents minimal additional risk to disamenity due to odour in the vicinity of the proposed farm. The subject land is located in a broadscale rural area with minimal development potential.

There will be no adverse impact on the orderly and sustainable use of adjoining land.

6.3 FARM DESIGN, LAYOUT AND CONSTRUCTION

6.3.1 Protecting the visual quality of the landscape

Section 6.2.3 discusses the visual impact of the proposed farm. The setbacks, proposed landscape buffer, landscaping to the west and the nearby forestry plantations will minimise the farm's visual impact on the landscape.

6.3.2 Efficient farm operation

The farm has been designed to maximise the efficiency of farm operations and provide environmental and amenity protection. This is assessed in Appendix 7. The proposed sheds are "state of the art" environmentally controlled minimum ventilation tunnel vent sheds.

The operation of the chicken sheds will be in accordance with the requirements of the Victorian Code for Broiler Farms 2009. The use of dripless drinking nipples to minimise water spillage, the regular removal and replacement of the litter, stringent vermin control and the removal of dead and diseased birds will ensure that the sheds are operated in a safe and efficient manner. This will minimise the potential for any odour or vermin issues to arise from the farm.

6.3.3 Avoiding environmental impacts from chicken sheds

The shed floors will be made of concrete, making them impermeable. They will have their finished levels approximately 0.6 m above the level of the drains running between the sheds. This will ensure that nutrients will not leach into the soil.

6.3.4 Noise management

It is submitted that there will be no adverse noise impact from the operation of the farm upon the residents of the nearby properties. The minimum ventilation tunnel vent type sheds are inherently low noise generators. The proposed sheds have substantial separation distances to the nearest sensitive uses.

Mechanical equipment will be located substantial distances away from the nearest sensitive uses. The operation of the farm should meet the requirements of the Environment Protection Authority's Noise Protocols.

The joint farm access point is located to the north of Farm 1. This location and the farm access road are located well away from sensitive uses. This will ensure that noise impacts from vehicles on neighbouring properties will be negligible.

6.3.5 Stormwater drainage

Stormwater is prevented from entering the sheds because the sheds will have concrete floors and be built on compacted clay pads with the finished levels being at least 0.6 m above the level of the adjacent drains. Further protection will be obtained from the dwarf concrete walls.

Stormwater will not come into contact with waste materials. Any spills of waste materials will be promptly cleaned up in accordance with the Environmental Management Plan. All surface water flows will be directed via table drains to the proposed new retarding dam.

Stormwater flows that do not emanate from the shed complex area will be diverted around the area over the pastures as is the current situation. The flood impact assessment report (Appendix 6) shows that the impact of the proposed development on floodplain storage is localised, changes in flood depth and flood velocity are negligible and are not likely to impact the surrounding properties.

The topography of the subject land is relatively flat and thus the risk of soil erosion is low. All areas disturbed by earthworks will be revegetated as soon as practical upon completion.

6.4 TRAFFIC, SITE ACCESS, ONFARM ROADS AND PARKING

6.4.1 Site access

The intersection of the joint farms' access road and the Rosedale - Longford Road is being constructed to ensure the easy movement of B-Double trucks. Any farm gate

on the access road will be setback at least 40 metres which ensures ample off-road parking is available for articulated vehicles. The access point and farm access road will be constructed to enable all-weather access.

The functional layout for the intersection is shown in Appendix B of the Traffic Engineering Assessment prepared by the Traffix Group which is presented in Appendix 4 of this submission. A rural basic left turn treatment and a rural basic right turn treatment will be provided on the Rosedale - Longford Road at the intersection.

The proposed farm access point is located some 1,240 metres from the nearest off-site dwelling. Therefore, there will be negligible noise and vehicle light impacts on existing sensitive uses.

6.4.2 Internal roads and car parking

All access roads and hard standing areas will be designed and constructed to operate in all weather conditions. Ample areas for vehicle parking are provided on the hard stand areas adjacent to the machinery and amenities buildings. This is shown on Figure 4 – Farm Layout. The ring road around the sheds complex ensures efficient traffic flow and provides easy access to all areas for articulated vehicles.

Given the baffled lighting, large setbacks from the site boundaries and landscape buffers, lighting will not spill beyond the site boundaries.

6.5 LANDSCAPING

6.5.1 Landscaping

A landscape buffer is to be established along the Rosedale – Longford Road frontage to provide effective screening of the 3 farms and associated infrastructure. Figure 4 – Farm Layout and accompanying landscape plan show the location of the landscape buffer proposed for the subject farm. The plans demonstrate that there will be adequate access and clearance around the sheds.

The landscape buffer will consist of a mix of indigenous trees and shrubs suited to the local area to ensure effective upper and lower screening of the sheds complex. It will be consistent with the landscaping to be undertaken around Farms 1 and 2.

6.6 WASTE MANAGEMENT

6.6.1 Spent litter

The spent litter removed from the sheds will be taken off-site. There will be no spreading of the used litter on the property. This approach ensures no potential for odour and dust generation. It also ensures no nutrient loaded run-off to surrounding land, waterways or ground water.

6.6.2 Dead birds

Dead birds will be collected daily and placed in freezers within the machinery shed. A contractor will remove the frozen dead birds off-site as required. This approach minimises the likelihood of disease transmission and minimises odour generation.

6.6.3 Chemical waste

The storage of chemicals and chemical waste will be undertaken within an enclosed section of the machinery shed in accordance with the requirements outlined in the relevant safety data sheets for the chemical.

6.7 FARM OPERATION AND MANAGEMENT (EMP)

The proposed farm will be operated in accordance with an approved environmental management plan (EMP).

The EMP for the proposed farm accompanies this submission. It has been tailored to meet the subject farm's characteristics.

6.8 SOCIAL AND ECONOMIC BENEFITS

It is submitted that the proposed use and development will provide positive social and economic effects to the surrounding area and the community. This will primarily be seen via increased productivity from the land, increased direct and indirect employment, increased economic activity in the area and the provision of competitively priced food for the community.

6.8.1 Productivity

The proposed sheds and infrastructure will take up an area of approximately 20 hectares. Thus 20 hectares will be transferred from grazing production to chicken production. Given the intensive nature of chicken meat production, the economic return from the 20 hectares will be much greater than that that can be achieved from beef production. Chicken meat income is based on the contracted growing fee. It will also be steady and consistent, unlike the returns from beef which are subject to inherent variability caused by factors such as fluctuating market prices and climatic variability.

Beef production:

The Livestock Farm Monitor Project is a publication funded by Agriculture Victoria which provides data on the productivity and profitability of sheep and beef farming in Victoria. The latest edition (FY 2020 - 21) reports the gross beef income for the surveyed farms in the Gippsland area at $1,228 / Ha

This figure results in a gross return from 20 hectares of some $24,560.

Chicken meat production:

The gross return from chicken meat production is based on the contracted growing fee, the number of birds grown and feed conversion. The growing fee can vary somewhat between growers but is approximately $1.00 per bird.

Mortalities during a batch are approximately 4%. So therefore, out of 400,000 birds placed, some 384,000 will be harvested at maturity. Assuming 5.6 batches per annum, the proposed farm can be expected to produce some 2,150,400 birds per annum.

Therefore, the gross return from the 20 hectares upon which the farm is located will equate to approximately $2,150,000 (2,150,400 x $1.00).

While the foregoing figures are a snapshot and are generalised figures, it is obvious that the gross return from chicken meat production will be substantially greater that from beef farming on the same 20 hectares of land.

6.8.2 Employment

The proposed 400,000 bird farm will create direct employment for an equivalent of two full time staff, some part-time staff and some casual employment.

The farm will also generate indirect employment in industries and sectors of the economy which support and service broiler farms. There is also the potential to generate further jobs in value added processing of chicken meat.

The Victorian Chicken Meat Council Incorporated (VCMC) has published a report titled "*Chicken Meat Industry Strategic Plan 2025 for Victoria*" (February 2015). This report identified that each new chicken farm shed is likely to generate some 5.4 full time equivalent (FTE) indirect jobs in supporting industries such as transport, processing, hatcheries, marketing, etc.

Based on the above, the proposed 9 shed farm is likely to lead to the generation of some 48 FTE indirect jobs.

6.9.3 Local economic activity

The proposed farm will result in increased economic activity for businesses and individuals that provide services to, or work on the chicken farm. Typically, these will include:

- Trades such as electricians and plumbers
- Mechanics, auto electricians, etc.
- Litter removal contractors
- Shed sanitation contractors
- Suppliers of gas
- New litter transport
- Bird collection crews
- Hardware & building supply businesses

Increased economic activity leads to improved standards of living and thus social benefits for individuals employed in these businesses and services.

This increased economic activity and social benefits would not occur if the 20 hectares continue to be used for grazing.

6.9.4 Competitively priced food

The VCMC Strategic Plan identifies that Australian and Victorian chicken meat production has increased steadily for more than 50 years. Consumption of poultry (of which chicken meat makes up about 96%) in 2014 was 44.1 kg per person per year. This compares to consumption of approximately 4.4 kg per person per year in 1960. Chicken meat consumption is growing annually by about 4%.

The Strategy report states that the Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES):

> *"predicts that chicken meat will maintain its number one position as the most consumed meat in the country. An ABARES outlook report singles out the competitive pricing of chicken meat as the main factor, noting that over the past five years to 2012 – 13, chicken was on average 21 per cent cheaper than pork, 22 per cent cheaper than beef, and 45 per cent cheaper than lamb."*

The ability to provide competitively priced food such as chicken is a social benefit to the community. The ability to use the subject land for the proposed chicken meat farm strengthens this benefit.

It is worthwhile noting that in a recent decision of the Victorian Civil and Administrative Tribunal [*Vukadinovic v Mount Alexander SC (No.6) (2016)]*, Senior Member Byard, when commenting on agricultural productivity, stated the following:

> *"The proposed use, buildings and works associated with the proposed broiler farms apply to only a tiny percentage of the total area concerned. Something in the order of 96% will continue to be as available as it ever was for productive agricultural activities such as grazing and cropping. As to the remaining 4%, far from depleting the agricultural capacity of that part of the land, the proposals would intensify the productive agricultural capacity of the land enormously."*

7 PLANNING POLICIES AND CONTROLS

7.1 DEFINITIONS

A **broiler farm** is defined as:

> *"Land used to keep broiler chickens for the production of meat."*

It is included in the **Poultry farm** definition which is:

> *"Land used to keep or breed poultry."*

7.2 ZONING CONTROLS – FARMING ZONE (CLAUSE 35.07)

The site is zoned **FARMING ZONE** (Clause 35.07) pursuant to the Wellington Planning Scheme. The zoning plan for the area is presented in the Planning Property report in Appendix 10.

The purpose of the Farming Zone is stated as follows:

> *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
>
> *To provide for the use of land for agriculture.*
>
> *To encourage the retention of productive agricultural land.*
>
> *To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.*
>
> *To encourage the retention of employment and population to support rural communities.*
>
> *To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.*
>
> *To provide for the use and development of land for the specific purposes identified in a schedule to this zone*

7.2.1 Use (Clause 35.07-1)

A Broiler farm is a Section 2 or 'permit required' use. An accompanying condition requires that a farm "Must meet the requirements on Clause 53.09".

A dwelling is a Section 2 use if it is on a lot smaller than 40 ha. In this instance, the proposed dwelling is to be located on Lot 2 LP141161, which is 36.15 ha, and therefore a planning permit is required for the use.

7.2.2 Buildings and Works (Clause 35.07-4)

A permit is required for any buildings and works associated with a Section 2 Use.

7.2.3 Decision Guidelines (Clause 35.07-6)

The decision guidelines for this clause are found at Clause 35.07-6.

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

	Comment
General issues	
The Municipal Planning Strategy and the Planning Policy Framework.	Conformity with The Municipal Planning Strategy and the Planning Policy Framework is demonstrated in Sections 7.4 and 7.5 of this submission.
Any Regional Catchment Strategy and associated plan applying to the land.	The proposal will not give rise to contaminated runoff. Storm water will be directed into the proposed retention dam. Spent litter from the farm will not be spread on the property. Therefore, the proposal will not impact on water quantity and quality in the catchment. The flood impact assessment undertaken by Water Technology (presented in Appendix 6) demonstrates that the proposal will not alter the flooding characteristics of neighbouring properties. The proposal is consistent with the West Gippsland Regional Catchment Strategy 2013-2019.
The capability of the land to accommodate the proposed use or development including the disposal of effluent.	The subject land has the physical capability to accommodate the proposal. The proposed sheds and infrastructure occupy only a small part of the property. The use does not generate wastewater. Effluent from the dwelling and amenities building will be treated in a septic tank in accordance with Council approval.
How the use or development relates to sustainable land management.	The land will continue to be used in a sustainable manner for grazing as well as supporting the proposed broiler operations.
Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.	Section 6 of this submission demonstrates that the site is suitable for the use and development and the proposal is compatible with adjoining and nearby land uses.
How the use and development makes use of existing infrastructure and services.	The proposal will utilise the existing main road network and regional power supply.

	Comment (cont)
Agricultural issues and the impacts from non-agricultural uses	
Whether the use or development will support and enhance agricultural production.	The proposal will enhance agricultural production by establishing a highly productive enterprise while having minimal impact on the traditional grazing production.
Whether the use or development will adversely affect soil quality or permanently remove land from agricultural production.	The proposed sheds and infrastructure occupy only a very small part of the property. It will have no impact on the surrounding soil quality and minimal impact on the traditional farming production.
The potential for the use or development to limit the operation and expansion of adjoining and nearby agricultural uses.	Section 6 of this submission demonstrates that the use and development proposed will not have an adverse impact on surrounding land uses.
The capacity of the site to sustain the agricultural use.	The proposed sheds and infrastructure occupy only a very small part of the property, hence the site can readily sustain the proposed agricultural use.
The agricultural qualities of the land, such as soil quality, access to water and access to rural infrastructure.	The agricultural quality of the land is good. Water is available from captured runoff and, if necessary, the on-site bore. Apart from the road network and reticulated power, the proposal does not require rural infrastructure. The proposal will not detrimentally impact on rural infrastructure.
Any integrated land management plan prepared for the site.	An Environmental Management Plan for the farm has been prepared.
Whether Rural worker accommodation is necessary having regard to: • The nature and scale of the agricultural use. • The accessibility to residential areas and existing accommodation, and the remoteness of the location.	Not applicable
The duration of the use of the land for Rural worker accommodation.	Not applicable
Accommodation Issues	
Whether the dwelling will result in the loss or fragmentation of productive agricultural land.	The proposed dwelling will house the manager of the broiler farm who must reside on-site. It will support the operation of the proposed use and will not result in the loss or fragmentation of productive agricultural land.

	Comment (cont)
Whether the dwelling will be adversely affected by agricultural activities on adjacent and nearby land due to dust, noise, odour, use of chemicals and farm machinery, traffic and hours of operation.	The proposed dwelling will be used in conjunction with the proposed broiler farm. It will be surrounded by land used for grazing, forestry and 2 other broiler farms. These are compatible uses. The dwelling will not be adversely impacted by the activity on surrounding land.
Whether the dwelling will adversely affect the operation and expansion of adjoining and nearby agricultural uses.	The proposed dwelling will not adversely impact on the surrounding grazing, forestry and broiler farm land uses.
The potential for the proposal to lead to a concentration or proliferation of dwellings in the area and the impact of this on the use of the land for agriculture.	The proposed dwelling is to support the proposed broiler farm on a large property. It will not lead to a concentration or proliferation of dwellings in the area. Any future dwellings will need to be on allotment of at least 40 ha or be subject to a planning permit.
The potential for accommodation to be adversely affected by noise and shadow flicker impacts if it is located within one kilometre from the nearest title boundary of land subject to: • A permit for a wind energy facility; or • An application for a permit for a wind energy facility; or • An incorporated document approving a wind energy facility; or • A proposed wind energy facility for which an action has been taken under section 8(1), 8(2), 8(3) or 8(4) of the *Environment Effects Act 1978*.	Not applicable
The potential for accommodation to be adversely affected by vehicular traffic, noise, blasting, dust and vibration from an existing or proposed extractive industry operation if it is located within 500 metres from the nearest title boundary of land on which a work authority has been applied for or granted under the *Mineral Resources (Sustainable Development) Act 1990.*	Not applicable
Environmental issues	
The impact of the proposal on the natural physical features and resources of the area, in particular on soil and water quality.	Minimal, if any, impact

	Comment (cont)
The impact of the use or development on the flora, fauna on the site and its surrounds.	The proposal does not require removal of native vegetation or faunal habitat. Hence there will be no impact.
The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.	See above.
The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation.	The use generates minimal effluent. The dwelling and amenities effluent disposal fields will be located well clear of any waterway. There is no native vegetation in the vicinity of the shed complex.
Design and siting issues	
The need to locate buildings in one area to avoid any adverse impacts on surrounding agricultural uses and to minimise the loss of productive agricultural land.	The proposed broiler sheds and associated infrastructure are located together as shown on Figure 4 – Farm Layout. They are well setback from property boundaries and roads and occupy only a small area within the property.
The impact of the siting, design, height, bulk, colours and materials to be used, on the natural environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.	Minimal impact. The sheds are well setback and will be screened by the proposed vegetation as depicted on Figure 4 - Farm Layout and the accompanying landscape plan. The sheds themselves will be low profile (Maximum height of 4.3 metres) with mist green side and end walls. The roof will be low pitch and made from custom orb which will dull over time and minimise any reflective impacts.
The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.	Subject site is well set back from the main road. The setback and proposed landscaping mitigate any visual impacts. No features of significance exist in the immediate area.

	Comment (cont)
The location and design of existing and proposed infrastructure including roads, gas, water, drainage, telecommunications and sewerage facilities.	Truck traffic to and from the farm will utilise the Rosedale - Longford Road to access the Princes Highway. The Rosedale - Longford Road is a main rural sealed road and is capable of accommodating the traffic generated by the proposal as demonstrated in the Traffic Engineering Assessment report presented in Appendix 4. To facilitate access to the site, a rural basic left turn treatment and a rural basic right turn treatment is being provided at the intersection of the farm access road and the Rosedale - Longford Road, as shown in Appendix B of the Traffic Engineering Assessment report. There will be no other changes to external roads, nor will there be any negative impact on existing or proposed infrastructure. 3 phase power will be supplied to the subject land.
Whether the use and development will require traffic management measures.	Apart from the treatments described above, the Traffic Engineering Assessment report demonstrates that no additional traffic management measures are required.
The need to locate and design buildings used for accommodation to avoid or reduce noise and shadow flicker impacts from the operation of a wind energy facility if it is located within one kilometre from the nearest title boundary of land subject to: • A permit for a wind energy facility; or • An application for a permit for a wind energy facility; or • An incorporated document approving a wind energy facility; or • A proposed wind energy facility for which an action has been taken under section 8(1), 8(2), 8(3) or 8(4) of the *Environment Effects Act 1978*.	Not applicable

	Comment (cont)
The need to locate and design buildings used for accommodation to avoid or reduce the impact from vehicular traffic, noise, blasting, dust and vibration from an existing or proposed extractive industry operation if it is located within 500 metres from the nearest title boundary of land on which a work authority has been applied for or granted under the *Mineral Resources (Sustainable Development) Act 1990*.	Not applicable

Comment:

The proposal is consistent with the purpose and provisions of the Farming Zone. The broiler farm will allow for the continued use of the land for grazing whilst further value adding to the rural economy via diversification of agricultural activities without detriment to the amenity, natural resources and biodiversity of the area.

7.3 OVERLAY CONTROLS

A strip of land approximately 150 wide running along the Farrell Lane frontage is within the Bushfire Management Overlay (BMO). This is shown in the Overlay Plan presented in the Planning Property Report in Appendix 10. The proposed sheds and dwelling are not located within the BMO therefore the BMO provisions do not apply to this proposal.

7.4 PLANNING POLICY FRAMEWORK

The following Planning Policies are relevant to this application.

7.4.1 Floodplain management – (Clause 13.03-1S)

The objective of this policy is:

To assist the protection of:

- *Life, property and community infrastructure from flood hazard,* including coastal inundation, riverine and overland flows.
- *The natural flood carrying capacity of rivers, streams and floodways.*
- *The flood storage function of floodplains and waterways.*
- *Floodplain areas of environmental significance or of importance to river, wetland or coastal health.*

Comment:

The proposed use and development is consistent with the above policy objective. The flood impact assessment undertaken by Water Technology Pty Ltd (Appendix 6) demonstrates that:

- There is little risk to life, property and community infrastructure;
- The flood carrying capacity of the floodplain is not compromised, and
- The flood storage function of the floodplain is not compromised.

The subject land does not contain any areas of particular environmental significance or importance to river health.

7.4.3 Noise abatement – (Clause 13.05-1S)

The objective of this policy is:

> *To assist the control of noise effects on sensitive land uses.*

The strategy for the achievement of this objective is:

> *Ensure that development is not prejudiced and community amenity is not reduced by noise emissions, using a range of building design, urban design and land use separation techniques as appropriate to the land use functions and character of the area.*

Comment:

The proposed use and development is consistent with the objectives of this clause. Refer to Section 6.3.4 of this submission for consideration of issues associated with noise.

7.4.4 Air quality management – (Clause 13.06-1S)

The objective of this policy is:

> *To assist the protection and improvement of air quality.*

The strategies for the achievement of this objective include:

> *Ensure, wherever possible, that there is suitable separation between land uses that reduce amenity and sensitive land uses.*

Comment:

The proposed use and development is consistent with the objectives of this clause. The OERA presented in Appendix 8 concluded that:

- The predicted odour risk levels remained unchanged at all identified sensitive receptor sites with the addition of the proposed farm, and
- The proposed new farm presents minimal additional risk to disamenity due to odour at all sensitive receptors (residences) in the vicinity of the proposed farm.

7.4.5 Land use compatibility – (Clause 13.07-1S)

The objective of this policy is:

> *To protect community amenity, human health and safety while facilitating appropriate commercial, industrial, infrastructure or other uses with potential adverse off-site impacts.*

The strategies for the achievement of this objective include:

> *Ensure that use or development of land is compatible with adjoining and nearby land uses.*
>
> *Avoid locating incompatible uses in areas that may be impacted by adverse off-site impacts from commercial, industrial and other uses.*
>
> *Avoid or otherwise minimise adverse off-site impacts from commercial, industrial and other uses through land use separation, siting, building design and operational measures.*

Comment:

The proposed use and development will be located in an appropriate location within the Farming Zone. It will have appropriate land use separation distances as demonstrated by the OERA presented in Appendix 8.

7.4.6 Protection of agricultural land – (Clause 14.01-1S)

The objective of this policy is:

To protect the state's agricultural base by preserving productive farmland.

Comment:

The proposed use and development will take up only a small area of the large property with the balance being available for continued grazing activities. The broiler farm will support the viability of current farming operations.

The proposal will not adversely impact on the agricultural and forestry production on adjacent land. It is compatible with existing and likely development and use of the surrounding land. The subject land has the physical capability to accommodate the proposal.

7.4.7 Protection of agricultural land – Gippsland – (Clause 14.01-1R)

The strategy of this policy is:

> *Protect productive land and irrigation assets, including the Macalister Irrigation District, that help grow the state as an important food bowl for Australia and Asia.*

Comment:

The proposal will increase the agricultural production from the land and will therefore assist the above strategy.

7.4.8 Sustainable agricultural land use – (Clause 14.01-2S)

The objective of this policy is:

> *To encourage sustainable agricultural land use.*

The strategies for the achievement of this objective include:

> *Support the development of innovative and sustainable approaches to agricultural and associated rural land use practices.*
>
> *Encourage diversification and value-adding of agriculture through effective agricultural production and processing, rural industry and farm-related retailing.*
>
> *Facilitate ongoing productivity and investment in high value agriculture.*
>
> *Facilitate the establishment and expansion of cattle feedlots, piggeries, poultry farms and other intensive animal industries in a manner consistent with orderly and proper planning and protection of the environment.*

Under policy documents, it is stated that planning must consider as relevant:

> *Victorian Code for Broiler Farms (Department of Primary Industries, 2009 plus 2018 amendments).*

Comment:

Section 6 of this submission demonstrates that the proposed farm will be established in a manner consistent with orderly and proper planning and will not be detrimental the environment.

The proposal adopts innovative and sustainable approaches to agricultural production and further diversifies agriculture in the region. It typifies high value agriculture

The assessment in Appendix 7 demonstrates that the proposal complies with all the provisions of the Broiler Code.

7.4.9 Catchment planning and management – (Clause 14.02-1S)

The objective of this policy is:

> *To assist the protection and restoration of catchments, waterways, estuaries, bays, water bodies, groundwater, and the marine environment.*

The strategies for the achievement of this objective include:

> *Undertake measures to minimise the quantity and retard the flow of stormwater runoff from developed areas.*
>
> *Require appropriate measures to filter sediment and wastes from stormwater prior to its discharge into waterways, including the preservation of floodplain or other land for wetlands and retention basins.*
>
> *Ensure land use and development minimises nutrient contributions to water bodies and the potential for the development of algal blooms.*

Under policy guidelines, it is stated that planning must consider as relevant:

> *Any regional catchment strategies approved under the Catchment and Land Protection Act 1994 and any associated implementation plan or strategy including any regional river health and wetland strategies.*

The relevant catchment management strategy is the West Gippsland Regional Catchment Strategy 2013-2019.

Comment:

All runoff from the developed areas of the site will be directed into the proposed retarding dam and either reused within the broiler sheds or released at flow rates no greater than existing conditions. Litter will not be spread on the property. These measures will ensure that the farm will not contribute to nutrient loadings in the local waterways.

The flood impact assessment undertaken by Water Technology (Appendix 6) concluded that the proposed development will not have any adverse impacts on flooding.

Section 6 of this submission demonstrates that the above mentioned objectives will not be compromised by the proposal.

7.4.10 Water quality – (Clause 14.02-2S)

The objective of this policy is:

> *To protect water quality.*

The strategies for the achievement of this objective include:

> Ensure that land use activities potentially discharging contaminated runoff or wastes to waterways are sited and managed to minimise such discharges and to protect the quality of surface water and groundwater resources, rivers, streams, wetlands, estuaries and marine environments.

Discourage incompatible land use activities in areas subject to flooding, severe soil degradation, groundwater salinity or geotechnical hazards where the land cannot be sustainably managed to ensure minimum impact on downstream water quality or flow volumes.

Comment:

Refer to comments in Section 7.4.9 above.

7.4.11 Aboriginal cultural heritage – (Clause 15.03-2S)

The objective of this policy is:

"To ensure the protection and conservation of places of Aboriginal cultural heritage significance."

Comment:

There are no areas of cultural heritage sensitivity and no recorded sites of significance on the subject land. Because of the foregoing, there is no mandatory requirement for the preparation of a Cultural Heritage Management Plan or the need to obtain any Aboriginal heritage permits. The proposed farm is consistent with the above objective.

7.4.12 A diversified economy – (Clause 17.01-1S)

The objective of this policy is:

To strengthen and diversify the economy.

Comment:

The proposal will diversify agricultural production by introducing a new enterprise while having minimal impact on the traditional agricultural production. This will be beneficial for diversifying the economy in the region.

7.5 LOCAL PLANNING POLICY FRAMEWORK

The following sections discuss the components of the Municipal Strategic Statement (MSS) and Local Planning Policies that are relevant to this application.

7.5.1 Municipal Strategic Statement (MSS)

Council's MSS at Clause 21.01provides a profile of the municipality. Clause 21.01-2 identifies 9 planning units within the municipality's rural areas. The subject land is located within Planning Unit 4a: Rosedale-Stradbroke which is described as follows:

The Rosedale-Stradbroke Planning Unit occupies the Gippsland Plains north and south of the Princes Highway, and the lowland hills to the south of Rosedale. Land uses in the Unit are varied. Land in the north and south of the

Princes Highway is characterised by flat to gently undulating plains that support sheep and beef grazing (and limited dairying). There is little irrigated agriculture apart from irrigated vegetable production in the south-east of the Unit on sandy soils. The hillier areas of the Unit are largely covered by native forest (Holey Plains Park) and forestry plantations. Dryland agriculture and the timber industry (on private and public lands) have very high strategic importance in the Unit. The Unit contains extensive sand and gravel resources that could be extracted in the future.

Clause 21.02-6 addresses Economic Development and includes the following statements:

Long term prosperity will rely on the diversification and strengthening of the Shire's economic base.

The diversity of economic activity within Sale and the wider Wellington Shire is a key economic strength.

Agriculture, rural and timber industries are of fundamental importance to the Shire's economic prosperity as well as economies of the region, State and nation.

Comment:

The proposed sheds and associated infrastructure will take up only a small part of the property, about 20 hectares of the total 346,26 ha (865 acres) property owned by the permit applicant. Grazing operations will continue on the balance of the subject land. The chicken farm will allow for the further diversification and expansion of agricultural activity on the property. It will diversify and strengthen the Shire's economic base as well as have benefits by way of direct and indirect employment generation. The land will remain in primary production contributing to the Shire's strong agricultural base.

Clause 21.13-1 deals with rural and natural landscapes. Objective 1 states:

To protect, improve and sustainably manage the Shire's natural environment and diverse landscapes.

A strategy supporting this objective is:

Locate and design activities such as abattoirs and intensive animal husbandry to minimise environmental damage and loss of amenity to surrounding areas taking into account matters such as effluent control, odour, noise, soil compaction, erosion and protection of water quality.

Comment:

The proposed sheds and associated infrastructure will take up only a small part of the property, about 20 hectares of the total 346,26 ha (865 acres). These buildings and works will be located on relatively flat grazing land which does not have any specific environmental values. They will be setback 1120 metres from the Rosedale

– Longford Road and will be well screened by the proposed landscape buffer and the forestry plantations to the east. Section 6 of this submission demonstrates that the proposal will have minimal impacts on the environmental and amenity values of the area.

Clause 21.17-2 states that agriculture is a major industry within the municipality. It includes the following objective:

> *To promote and develop opportunities for value adding industries, plantation timber production, eco-tourism and cultural tourism.*

Strategies to support this objective are identified as:

> *Encourage development which adds to and diversifies existing agricultural activities.*
>
> *Facilitate more intensive and diversified use of rural land for higher value products, including horticulture, viticulture, intensive animal husbandry and agroforestry, where environmental conditions permit.*

Comment:

The introduction of the broiler farm will intensify the use of the land and add to, and diversify, the existing agricultural activities on the land.

7.5.2 Local Planning Policies

The local planning policy within the Wellington Planning Scheme that is relevant to the subject proposal is Clause 22.02 which provides rural policy. It discourages subdivision, uses and development which would be incompatible with the sustainable use of land for agricultural production.

Comment:

The proposed use and development is a form of agricultural production and does not conflict with this policy.

7.6 PARTICULAR PROVISIONS

7.6.1 Poultry Farm (Clause 53.09)

The purpose of this Clause is:

> *"To facilitate the establishment and expansion of poultry farms in a manner that is consistent with orderly and proper planning and the protection of the environment".*

Clause 53.09-3 Requirement – Broiler farm states:

An application to use land or construct a building or construct or carry out works for a broiler farm must comply with the Victorian Code for Broiler Farms 2009 (plus 2018 amendments).

Comment:

The design and siting of the chicken farm is consistent with all the requirements of the Victorian Code for Broiler Farms 2009. Compliance with the various sections of the Broiler Code is discussed in Appendix 7 to this submission.

7.7 GENERAL PROVISIONS

7.7.1 Decision Guidelines (Clause 65)

Because a permit can be granted does not imply that a permit should or will be granted. The responsible authority must decide whether the proposal will produce acceptable outcomes in terms of the decision guidelines of this clause.

Approval of an application or plan (Clause 65.01)

Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate:

	Comment
The matters set out in Section 60 of the Act.	Conformity achieved via compliance with the Broiler Code.
Any significant effects the environment, including the contamination of land, may have on the use or development.	The are no factors in the environment which will have any detrimental effects on the proposed use or development.
The Municipal Planning Strategy and the Planning Policy Framework.	Conformity with the Municipal Planning Strategy and the Planning Policy Framework is demonstrated in Section 6 of this submission.
The purpose of the zone, overlay or other provision.	The proposal is consistent with sustainable land management practices, adds to the variety of productive agricultural uses in the area and does not detract from the local environmental values.
Any matter required to be considered in the zone, overlay or other provision.	Is consistent with these. Refer to Section 7.
The orderly planning of the area.	The proposed broiler farm will not adversely impact upon the orderly planning of the area as demonstrated in Section 6 of this submission.
The effect on the environment, human health and amenity of the area.	The proposed broiler farm will not adversely impact upon the environment, human health or amenity of the area as demonstrated in Section 6 of this submission.

	Comment
The proximity of the land to any public land.	The small area of adjacent unreserved Crown Land near the western boundary is fenced within and used as part of the neighbouring farming property. The proposal will not impact on this arrangement.
Factors likely to cause or contribute to land degradation, salinity or reduce water quality.	The proposed broiler farm will not contribute to land degradation, salinity or reduce water quality as demonstrated in Section 6 of this submission.
Whether the proposed development is designed to maintain or improve the quality of stormwater within and exiting the site.	The proposed broiler farm will not impact on water quality in the area as demonstrated in Section 6 of this submission.
The extent and character of native vegetation and the likelihood of its destruction.	No remnant native vegetation will be removed. Additional planting will ensure a net gain for the area.
Whether native vegetation is to be or can be protected, planted or allowed to regenerate.	Refer to above.
The degree of flood, erosion or fire hazard associated with the location of the land and the use, development or management of the land so as to minimise any such hazard.	The proposal will not be adversely impacted by flooding. The area of the sheds and associated infrastructure is outside the Land Subject to Inundation Overlay. Management practices for the use and development of the proposal will ensure that erosion or fire hazards are not increased.
The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.	The farm has large hardstand areas at the ends of the sheds which provide adequate space for loading and unloading activities. These are located some 1.5 kilometres from the nearest sensitive use. The Traffic Engineering Assessment (Appendix 4) concluded that there are no traffic engineering reasons why a permit should not be granted for the proposal.
The impact the use or development will have on the current and future development and operation of the transport system.	The Traffic Engineering Assessment presented in Appendix 4 demonstrates that the proposed use and development will not detrimentally impact on the current and future development and operation of the road transport system.

7.8 ANALYSIS OF PLANNING POLICIES AND CONTROLS

A broiler farm is a legitimate form of intensive agricultural industry. It is appropriate to be located within agricultural areas where appropriate separation distances from sensitive uses such as dwellings can be readily achieved.

Providing water quality, the air and noise environments and the land resource are protected, there is very strong state and local planning policy support and encouragement for broiler farms. The Wellington Planning Scheme contains specific local policy support for intensive agricultural industries.

The purposes of the Farming Zone seek to encourage sustainable productive agricultural use of land. The Broiler Code addresses how this should occur in the case of broiler farms. It specifies objectives and standards that must be complied with by all proposals. It provides approved measures, that if implemented, ensure that the standards and objectives are met.

The Broiler Code is incorporated in the planning scheme and is therefore State Government policy. It is the primary criteria by which the responsible authority must assess broiler farm proposals.

Given the strong planning policy support for intensive agricultural industries, the farm's full compliance with the Broiler Code and the protection of amenity and environmental values, it is submitted that the proposed broiler farm is consistent with both State and local planning policies and controls and is therefore consistent with orderly and proper planning.

8 OTHER APPROVALS / LEGISLATION / CODES OF PRACTICE

8.1 THE CODE OF ACCEPTED FARMING PRACTICE FOR THE WELFARE OF POULTRY

The Code of Accepted Farming Practice for the Welfare of Poultry (Welfare Code) provides guidelines detailing the minimum standards for the management of poultry. The management and operation of the proposed broiler farm will comply with the guidelines within the Welfare Code.

8.2 LAND TRANSPORT CODE OF PRACTICE.

All birds will be delivered to and removed from the site in accordance with the Land Transport Code of Practice.

9 CONCLUSION

In conclusion, it is submitted that the proposed use and development of a 400,000 bird broiler farm and manager's dwelling is appropriate for the site and will be of economic benefit to the municipality.

The proposed use and development fully complies with the requirements of the Victorian Code for Broiler Farms 2009.

It is further submitted that the proposed use and development will not impact upon the environment, human health or amenity via the emission of noise, generation of dust or odour, impacts upon water quality or flows or on visual amenity.

The proposed use and development satisfy the objectives and intent of the Wellington Planning Scheme through compliance with:

- The requirements of the Planning Policy Framework;
- The purposes and objectives of the Local Planning Policy Framework, including the Municipal Strategic Statement as they apply to the site; and
- The purpose and decision guidelines of the Farming Zone, the Bushfire Management Overlay, Clause 53.09 - Broiler Farms and Clause 65 – Decision Guidelines.

It is therefore respectfully requested that a planning permit be issued subject to appropriate conditions being placed on the permit.

APPENDIX 7

COMPLIANCE WITH VICTORIAN CODE FOR BROILER FARMS

Victorian Code for Broiler Farms 2009

Assessment against Best Practice Farm Design and Operation

ELEMENT 1 (E1) – LOCATION, SITING AND SIZE

ELEMENT 1(E1): LOCATION, SITING AND SIZE	
OBJECTIVE, ELEMENT 1 To ensure the location and size of the broiler farm, and the siting of the broiler sheds, temporary litter stockpiles, compost piles and litter spreading areas: • minimise the risk of adverse amenity impacts on nearby existing, planned and potential future sensitive uses as a result of odour, dust and noise • do not adversely affect the use and development of nearby land • avoid pollution of ground and surface waters • avoid adverse impacts on the visual quality of the landscape • minimise biosecurity risks.	
STANDARD E1 S1: AMENITY PROTECTION Adverse impacts on the amenity of the surrounding area are minimised by ensuring broiler sheds, temporary litter stockpiles, compost piles and litter spreading areas are adequately separated from existing and planned residential and rural living areas, sensitive uses and broiler farm property boundaries.	
Approved measures	**Comment**
E1 M1.1 The nearest external edge of a new or existing broiler shed(s) or temporary litter stockpile / compost pile is / are set back by at least 1000 m from the boundary of a: • residential zone, urban growth zone or other urban zone where housing is a primary purpose of the zone, or • future residential area, shown on a plan or strategy incorporated in the planning scheme.	Complies The nearest external edge of the sheds is located some 4.5 kilometres from the nearest residential zone at Rosedale. There are no future residential areas in the general area.

Approved measures (cont)	Comment (cont)
E1 M1.2 The nearest external edge of a new or existing broiler shed(s) or litter stockpile / compost pile is / are set back by at least 750 m from the boundary of a: • zone that provides for rural living (i.e. a Rural Living Zone or Green Wedge A Zone), or • future rural living area shown on a plan or strategy incorporated in the planning scheme.	Complies The Rural Living Zone to the west is some 2.7 kilometres from the proposed sheds. There are no future rural living areas in the general area.
E1 M1.3 Prevailing meteorological conditions and topographical features are taken into account in determining the adequacy of separation distances to nearby sensitive uses. The minimum separation distances (as prescribed by Formula 1 of the Code) may need to be greater for some limited site specific circumstances. For example, the separation distance to a sensitive use located downslope in a drainage valley may need to be increased to minimise the risk of odour impacts.	Complies The OERA presented in Appendix 8, concluded that the predicted odour risk levels remained unchanged at all identified sensitive receptor sites with the addition of the proposed farm. The OERA demonstrates that the proposed new farm presents minimal additional risk to disamenity due to odour at all sensitive receptors (residences) in the vicinity of the proposed farm.
E1 M1.4 The nearest external edge of any new shed or temporary litter stockpile / compost pile is / are set back at least 100 m from the broiler farm property boundary. This distance is referred to as the boundary setback. For the purposes of this measure, a new shed includes an extension to an existing shed to house an increased number of birds.	Complies The shortest boundary buffer is 210 metres. This is between the western shed edges and the western boundary of the subject land.
E1 M1.5 The nearest external edge of a temporary litter stockpile / compost pile is / are set back at least 300 m from an existing sensitive use beyond the broiler farm property boundary.	Complies There are no temporary litter stockpiles or compost piles to be located on the property.

Approved measures (cont)	Comment (cont)
E1 M1.6 The nearest external edge of a litter spreading area is set back at least 20 m from the broiler farm boundary.	Complies Litter spreading will not be undertaken on the farm.
E1 M1.7 The nearest edge of a litter spreading area is set back at least 100 m from any existing sensitive use beyond the broiler farm property boundary.	Complies Litter spreading will not be undertaken on the farm.
STANDARD E1 S2: WATERWAY PROTECTION Adverse impacts on waterways are avoided by ensuring that broiler sheds, temporary litter stockpiles, compost piles and litter spreading areas are adequately separated from waterways, or other risk mitigation measures are incorporated and approved by the responsible authority.	
Approved measures	**Comment**
E1 M2.1 A natural vegetative buffer zone of at least 30 m (or any greater distance specified in the planning scheme or by the Catchment Management Authority) is maintained along waterways. No buildings, roads or litter storage or litter re-spreading areas are located in the vegetative buffer zone. The measuring point for a waterway is the point water may reach before flowing over a bank (the bank-full discharge level).	Complies There are no designated waterways in the vicinity of the proposed sheds. There are two 1% AEP flow paths adjacent to the shed location. The Flood Impact Assessment (Appendix 6) demonstrates that these will not be negatively impacted by the proposed development.
E1 M2.2 A clearance of a further 20 m from the edge of the Natural vegetative buffer zone to the nearest external edge of any broiler shed is provided to ensure adequate shed ventilation, minimise vermin habitat and provide adequate access to the sheds and fire-fighting protection.	Complies Refer to comments immediately above.

Approved measures (cont)	Comment (cont)
E1 M2.3 No solid or liquid waste (including temporary litter stockpiles, compost piles and litter spreading areas) is stored or disposed of within: • 800 m of any potable water supply take-off controlled by a statutory authority • 200 m of any waterway supplying potable water • 100 m of any other type of waterway.	Complies There is no potable water supply take-off or waterway in the area. Litter will not be stockpiled or composted on the property. Also, litter spreading will not be undertaken on the farm.
STANDARD E1 S3: PROTECTING THE VISUAL QUALITY OF THE LANDSCAPE Buildings and works are sited to account for the topography of the site and views from public roads, to minimise their visual impact on the landscape.	
Approved measures	**Comment**
E1 M3.1 Buildings and works are not sited on steep slopes (greater than 20 per cent slope).	Complies The slope of the subject land where the sheds are to be located is approximately 1%.
E1 M3.2 Buildings and works are oriented to follow the contours of the land.	Complies The sheds are to be located on relatively flat land.
E1 M3.3 Existing ridgeline vegetation is maintained to avoid breaking the ridgeline silhouette.	Not Applicable There is no ridgeline on the property.

STANDARD E1 S4: BIOSECURITY An appropriate distance is provided between the broiler farm (that is the broiler sheds, temporary litter stockpiles, compost piles and litter spreading areas), and other existing poultry farms under separate management, to minimise the risk of disease transmission.	
Approved measures	**Comment**
E1 M4.1 The nearest external edge of new or existing broiler sheds is / are set back from sheds on other poultry farms by the distance specified in Table 1 of *Biosecurity Guidelines for Poultry Producers* (Agnote AG1155 at www.dpi.vic.gov.au/notes).	Complies There are no poultry farms owned by others within 5 kilometres from the proposed sheds. Thus, the setback distance of 1000 metres listed in the Biosecurity Guidelines is complied with. Farms 1 and 2 are owned by the proponent and meets Ingham Enterprises' setback requirement of 500 metres.
E1 M4.2 Temporary litter stockpiles or compost piles are separated by at least 100 m from a new or existing broiler shed on the subject land, or are sited and managed as otherwise stipulated by the processor to meet biosecurity requirements.	Complies There are no temporary litter stockpiles or compost piles to be located on the property.
E1 M4.3 The litter spreading area is separated by at least 20 m from a new or existing broiler shed on the subject land, or is sited and managed as otherwise stipulated by the processor to meet biosecurity requirements.	Complies Litter spreading will not be undertaken on the farm.

STANDARD E1 S5: FUTURE USE AND DEVELOPMENT OF NEIGHBOURING LAND

Broiler sheds are sited so that offensive odour, dust and noise emissions will not adversely impact the orderly and sustainable use and development of land located beyond the farm property boundary, including the ability to establish a dwelling (excluding a bed and breakfast or caretaker's house) on a vacant property, having regard to:

- the existing and likely future use and development of the land including any approved sensitive uses
- the existing physical and environmental characteristics of the land
- the purpose and requirements of the zone applying to the land
- any applicable land use decision guidelines, policies and strategies in the planning scheme.

Approved measures	**Comment**
There are no approved measures for Farm Clusters under Standard E1 S5. These broiler farm applications must be assessed against this standard on a case-by-case basis using the information produced by the Odour ERA (see the 'Odour Environmental Risk Assessment (Odour ERA)' section of this Code).	<u>Complies</u> The OERA presented in Appendix 8, concluded that the predicted odour risk levels remained unchanged at all identified sensitive receptor sites with the addition of the proposed farm. The OERA demonstrates that the proposed new farm presents minimal additional risk to disamenity due to odour at all sensitive receptors (residences) in the vicinity of the proposed farm.

ELEMENT 2 (E2) – FARM DESIGN, LAYOUT AND CONSTRUCTION

ELEMENT 2 (E2): FARM DESIGN, LAYOUT AND CONSTRUCTION	
OBJECTIVE, ELEMENT 2 To ensure the design and construction of the broiler farm minimise the risk of adverse amenity and environmental impacts, and support the cost effective operational efficiency of the farm.	
STANDARD E2 S1: PROTECTING THE VISUAL QUALITY OF THE LANDSCAPE Buildings and works are designed and constructed to minimise their visual impact. Site topography and existing and proposed vegetation are used to best advantage to screen new buildings and works from public roads and neighbouring properties.	
Approved measures	**Comment**
E2 M1.1 Buildings are constructed in response to the topography of the land as follows: • On flat land, buildings directly in the view line of adjacent roads and dwellings on neighbouring properties are screened by vegetation (see Element 4: Landscaping). • On hilly terrain, the construction of terraces or earth platforms avoids unnecessary or excessive earthworks, and suitable erosion control measures are in place (see also Standard E1 S3 and Approved measures E1 M3.1-3.3).	Complies The topography of the subject land is relatively flat. The proposed sheds will be screened by the landscape buffer as shown on Figure 4 – Farm Layout and the accompanying landscape plan. The proposed plantings, along with the landscaping on Farms 1 & 2 and the forestry plantations to the east, will minimise the visual impact of the sheds from nearby locations.
E2 M1.2 Broiler shed walls are clad externally in materials that are non-reflective and finished in natural colours and tones of surrounding vegetation, soil, rocks or other natural features, to improve the visual integration of buildings with the natural landscape.	Complies The cladding of the walls of the sheds and associated buildings is to be selected from the 'colourbond range' in a non-reflective pale green colour.

STANDARD E2 S2: EFFICIENT FARM OPERATION

The design and layout of the whole broiler farm provides environmental and amenity protection while maximising the efficiency of farm operations, including:

- orderly management of feed and water, including:
  - adequate (quality and quantity) water supply
  - drinker technology that minimises wetting of litter through water spillage
  - treatment and disinfection of non-potable drinking water supply (dams, rivers and bores).
- efficient placement of silos and feed systems
- efficient placement and collection of birds
- efficient placement of fresh litter
- collection, handling and treatment of all wastes
- cleaning and maintenance of collection areas
- protection against birds and other vermin
- efficient energy and water use.

Approved measures	**Comment**
E2 M2.1 New broiler sheds are orientated to minimise the risk of odour, dust and noise impacts on the surrounding community with tunnel ventilation fans being located at the furthermost point away from the nearest sensitive use and taking into account the locality and concentration of other sensitive uses.	Complies The tunnel ventilation fans are located on the eastern ends of the sheds. The closest off-site residence to the proposed fans is 1,250 m to the south.
E2 M2.2 The design and construction of broiler sheds, associated works and roads facilitate the efficient delivery of feed and birds, collection of birds, and the cleaning and maintenance of sheds and collection areas.	Complies The shed complex is designed with a ring road around the external perimeter of the sheds and substantial hardstand areas at the ends of the sheds. This facilitates efficient traffic movement, delivery, collection, cleaning and maintenance.

Approved measures (cont)	Comment (cont)
E2 M2.3 Broiler sheds and feed silos are constructed to prevent access by wild birds, vermin and rodents.	Complies The chicken sheds will be fully enclosed with concrete floors and dwarf walls sunk at least 150 mm deep. The silos and feed distribution are also fully enclosed. This infrastructure will be bird, vermin and rodent proof.
E2 M2.4 A continuous water supply is available to the proposed development site (from reticulated town water supply, dams or a bore) for drinking, shed cooling and shed wash down (disinfection).	Complies Water for all purposes will be sourced from the proposed new dam on-site. This will be supplemented by water from a bore on the property if necessary. Drinking water for the birds will be suitably treated prior to entering the sheds.
E2 M2.5 A back-up supply or storage of water is available to hold at least one day's total requirement, in case of a breakdown or loss of normal water supply.	Complies Backup water supply is provided by the three water tanks to be located on the southern side of the sheds – refer to Figure 4 – Farm Layout. These store more than 3 days of total farm water requirements.
E2 M2.6 When dam or river water is used to supply water, chlorination, ultraviolet light systems or other appropriate disinfection procedures are used to disinfect the water.	Complies Drinking water for the birds will be suitably treated prior to entering the sheds.
E2 M2.7 Feed and watering systems can be adjusted to meet the requirements of the birds as they grow.	Complies Both the automatic watering and feed delivery systems located within the sheds will be capable of adjustment as the birds grow.
E2 M2.8 Nipple drinkers with trays are used to provide drinking water.	Complies High quality, "state of the art "nipple drinkers will be used to provide drinking water (refer to Photos 9 -11 provided in Appendix 2). These do not have drip trays but exhibit superior performance to nipple drinkers with drip trays.

Approved measures (cont)	Comment (cont)
E2 M2.9 Silos and feed systems are designed, sited and constructed to minimise spills of feed.	Complies The feed silos and delivery systems are totally enclosed which ensures that the likelihood of any feed spills is negligible.
STANDARD E2 S3: AVOIDING ENVIRONMENTAL IMPACTS FROM BROILER SHEDS Broiler shed floors and areas surrounding the sheds are designed and constructed to avoid the leaching of nutrients into the ground.	
Approved measures	**Comment**
E2 M3.1 A concrete hard stand area is located at the entrance to each broiler shed.	Complies Concrete hard stand areas will be constructed at the doors at each end of the sheds.
E2 M3.2 The base of the broiler sheds is constructed from low permeability materials such as concrete, concrete or another sealed surface.	Complies The base of the broiler sheds will be constructed of concrete with a finished floor level 0.6 m above the drains between the sheds.
E2 M3.3 The finished floor level of the broiler sheds is above the natural surface level to prevent the entry of stormwater run-off. Alternatively, the shed is bunded or a surface drainage system is installed to prevent the entry of stormwater run-off.	Complies The finished floor levels of the sheds will be 0.6 m above the drains between the sheds. A surface drainage system will be constructed to drain all surface water flows away from the sheds and to the proposed dam.

STANDARD E2 S4: NOISE MANAGEMENT	
The broiler farm development meets the requirements of the Interim *Guidelines for Control of Noise from Industry in Country Victoria* N. 3/89 (or its most recent update). To achieve this, in addition to the requirements of Element 1, Standard 1 (E1 S1); and Element 3, Standard 2 and Standard 4 (E3 S2 and E3 S4), the broiler farm further manages noise levels by ensuring farm vehicles and equipment associated with farm operations do not cause adverse noise impacts on nearby sensitive uses.	
Approved measures	**Comment**
E2 M4.1 The design, siting and selection of all mechanical equipment, including fans, pneumatic feed systems and other equipment, minimises the generation of mechanical noise and the likelihood of off-site vibration.	Complies Mechanical equipment will be chosen with the intent of minimising noise. Equipment will be located well away from nearest off-site dwellings, the closest of which is 1,250 metres away.
STANDARD E2 S5: STORMWATER DRAINAGE	
Stormwater and / or wastewater run-off from the broiler farm does not contaminate nearby waterways or groundwater, or cause erosion. Stormwater is also prevented from entering the broiler sheds.	
Approved measures	**Comment**
E2 M5.1 Clean stormwater collection areas are separated from areas that broiler farm waste may affect.	Complies Farm waste is not to be stored on the property. Any spills of waste materials will be promptly cleaned up. All surface drainage is to be directed to the proposed new dam.
E2 M5.2 Stormwater from sheds and hard standing apron areas is collected and managed on site in a dam(s) or tanks within the broiler farm boundary.	Complies All surface drainage is to be directed to the proposed new dam shown on Figure 4 –Farm Layout.

Approved measures (cont)	Comment (cont)
E2 M5.3 Stormwater table drains with an appropriate gradient are established along all building lines to collect stormwater run-off from sheds and hard standing apron areas.	Complies Stormwater table drains will be constructed along all buildings and hard standing areas to direct stormwater flows to the proposed new dam as shown on Figure 4 – Farm Layout.
E2 M5.4 In areas subject to soil erosion, the system design incorporates mitigation methods such as crushed rock traps and drops.	Complies The topography of the sheds site is relatively flat thus the risk of soil erosion is low. All areas disturbed by earthworks will be revegetated as soon as practical upon completion.
E2 M5.5 Stormwater management is consistent with any stormwater management plan of the responsible authority.	Complies Stormwater flows originating from the shed complex area will be directed into the proposed new dam.
E2 M5.6 Retaining dams are constructed with the capacity to retain run-off from a one-in-ten-year storm.	Complies The proposed new dam shown on Figure 4 – Farm Layout will be designed to retard the one-in-ten-year storm event.

ELEMENT 3 (E3) – TRAFFIC, SITE ACCESS, ONFARM ROADS AND PARKING

<table>
<tr><td colspan="2">ELEMENT 3 (E3) – TRAFFIC, SITE ACCESS, ONFARM ROADS AND PARKING</td></tr>
<tr><td colspan="2"><u>OBJECTIVE, ELEMENT 3</u>

To ensure the location, design and construction of the farm access points, internal roads and parking areas, and the movement of vehicles for broiler farm operations support the safe and efficient operation of the farm, and minimise adverse amenity impacts on nearby sensitive uses.</td></tr>
<tr><td colspan="2">STANDARD E3 S1: SITE ACCESS

Vehicle access points are designed and constructed to allow all-weather safe entry and exit for the anticipated type and frequency of vehicles, accounting for road and traffic conditions.</td></tr>
<tr><td>Approved measures</td><td>Comment</td></tr>
<tr><td>E3 M1.1

Access points are constructed to a standard that minimises deterioration in the road pavement, avoids sharp turns and provides sufficient road width for truck turning movements.</td><td><u>Complies</u>

The access point for all farms is off Rosedale – Longford Road in front of Farm 1. It is being constructed to ensure the easy movement of articulated and B-Double trucks in and out of the site. A rural basic left turn treatment and a rural basic right turn treatment will be provided in accordance with the recommendations of the Traffic Engineering Assessment (Appendix 4).</td></tr>
<tr><td>E3 M1.2

For site access from a public road, the gate to the broiler farm is at least 30 m inside the broiler farm boundary, so articulated vehicles requiring access can park off the public road while the gate is being opened.</td><td><u>Complies</u>

Any gate on the access road into the farm will be setback at least 40 metres. This ensures ample off-road standing for articulated vehicles.</td></tr>
</table>

STANDARD E3 S2: SITE ACCESS	
Vehicle access points to the broiler farm from public roads are located to minimise noise and vehicle light impacts on existing sensitive use.	
Approved measures	**Comment**
E3 M2.1 Vehicle access points are located as far away as possible from a sensitive use not associated with the broiler farm.	Complies The access point off The Rosedale - Longford Road will be some 1,240 metres from the nearest off-site residence.
E3 M2.2 All lighting is located, directed and baffled to limit light beyond the development site boundaries.	Complies Given the baffled lights and large boundary setbacks, lighting will not spill beyond the boundaries
STANDARD E3 S3: INTERNAL ROADS AND CAR PARKING Internal roads and parking areas are designed, constructed and maintained to operate in all weather conditions. Adequate provision is made for the parking and movement on the property of articulated and other vehicles associated with the farm's operation, including the delivery of birds, litter and feed to the premises, and the collection of birds and waste.	
Approved measures	**Comment**
E3 M3.1 Internal roads and parking areas are constructed of a compacted sub-base with table drains, and a compacted gravel layer with a camber to shed rainwater to the drains.	Complies All access roads and hard standing areas will be designed and constructed to meet this requirement.
E3 M3.2 An area(s) is provided for parking articulated vehicles involved in loading and unloading stock, feed, litter and waste.	Complies Ample areas are provided on the substantial hard stand areas at the east and west ends of the sheds.

STANDARD E3 S4: INTERNAL ROADS AND CAR PARKING Internal roads and parking areas are designed and sited to minimise noise and light impacts on neighbouring sensitive uses.	
Approved measures	**Comment**
E3 M4.1 Internal roads and parking areas are designed to ensure efficient traffic flow and to reduce the need for vehicles to reverse. The layout allows ease of access to the site, avoids the use of sharp turns, and for vehicles to leave the farm travelling in a forward direction.	Complies Figure 4 – Farm Layout demonstrates that the access road, ring road and substantial hard stand areas meet this requirement.
E3 M4.2 Internal roads and parking areas are located as far away as possible from a sensitive use not associated with the broiler farm.	Complies Figure 2 – Site Context Plan demonstrate that roads and parking areas are a substantial distance away from the neighbouring off-site dwellings, the closest of which is 1,233 metres from the sheds.
E3 M4.3 All lighting is located, directed and baffled to limit light beyond the development site boundaries.	Complies Given the baffled lights and large boundary setbacks, lighting will not spill beyond the boundaries.

ELEMENT 4 (E4) – LANDSCAPING

ELEMENT 4 (E4) – LANDSCAPING	
OBJECTIVE, ELEMENT 4 To ensure landscaping is used to minimise the visual impact of broiler sheds and litter storage areas, further reduce the risk of adverse impacts from light and dust on nearby sensitive uses, and protect, manage and enhance on-farm native vegetation and biodiversity.	
STANDARD E4 S1: LANDSCAPING Landscaping provides substantial visual screening from roads, public areas, nearby sensitive uses not associated with the broiler farm; integrates the farm into the surrounding landscape; and provides adequate access and clearance around the sheds.	
Approved measures	**Comment**
E4 M1.1 The landscape plan provides for dense vegetation and planting along frontages to public roads and other highly exposed site boundaries to provide screening of the broiler farm buildings, structures and handling areas.	Complies Figure 4 – Farm Layout and the accompanying landscape plan shows a dense landscape buffer along the Rosedale – Longford Road frontage. A similar landscape buffer is being established around Farms 1 and 2. As these mature, they will provide effective screening around the proposed sheds and associated infrastructure. The forestry plantations to the east will also assisted in screening.
E4 M1.2 The landscape plan incorporates a mix of trees and large shrubs to ensure effective upper level and lower level screenings of the farm.	Complies The planting detail shown on Figure 4 and the accompanying landscape plan demonstrates that a mix of trees and large shrubs will be provided to ensure effective upper and lower screening.
E4 M1.3 As far as possible, the landscape plan retains existing trees, particularly native vegetation, and a mix of native and local indigenous plant species that blend into the landscape.	Complies No trees are to be removed for the development. The accompanying landscape plan shows a mix of indigenous plant species consistent with the EVCs for the area.

Approved measures (cont)	Comment (cont)
E4 M1.4 Mounds to a height of approximately 2 m are used if the combination of natural topography and tree planting cannot effectively screen a broiler farm. Soil from shed excavation, stormwater drains and farm dams may be suitable for constructing these mounds.	Complies The relatively flat topography, substantial setback distance and the proposed and existing vegetation mean that mounding is not required to provide effective screening of the proposed sheds and associated infrastructure.
E4 M1.5 Plantings and vegetation are located no closer than 20 m from the perimeter of the broiler sheds to ensure adequate shed ventilation, minimise vermin habitats, and provide adequate shed access and fire-fighting protection.	Complies The landscape buffer is at a suitable distance from the sides and the ends of the sheds.
E4 M1.6 Unpaved areas around sheds are grassed to prevent soil erosion and minimise the heat load on the buildings through radiation from bare ground.	Complies All unpaved areas of the farm site will be grassed.
E4 M1.7 Ground surfaces that are exposed to erosion are stabilised with ground cover planting or other means to minimise erosion.	Complies The topography of the subject land is relatively flat thus the risk of soil erosion is low. All areas disturbed by earthworks will be revegetated as soon as practical upon completion.
E4 M1.8 The permit approval requires the establishment of a landscape performance bond, to ensure effective implementation of a landscape plan approved by the responsible authority. This plan includes a reasonably detailed estimate of the quantity and types of materials, watering equipment, plants and other inputs required. The amount of the bond provides an incentive for the broiler farm operator to fully implement the landscape plan and maintain the vegetation during the establishment period.	Complies The required estimate is provided at Appendix 5 of this report.

ELEMENT 5 (E5) – WASTE MANAGEMENT

ELEMENT 5 (E5) – WASTE MANAGEMENT	
OBJECTIVE, ELEMENT 5 To manage waste from broiler farm operations to: • minimise adverse amenity impacts from odour and dust on nearby sensitive uses • prevent the pollution of ground and surface waters and land • avoid biosecurity risks.	
STANDARD E5 S1: SPENT LITTER The management and disposal systems for spent litter are designed to minimise odour and dust generation and the likelihood of disease transmission, and to prevent nutrient run-off to surrounding land, waterways or groundwater.	
Approved measures	**Comment**
E5 M1.1 Temporary litter stockpiles or compost piles are not visible or are well screened from neighbouring sensitive uses. If piles are visible from the broiler farm boundary, then they are screened by shedding or other suitable material.	Complies There are no temporary litter stockpiles or compost piles to be located on the property.
E5 M1.2 Temporary litter stockpiles or compost piles are located to prevent water run-off into sensitive areas, such as stormwater drains, waterways and catchments. Additional bunding may be required to prevent entry to, and contamination of, stormwater run-off. It may also be required to prevent extraneous stormwater run-off from entering the compost pile.	Complies There are no temporary litter stockpiles or compost piles to be located on the property.

Approved measures (cont)	**Comment (cont)**
E5 M1.3 Nutrient-rich run-off from the temporary litter stockpiles or compost piles is collected in a sump or dam and may be re-used to add Moisture to the pile.	Complies Refer to previous comments.
E5 M1.4 Temporary litter stockpiles or compost piles are on an impermeable base such as concrete, concrete or cement-stabilised soils, to prevent nutrient leaching.	Complies Refer to previous comments.
E5 M1.5 The litter application site is not on land subject to flooding, steep slopes (greater than 10 per cent), rocky, slaking or highly erodible land or highly impermeable soils where there is any risk of nutrient run-off to waterways, surrounding land or groundwater.	Complies Spreading of litter will not be undertaken on the property.

STANDARD E5 S2: DEAD BIRDS The management and disposal of dead birds is designed to minimise the likelihood of disease transmission, complies with the *National Biosecurity Manual for Contract Meat Chicken Farming* (or its most recent update) and minimises odour and dust generation.	
Approved measures	**Comment**
E5 M2.1 Where birds are to be frozen before collection, adequate freezers and space for the freezers are provided.	Complies Adequate freezer capacity will be provided within the machinery shed.
E5 M2.2 The collection point (for the collection vehicle) is as far as practical away from the farm site so that dead bird bins are not left in public view, and the collection vehicle does not come in close proximity to the broiler sheds.	Complies The collection point is to be at the rear of the machinery shed outside the biosecurity area. This is well clear of the sheds housing the chickens.
E5 M2.3 The collection point is appropriately constructed so the bins are protected from extreme weather conditions (for example, from winds that will cause lids to open or bins to tip over); and the site can be easily cleaned in the event of a spill.	Complies Freezers are to be located within the machinery shed. Hence these will be protected from extreme weather conditions and are not visible to the public.
E5 M2.4 Dead bird collection vehicles and all containment systems are leak proof and vermin proof.	Complies Collection vehicles and containment systems will meet this requirement.
E5 M2.5 Incineration of dead birds is conducted only in incinerators built for purpose.	Complies There will be no incineration of dead birds on the property.

Approved measures (cont)	**Comment (cont)**
E5 M2.6 On-site burial of dead birds is undertaken only in an emergency situation and with the approval of the relevant authorities (the Chief Veterinary Officer of the Department of Primary Industries and EPA Victoria).	Complies On-site burial of dead birds will only be undertaken in an emergency situation and with the approval of the relevant authorities.
STANDARD E5 S3: CHEMICAL WASTE The management and disposal systems for chemical waste and general farm waste are designed to ensure the safe storage, use and disposal of chemicals.	
Approved measures	**Comment**
E5 M3.1 Secure sheds, with an impermeable concrete base and appropriate bunding to avoid contaminated runoff, are provided to store chemicals, fuels, chemical waste and / or waste containers (before disposal).	Complies The storage of these materials will be undertaken within an enclosed section of the machinery shed in accordance with the requirements of the relevant safety data sheet requirements.

ELEMENT 6 (E6) – FARM OPERATION AND MANAGEMENT (ENVIRONMENTAL MANAGEMENT PLAN (EMP))

ELEMENT 6 (E6) – FARM OPERATION AND MANAGEMENT (ENVIRONMENTAL MANAGEMENT PLAN (EMP))	
OBJECTIVE, ELEMENT 6 To apply best practice management of the broiler farm to avoid or minimise the risk of adverse amenity and environmental impacts on the surrounding environment and nearby sensitive uses.	
STANDARD E6 S1: An environmental management plan (EMP) is developed that includes strategies and measures to avoid or minimise environmental risks, and also contingency actions to manage environmental problems that may arise, as follows:	
Approved measures	**Comment**
E6 M1.1 An environmental management plan (EMP) is developed that is site specific and based on the approved generic EMP (as amended and updated from time to time). If the EMP lodged with permit application does not address any part of the generic EMP, the applicant has addressed why that part is not relevant or applicable. Alternatively, the EMP may be developed under the Victorian Farmers Federation Chicken Care program. To expand an existing Chicken Care-accredited farm, the EMP must be updated to incorporate any new or additional risks as a result of the farm development and to ensure compliance with this Code. Where the EMP does not address any part of the generic EMP, the applicant has addressed why that part is not relevant or applicable.	Complies The environmental management plan (EMP) accompanies the planning permit application. It is tailored to meet the subject farm's characteristics.
E6 M1.2 The farm grower / operator maintains and updates (as required) a manual containing the EMP, which is available for inspection by the responsible authority.	Complies The proponent commits to keeping the EMP up to date and available for inspection by the responsible authority.

ENVIRONMENTAL MANAGEMENT PLAN

Broiler Farm – Unit 3

Farrell Lane, Rosedale

April 2022
(2560R07)

ENVIRONMENTAL MANAGEMENT PLAN

BROILER FARM – UNIT 3

FARRELL LANE, ROSEDALE

April 2022

CONTENTS

APPENDICES

Environmental Management Plan

Farrell Lane, Rosedale
April 2022

(2560R07)

1 INTRODUCTION

The Victorian Code for Broiler Farms 2009 (the Code) provides a basis for the planning, design, assessment, approval, construction, operation and management of broiler farms in Victoria. A key element of this Code is an emphasis on ongoing environmental management. It requires the preparation and approval by the responsible authority of an Environmental Management Plan (EMP) for every new farm or expansion of an existing farm.

This EMP has been specifically prepared to address the requirements of Condition XXXX of Planning Permit No. XXXX for the use and development of a broiler farm at Farrell Lane, Rosedale (Unit 3). It must be noted that if there is any discrepancy between the permit and this EMP, the conditions of the permit shall prevail.

The objective of this EMP is to ensure best practice management and a commitment to continuous improvement in environmental performance. It is intended to minimise the risk of any adverse event with potential to impact on the environment or the surrounding community during the ongoing operation of the broiler farm.

This EMP reflects the requirements in the Code. It incorporates to the maximum current practical extent the requirements of the Operation and Management Section (Element 6) of the Code and is subject to a process of continuous improvement. It reflects the following principles:

- Pursuit of continuous improvement in environmental performance;
- Provision of flexibility but without vagueness that could permit selective interpretation of acceptable performance;
- Provision where possible of plans or actions, not merely statements of good intentions;
- Compatibility with the need for objective independent auditing, and
- Support to the Code objective, which encourages investment decisions consistent with a long term strategy for the industry.

This EMP comprises twelve categories of environmental issues. Each has an objective and a series of Management Measures required to achieve the objective. Prime responsibility (Grower and/or Processor) for each measure is indicated. The method of monitoring each measure is stated as well as the indicator or trigger level which will initiate contingency action. The nature of contingency actions and their timing are also provided.

Additional information has not been given for Management Measures where the requirements are clear and where Growers and Auditors can readily assess compliance.

2 ENVIRONMENTAL ISSUES

Within this EMP the environmental issues pertinent to the broiler farm have been grouped into 12 categories as follows:

1. Landscaping
2. Facilities Standards
3. Roads and Traffic
4. Feed, Water and Electricity Supply
5. Odour
6. Noise
7. Litter and Dust
8. Chemicals
9. Bird Management and Biosecurity
10. Other Environmental Controls
11. Contingency Plans
12. Community Participation

Overall strategies and control measures to minimise impacts and continuously improve environmental performance on each issue are provided in the following sections.

Careful monitoring and application of the appropriate measures can manage potential impacts in relation to each issue.

2.1 LANDSCAPING

EMP Objective: To complete the landscape plantings specified in the approved landscape plan within six months of commencement of the use with the intent to provide effective visual screening of the broiler farm sheds and to maintain these over the life of the farm.

Management Measures / Strategies	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.1.1 The implementation of the landscape plan approved by the responsible authority as part of the planning permit will effectively screen broiler farm sheds and assist with odour dispersion.	Grower	Inspection will confirm that planting has been undertaken within 6 months of the use of the sheds commencing.	Dead or diseased plants or inconsistencies with approved plan will initiate corrective action.	Dead, diseased, or incorrect plants to be replaced with new plants within 2 months where seasonal conditions allow.
2.1.2 Landscaping is well maintained with dead/diseased plants regularly replaced. Watering, weed control and mulching activities are consistent with advice from a qualified horticulturist and/or local nurseries.	Grower	Inspections to be monthly for 12 months after planting and every 6 months thereafter to ensure plant health and weed control. Replaced plants to be inspected monthly in the period November to April for the first year after planting.	Dead and diseased plants trigger replacement of plants. Supplementary watering triggered by dry soil conditions consistent with advice from a qualified horticulturist and/or local nurseries.	Replacement within 2 months if consistent with seasonal and weather conditions. Species to be consistent with original plantings unless deemed unsuitable by death or disease. Manual watering will be undertaken as soil moisture conditions require.
2.1.3 Changes that will improve farm performance against EMP 2.1 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both(1)			

Note (1): "Both" means responsibility shared by both Grower and Processor

2.2 FACILITY STANDARDS

EMP Objective: To maintain and enhance buildings, site drainage and equipment in order to minimise off-site impacts and maximise operational efficiency and safety.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.2.1 Sheds and associated areas are maintained to the Processor and Grower agreed best practice specifications and to planning permit requirements.	Both	Annual inspection and comparison will demonstrate compliance with both Processor and Permit requirements.	Non-compliance with Processor or Permit requirements will trigger remedial action.	Minor remedial actions will be completed prior to placement of next batch. Major remedial action will be undertaken within one year.
2.2.2 Equipment and structures are in place and maintained to enable odour, dust and noise control as required by the planning permit.	Grower	Manufacturer documentation for major equipment is available to demonstrate design performance standards are being achieved.	Failures in performance will trigger remedial action.	Repairs will occur prior to next batch unless there is potential for immediate offsite noise or other impacts. In these cases, timings in Sections 2.5, 2.6 and 2.11 apply.
2.2.3 External finishes of sheds exhibit low visual intrusion. Walls are a pale green colourbond. Coolpad surfaces to be non-reflective. Roofs are to be constructed of custom orb. Energy consumption, fan usage and animal welfare have been considered in selecting the roof surface.	Grower	Annual inspection will confirm compliance with planning permit requirements and maintenance of external cladding in a sound condition.	Surfaces found not to be in sound condition are to be repaired.	Minor remedial actions will be completed prior to placement of subsequent batch. Major remedial action will be undertaken within one year.
2.2.4 Best practice equipment for monitoring and control of temperature, ventilation, cooling and water consumption is used and maintained to manufacturer's specifications.	Grower	Continuous monitoring of shed via programmable controllers (to adjust heaters, fans and cooling systems) and remote alarms (to alert on temperature, water and electricity excursions).	Deviation of conditions outside processor's performance tolerances initiates remedial action. Power or water failures initiate corrective action.	Remedial / corrective action to be undertaken immediately to protect environmental performance and bird welfare.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.2.5 Drainage to soil or waterways is not impaired or contaminated by shed or farm operations. Spilt feed or litter will be cleaned up to prevent contamination of surface waters. No free flowing water from shed cleaning / sanitisation will be allowed to leave the shed.	Grower	Inspections at the time of feed deliveries, litter clean out, shed cleaning and rainfall events will confirm compliance.	Any incidences of spilt feed or litter will initiate remedial action. Any failures of the drainage system to efficiently deliver surface water flows into the retention dam will initiate remedial action.	Clean up of spilt feed or litter will occur within 8 hours of detection. Rectification of drainage problems will be undertaken within one month.
2.2.6 Stormwater runoff from roofs, roads and hardstand aprons is controlled and collected via drains and directed into the retention dam capable of detaining a 1:10 year rainfall event.	Grower	Confirmation via inspections at the time of rainfall events.	Drains are to have sufficient capacity to adequately drain required areas and deliver flows to retention dam. Failure to achieve this will initiate remedial action.	Remedial actions will be undertaken within one month
2.2.7 Stormwater systems including drains, silt traps and dams are maintained in accordance with planning permit requirements to ensure no pollution of surface or groundwater	Grower	Confirmation via inspections at the time of rainfall events.	Drains are maintained in shape and slope (typically greater than 1:300) and are free of weeds and blockages. Failure to achieve this will initiate remedial action.	Remedial actions will be undertaken within one month
2.2.8 Water from the retention dam is to be recycled for drinking, cooling and landscape purposes.	Grower	Confirmation by quarterly inspection of infrastructure.	Observation of non-compliance will initiate remedial action.	Remedial actions undertaken immediately if there is a threat to bird welfare or within one month
2.2.9 Changes that will improve farm performance against EMP 2.2 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.3 ROADS AND TRAFFIC

EMP Objective: To maintain roads, gates and turning areas in good condition and in accordance with the planning permit in order to prevent interference with other traffic or the generation of unreasonable off-site noise or dust.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.3.1 Access to the farm is from Rosedale – Longford Road via an all weather road.	Grower	Compliance confirmed by inspection.	Non-compliance with Permit requirements will trigger remedial action.	Minor remedial actions will be completed prior to placement of next batch. Major remedial action will be undertaken within one year.
2.3.2 The access point is constructed to the standards specified by the responsible authority in the Planning Permit. It is provided with a minimum 30 metre truck storage area off Rosedale - Longford Road.	Grower	Compliance confirmed by inspection.	Non-compliance with Permit requirements will trigger remedial action.	Minor remedial actions will be completed prior to placement of next batch. Major remedial action will be undertaken within one year.
2.3.3 The surface of access roads, loading areas and car parking spaces are surfaced with crushed rock and maintained to allow safe entry, all weather access and minimise generation of dust.	Grower	Inspection of road infrastructure will be undertaken at the completion of each batch.	If all weather access is compromised or fine surface particles are likely to lead to dust generation, remedial action will be triggered.	Repairs or upgrades where needed will be completed prior to the next major period of truck movements.
2.3.4 Road drains, stormwater runoff areas and culverts etc., are maintained to ensure efficient functioning.	Grower	Confirmation via inspections at the time of rainfall events.	Failure to achieve efficient functioning will initiate remedial action.	Remedial actions will be undertaken within one month

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.3.5 All vehicles and machinery, including that used by contractors servicing the farm, are maintained to ensure that noise or emissions do not exceed the manufacturer's specification. Registered vehicles will conform to Environmental Protection (Vehicle Emission) Regulations 1992 which incorporate Australian Design Rule 28 relating to noise performance. Unregistered farm vehicles (with spark ignition engines) should generate no more than 90 dB(A) as determined by Schedule 6 of the Regulations.	Both	Monitoring will be via the recording of noise complaints from neighbours.	Regular substantiated noise complaints from neighbours will initiate remedial action.	Where offsite vehicle noise has been identified as a concern, testing of vehicles by an appropriate acoustics engineer will occur to ensure compliance with the noise standards listed in this Section.
2.3.6 Where the potential for off-site noise impacts is indicated by a risk assessment of local topography and proximity of sensitive uses, a register of all transport contractors and written confirmations from major firms of their noise controls will be maintained on farm with the view of minimising the generation of noise.	Both	Monitoring will be via the recording of noise complaints from neighbours.	Regular substantiated noise complaints from neighbours will initiate remedial action.	Where regular verified off-site noise complaints occur, the principles and measures outlined in the National Environmental Management System for the Meat Chicken Industry – Rural Industries Research & Development Corporation Publication No. 03/038 will be adopted and implemented.
2.3.7 Farm layout and standing instructions to transport contractors ensure that all vehicles leave the property in a forward direction.	Both	Monitoring will be via regular observations by farm manager	Observation of non-compliance will initiate remedial action.	Transport contractors will be instructed to ensure that all vehicles leave the property in a forward direction.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.3.8 Bird pick-up contractors are instructed and supervised to ensure bird pick-up and associated activities completed during the night are undertaken with care to reduce the generation of noise.	Both	Monitoring will be via regular observations by farm manager	Observation of non-compliance will initiate remedial action.	Bird pick up contractors will be instructed to ensure that all activities are undertaken with care to reduce the generation of noise.
2.3.9 During pick up and loading activities (generally 8.30 pm to 7.00 am) the time that shed doors remain open will be minimised as far as practicable. If delays occur, shed doors will remain closed.	Both	Monitoring will be via regular observations by farm manager	Observation of non-compliance will initiate remedial action.	Bird pick up contractors will be instructed to ensure shed doors are closed during delays in pick up activities.
2.3.10 Vehicle speed limit of 30 kph applies on the farm and is implemented by training, signs and instructions to drivers in order to limit noise and dust levels.	Grower	Monitoring will be via visual monitoring of vehicle movements, monthly inspection of signs and annual inspection of documented instructions.	Observation of non-compliance will initiate remedial action.	Vehicle operators will be instructed to maintain speeds below 30 kph. Documentation of instructions to operators will be updated where required and advised to drivers.
2.3.11 Contract transport drivers are aware of their responsibilities and are familiar with their transport accident emergency plan.	Processor	Compliance confirmed by inspection of plan.	Observation of non-compliance will initiate remedial action.	Emergency plans updated to comply with industry emergency procedures and with VicRoads Transport Regulations
2.3.12 Changes that will improve farm performance against EMP 2.3 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.4 FEED, WATER AND ELECTRICITY SUPPLY

EMP Objective: To ensure the quality and continuity of feed, water and shed ambient conditions in order to protect animal welfare and prevent environmental impacts.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.4.1 Well designed, constructed and totally enclosed silos and feed systems are installed in order to provide fresh and wholesome feed without any contamination or generation of dust.	Both	Inspections of the feed delivery system will be undertaken daily and problems will be recorded in the farm log book.	Observation of any breach will initiate remedial action.	Where feed delivery to birds is compromised by the problem, repairs will be undertaken immediately. All other repairs will be undertaken with one week.
2.4.2 Wild-bird proofing on shed and silos is installed and maintained, and vermin and rodents are controlled by targeted and environmentally safe baiting, using substances and protocols that meet Government and Processor requirements.	Grower	Inspections of the bird proofing will be undertaken prior to each batch of chickens being placed. Vermin and rodent control actions and baiting program will be recorded in the farm log book and checked against protocols.	Observation of any breach will initiate remedial action. Non-compliance with protocols will initiate corrective action.	Where biosecurity of birds is compromised, repairs will be undertaken immediately. Farm staff will be instructed to comply with relevant protocols for next cycle of control and / or baiting.
2.4.3 Equipment and procedures for clean-up of feed spills are available and any such spills are removed daily.	Grower	Inspections will be undertaken daily for spillages or breaches of the feed system – these will be recorded in the farm log book.	Observation of any breach will initiate remedial action.	Spillages will be cleaned up within 8 hours. Where feed delivery to birds is compromised by the problem, repairs will be undertaken immediately. All other repairs will be undertaken with one week.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.4.4 Potable drinking water for birds is provided from the dam located to the north of the sheds. This water is suitably treated before being used in the sheds. On-site water storage tanks provide in excess of 3 days back up supply of water (at peak summer usage). These are connected to automatic backup water pumps.	Grower	Water supply failure sensors will be connected to the Farm Alarm System which will immediately alert the farm manager by mobile phone. The system has automatic leak failsafe and shut off facility. The sheds' computer controller system constantly monitors water flow.	The Farm Alarm System will alert farm manager if consumption is outside set parameters – normally + or – 50% of previous day's consumption. The system will automatically cut off water supply to the shed(s) if it detects abnormal flows.	The farm manager or staff will immediately identify the problem and take corrective action.
2.4.5 Electrical power and phase supply alarms are installed to alert the Grower of supply failure and a standby generator is provided to maintain normal operating conditions.	Grower	Monitoring is via daily inspection and monthly testing.	Generator starts automatically upon supply / phase failure. Mains electricity supply failure sensors will be connected to the Farm Alarm System which will immediately alert the farm manager by mobile phone.	The farm manager or staff will immediately identify the problem and take corrective action.
2.4.6 Changes that will improve farm performance against the EMP 2.4 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.5 NOISE

EMP Objective: To ensure that farm operations control transmission of unreasonable noise by using appropriate design, maintenance and operating procedures.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.5.1 Correct operation of all mechanical equipment, including shed fans, feed systems and other equipment minimises the offsite transmission of mechanical noise or vibration.	Grower	Inspection prior to placement of each batch will confirm compliance.	Observation of an equipment failure will initiate remedial action.	Equipment failures causing increased off-site noise are repaired within one week. Other equipment problems are repaired in a timely manner to prevent deterioration and occurrence of excessive offsite noise.
2.5.2 Equipment and electrical generators have effective noise suppressers / screens.	Grower	Inspection prior to placement of each batch will confirm compliance.	Observation of ineffective noise suppressers / screens will initiate remedial action.	Problems causing increased off-site noise are repaired within one week. Other equipment problems are repaired in a timely manner to prevent deterioration / occurrence of excessive offsite noise.
2.5.3 Equipment is installed, operated and maintained according to manufacturer's requirements or to the instructions from an appropriately qualified technical source.	Grower	Annual comparison of equipment operations with register of manufacturer instructions available on the farm for all equipment with potential for off-site noise.	Observation of failure to comply with manufacturer's or technician's instructions will initiate remedial action.	Farm staff will be instructed to comply with relevant instructions
2.5.4 Vehicle reversing is minimised and visual alarms are used (subject to safety considerations also being met).	Grower	Monitoring will be via regular observations by farm manager	Observation of non-compliance will initiate remedial action.	Drivers will be instructed to minimise vehicle reversing.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.5.5 Only low noise alarms, house alarms, visual alarms and pagers are used to minimise the occurrence and duration of noise affecting neighbours.	Grower	Inspection confirms installation of low noise alarms, house alarms, visual alarms and paging systems. Alarms are to be checked on a daily basis.	Failure of any alarm will trigger corrective action.	Failed alarms will be repaired as soon as possible upon detection.
2.5.6 Ventilation fans, tractors, farm vehicles, transport vehicles and other equipment are maintained, repaired and operate to the manufacturer's requirements.	Both	All equipment is to be inspected annually via an equipment checklist	Observation of failure to comply with manufacturer's or requirements will initiate remedial action.	Equipment failures causing increased off-site noise are repaired within one week. Other equipment problems are repaired in a timely manner to prevent deterioration and occurrence of excessive offsite noise
2.5.7 Bird pick-up contractors have the equipment and training specified by Processors and comply with procedures that minimise noise. Noise control practices require the arrival, operation and departure of pick up trucks and crews to be conducted as quietly as possible.	Both	Procedures will be reviewed annually with the Processor Monitoring will be via regular observations by farm manager	Observation of non-compliance will initiate remedial action.	Bird pick up contractors will be instructed to ensure that arrival, operation and departure of pick up trucks and crews will be conducted as quietly as possible.
2.5.8 Bird pick-up contractors are supervised and suggested practical improvements or details of noisy contractor performance are reported to the Processor for action.	Both	Monitoring will be via regular observations by farm manager. Breaches of noise control practice will be recorded in the farm log book and reported to the processor.	Breaches will initiate remedial action.	Breaches to be reported to the processor within 24 hours for follow up with the pick up contractor.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.5.9 Farm noise levels comply with the noise criteria specified in the planning permit.	Both	Monitoring will be via the recording of noise complaints from neighbours.	Regular substantiated noise complaints from neighbours will initiate remedial action.	Where regular substantiated noise complaints occur, the principles and measures outlined in the National Environmental Management System for the Meat Chicken Industry – Rural Industries Research & Development Corporation Publication No. 03/038 will be adopted and implemented.
2.5.10 All physical noise barriers specified in the planning permit and/or endorsed plans are maintained in effective condition.	Grower	Monitoring will be via regular observations by farm manager	Observation of non-compliance will initiate remedial action.	Failures likely to cause increased off-site noise are repaired within one week. Other problems are repaired in a timely manner to prevent deterioration and occurrence of excessive offsite noise.
2.5.11 Changes that will improve farm performance against EMP 2.5 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.6 ODOUR

EMP Objective: To ensure that farm operations do not produce odours that unreasonably impact on neighbours.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.6.1 A farm logbook of key conditions and activities with potential to affect odour generation is in place, maintained and periodically reviewed as the basis for minimisation and control of odours. It addresses relevant factors including feed, drinker, litter and climate conditions and flock age.	Both	Confirmation will be via inspection of logbook at the end of each batch. Regular observations of odour generation by farm manager.	Observation of non compliance, either due to incomplete recording or verified odour complaints will trigger corrective actions. Observation of higher than normal odour generation from a shed will trigger remedial action.	In cases of incomplete recording, staff will be instructed to carry out proper recording. In instances of high odour emissions or verified complaints, investigation of the cause will be undertaken, and appropriate contingency action plans will be enacted. These may include those detailed in Section 2.11 and in various industry information. These cover odours caused by: - Drinker malfunction - Poor ventilation - Wet droppings - Dead birds - Chemicals
2.6.2 Drinker technology equivalent in performance to industry best practice is installed and maintained to minimise formation of wet litter.	Both	Annual comparison with other Growers in the Processor group, benchmarking between Processors and reviews of research and commercial literature. Daily inspection of drinkers and litter.	Where comparisons and inspections confirm that best practice operating performance is not being achieved, mitigation measures are to be investigated. Instances of wet litter will initiate remedial action.	Consistent poor performance dictates that drinker technology be repaired / upgraded in a timely manner to prevent further deterioration and occurrence of wet litter. Wet litter is to be removed from sheds within 8 hours of detection.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.6.3 Feed is sourced only from mills capable of producing an output of assured quality. Feed formulation objectives for meat chicken diets demonstrably minimise the risk of feed-sourced odour on farms. Feed delivery flexibility will be typically provided by availability of at least 3 silos (approx 45 tonne capacity) for every 2 sheds	Processor	Monitoring will be via regular observations of odour by farm manager.	Any individual feed batches strongly linked to excessive odour will be reported to the Processor.	Suspect batches will be reviewed, changed or removed immediately when the sources of the problem are known. Feed formulations suspected to be causing excessive odour or wet litter will be adjusted no later than for the next bird growing cycle.
2.6.4 The prevailing weather conditions and forecasts are taken into account when scheduling and planning farm operations in order to minimise offsite impacts. These are to be recorded in the farm logbook of key conditions, which for example, will include recording of wind direction and strength at the time of shed clean-out.	Grower	Weekly and daily monitoring of weather forecasts will be undertaken by the farm manager. Confirmation will be via inspection of the farm log book at the end of each batch.	Weather conditions are forecast that are likely to lead to off-site impacts,	Timing and / or nature of operations will be adjusted to take account of potentially adverse conditions.
2.6.5 Changes that will improve farm performance against the EMP 2.6 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.7 LITTER AND DUST

EMP Objective: To minimise odour or dust generation with potential for off-site impact and to ensure that no land or water contamination occurs.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.7.1 Prior to the introduction of the birds to the sheds, a 6 to 8 centimetre layer of dry sawdust, wood shavings, rice hulls or similar material (deep litter) is distributed over the entire shed floor.	Grower	Confirmation will be via inspection of litter by farm manager prior to placement of birds at beginning of each batch.	Insufficient depth of litter will trigger remedial action.	Litter will be topped up to sufficient depth prior to placement of birds.
2.7.2 A concrete hardstand of area sufficient for clean-out operations is provided and maintained at the shed entrance.	Grower	Confirmation will be via inspection by farm manager during cleanout operations.	Concrete area to be large enough to accommodate litter removal machinery. Insufficient size will trigger remedial action.	Concrete hardstand area to be increased to sufficient size prior to clean out of next batch.
2.7.3 Litter moisture is monitored and kept in a dry condition below the level for the farm known to cause odour (typically below 30 to 40% by weight throughout the batch). This is achieved by the shed floors built up above adjacent surface levels with compacted clay (eliminating moisture seepage into sheds), by best practice drinkers (eliminating wet litter) and by regular checking of the litter and drinkers. The results of monitoring are to be recorded in the farm log book.	Grower	Litter and drinker monitoring will be undertaken via regular visual inspections (typically 3 to 4 times daily). Weekly monitoring in each shed will be undertaken using a 6 point visual scale of dusty, friable, moist, sticky, wet/sticky/caking or very wet/sticky and recorded in the farm logbook. Measurement of litter moisture percentage by weight is to be undertaken where persistent odour problems are occurring.	Dry litter is material that does not form a single stable ball when squeezed by hand. Litter which is not dry will trigger remedial action. Areas of wet litter observed will trigger remedial action.	Contingency actions including gas heating, ventilation adjustment and others detailed in industry information will be implemented to dry litter and counteract high moisture levels prior to onset of excessive odour generation.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.7.4 Any major wet litter areas are removed and replaced with dry litter where practicable.	Grower	Monitoring will be undertaken via regular visual inspections (typically 3 to 4 times daily).	Areas of wet litter exceeding 10 square metres will trigger remedial action	Where the wet litter is likely to generate high levels of odour, it will be replaced with dry litter within 24 hours. Otherwise contingency actions including gas heating, ventilation adjustment and others detailed in industry information will be implemented to dry litter.
2.7.5 Litter transported off-site is free of dead birds.	Grower	Inspection of empty sheds before litter removal is undertaken will ensure that dead birds are not contained within the litter. Where wet litter is removed from any shed during the growing cycle, it will be inspected for dead birds prior to disposal.	Occurrence of dead birds will trigger remedial action.	Dead birds are collected and removed in the manner described in Section 2.9.
2.7.6 Litter is removed from each shed after each batch as part of the cleaning process and loaded directly onto trucks for transport off-site. Sheds are closed before and after clean-out to reduce the potential for off-site odour impacts. Litter will not be stockpiled on the property.	Grower	Confirmation will be via inspection by farm manager during cleanout operations.	A verified off-site complaint regarding odour or litter removal will trigger remedial action.	The principles and measures outlined in the National Environmental Management System for the Meat Chicken Industry – Rural Industries Research & Development Corporation Publication No, 03/038 will be adopted and implemented.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.7.7 Contractors responsible for delivery and pick-up of litter ensure that all trucks delivering and collecting litter at the beginning/end of each batch have secured covers, which are used to prevent any dust or spillage of the litter on arrival at and departure from site.	Grower	Litter delivery / collection vehicle movements will be monitored by the farm manager.	Where uncovered loads have been identified, remedial action will be triggered.	The contractor will be instructed to cover all loads.
2.7.8 Any litter spillage will be cleaned up promptly in order to minimise generation of contaminated stormwater or dust. Such events and actions are documented in the farm log book.	Grower	Litter delivery / collection activities will be monitored by the farm manager.	Occurrences of spilt litter will trigger remedial action.	Spills will be cleaned up within 8 hours of occurrence.
2.7.9 Spent litter from the farm will not be spread on the property.	Grower	This will be monitored by the farm manager.	Remedial action will be triggered if litter spreading occurs	Non-conforming activities will be ceased immediately.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.7.10 If dust is visible with potential for off-site impact, shed operations and / or loading activities will be modified to control the level of dust emissions.	Both	Monitoring will be undertaken via regular visual inspections of shed operations (typically 3 to 4 times daily). Inspections by farm manager during cleanout operations will be conducted.	Visible dust with the potential for off-site impacts will initiate remedial action.	Contingency actions include adjustment of litter moisture levels or fan cowls. Actions to be commenced immediately. Loading of used litter onto trucks may have to be stopped or modified.
2.7.11 Changes that will improve farm performance against EMP 2.7 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.8 CHEMICALS

EMP Objective: To identify all environmental and safety hazards associated with chemicals and fuels used on the farm, to ensure systems are in place to handle accidents and to prevent on-site and off-site impacts.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.8.1 The Safety Data Sheets (SDS) for all chemicals used are available on the farm. They are reviewed and the implications for use of the substances are assessed and understood. Risk controls are in place before a new substance is received on the farm.	Both	Annual inspection will provide confirmation.	Any missing SDS's will trigger remedial action.	Actions are to be undertaken prior to the subsequent batch to ensure compliance.
2.8.2 A list of the maximum quantities of chemicals and fuels typically stored on the farm is available, containers are labelled and HAZCHEM placards posted as required under Dangerous Goods and Workplace Hazardous Substances Regulations.	Both	Confirmation by annual inspection and reference to SDS's.	Any incidences of non-compliance will initiate remedial action.	Actions are to be undertaken prior to the subsequent batch to ensure compliance.
2.8.3 All agricultural chemicals used in poultry facilities are registered and approved for the intended use.	Both	Confirmation by reference to SDS's.	Any occurrence of unregistered or unapproved chemicals will trigger remedial action.	Non-complying chemicals will be removed from the property.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.8.4 All persons applying chemicals have successfully completed training in the safe use of chemicals or are supervised by a person who has. Evidence of training will be available on the farm.	Both	Confirmation by annual inspection that persons have successfully completed training such as the Farm Chemical Users Course or equivalent.	Occurrences of non-compliance will trigger remedial action.	Untrained or inappropriately supervised persons will be prohibited from applying chemicals on the farm.
2.8.5 Sanitising and cleaning products to be used on the farm, and their application, will be consistent with the Technical Appraisals and SDS's.	Both	Confirmation by annual inspection and reference to SDS's.	Occurrences of non-compliance will trigger remedial action.	Persons applying chemicals will be instructed on correct use and application of chemicals prior to the subsequent batch.
2.8.6 Records are maintained covering the purchase and procurement of chemicals and the details of each chemical application. These records are available to responsible authorities to substantiate that the chemical use meets the requirements of the Code of Practice for Farm Chemical Spray Application.	Both	Confirmation by annual inspection	Occurrences of non-compliance will trigger remedial action.	Actions are to be undertaken prior to the subsequent batch to ensure compliance.
2.8.7 Storage of farm chemicals prevents contamination of soil or stormwater and prevents uncontrolled reactions in routine operations or through spills. This includes provision of a low risk storage location, sealed flooring, segregation and provision of spill absorbents	Both	Confirmation by annual inspection	Occurrences of non-compliance will trigger remedial action.	Actions are to be undertaken prior to the subsequent batch to ensure compliance.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.8.8 LPG and other fuels storage and handling comply with legal (HAZCHEM) requirements and supplier guidelines. Spill cleanup techniques will meet HAZCHEM requirements.	Grower	Confirmation by annual inspection	Occurrences of non-compliance will trigger remedial action.	Actions are to be undertaken prior to the subsequent batch to ensure compliance.
2.8.9 No chemical or related odours are to be detected off-site during or after shed cleaning / sanitisation. Sanitisation/cleaning of shed uses high pressure low volume sprays to avoid generation of free flowing water or excessive odour or mists To minimise the risk of off-site chemical spray drift, shed is closed immediately after chemical applications and for 12 to 48 hours after spraying with hazardous or highly odorous substances such as cresylic acid, formaldehyde or organophosphate pesticides.	Both	Confirmation will be via inspection by farm manager during and after shed cleaning / sanitisation operations.	The identification of free flowing water or odours / mists that have the potential to create off-site impacts will initiate remedial action.	Immediate modifications to the method of cleaning / sanitisation or application of chemicals will be undertaken, including the closure of sheds, if necessary.
2.8.10 Controls are to be implemented to ensure there is no chemical spray drift into sensitive areas, such as watercourses and residences. Includes spraying only on days with suitable wind conditions and selection of appropriate spraying methods and spray nozzles.	Grower	Confirmation will be via inspection by farm manager during spraying operations.	The identification of spray drifts that have the potential to create off-site impacts will initiate remedial action.	Immediate appropriate corrective action will be implemented. Guidance is available in pamphlets including Reducing Spray Drift (Agriculture Victoria) and Protecting Waterways from Contamination by Pesticides (DNRE Victoria)

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.8.11 Changes that will improve farm performance against EMP 2.8 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.9 BIRD MANAGEMENT AND BIOSECURITY

EMP Objective: To provide a safe and healthy environment for birds that is appropriate for their physical and behavioural needs and for control of odour.

	Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.9.1	Sheds, equipment, management systems and farm practices comply with the *Code of Accepted Farming Practice for Welfare of Poultry (Rev 2)*. The automated shed environmental control system incorporating heating and cooling and the use of roof insulation will control sheds to the temperatures appropriate to bird age and as outlined in the welfare code above.	Both	Regular inspections by the farm manager will be undertaken to ensure compliance.	Occurrences of non-compliance will trigger remedial action.	Where non-compliance may impact on bird welfare, immediate corrective action will be undertaken. In other instances, actions are to be undertaken prior to the subsequent batch to ensure compliance.
2.9.2	Effective biosecurity and general shed management complies with the requirements of the Processor, the National Biosecurity Manual and industry guidelines to minimise the risk of disease introduction to the farm. Wild-bird proofing on shed and silos is installed and maintained. Exclusion zones exist around shed complex to control entry to authorised persons, vehicles & equipment.	Both	Inspections by the farm manager will be undertaken to ensure compliance prior to each batch of chickens being placed. Ongoing observation will be undertaken by farm manager to ensure compliance.	Occurrences of non- compliance or breaches will trigger remedial action.	Where non-compliance may impact on bird biosecurity, immediate corrective action will be undertaken. In other instances, actions are to be undertaken prior to the subsequent batch to ensure compliance.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.9.3 Adjustments as needed will be made to feeder availability and height, water availability and drinker height, ventilation rates, air speed, temperature and light levels.	Grower	Monitoring will be undertaken via regular inspections of shed operations (typically 3 to 4 times daily).	Where conditions deviate from guidelines issued by the processor or the Welfare Code, corrective actions will be undertaken.	Immediate actions will be undertaken to correct the specific problem.
2.9.4 Cooling system performance is observed, adjusted and maintained to provide the operating patterns specified by Processors or equipment suppliers and to minimise litter wetting.	Grower	Cooling system is continuously monitored as part of the automated control system.	Deviation of shed temperatures and humidity from the processor's tolerances will initiate corrective action.	The automated shed controllers will adjust operating parameters. These can be overridden manually if necessary. Any irregularities will be logged, investigated and rectified as soon as practical.
2.9.5 Any maldigestion of feed or observable increase in shed odour or moisture content of droppings is reported to the Processor for review (by a qualified husbandry officer).	Both	Monitoring will be undertaken via regular inspections of shed operations (typically 3 to 4 times daily).	An observable and recorded increase in droppings moisture for a three day period would typically confirm the need for a review and action.	Depending on the source of the problem, corrective actions could include bird removal, adjustment of feed formulation or treatment for poor health.
2.9.6 Bird density does not exceed those specified in the Code of *Accepted Farming Practice for Welfare of Poultry (Rev 2)*.	Processor	Total bird numbers will be checked at time of placement. Density / bird mass will be checked prior to first thin out.	The standard currently required by the Code is 40kg/m^2 maximum and is reviewed and updated from time to time.	Any likely exceedance will be controlled by removal of the necessary number of birds from the sheds to ensure compliance.
2.9.7 Growers record daily bird mortality and report any abnormal losses or trends to their Processor for review and action.	Both	Monitoring will be undertaken via daily recording of mortalities in the farm log book.	Bird mortalities at double the norm for the specific week of the batch or unusual flock appearance would be reported to the processor and trigger a review and action.	Investigation of the cause of abnormal mortalities would be immediately undertaken. Corrective action would be dependent on the identified cause of the problem.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.9.8 The collection of dead birds from within the sheds occurs on a daily basis, or more frequently should conditions so require.	Grower	Monitoring will be undertaken via daily recording of mortalities in the farm log book.	Occurrences of non-compliance will trigger remedial action.	Actions are to be undertaken prior to the subsequent batch to ensure compliance.
2.9.9 Disposal of dead birds is in accordance with the planning permit. Collection of dead birds occurs on a daily basis. Dead birds will be placed in buckets/ bins and placed in freezers prior to off-farm disposal.	Both	Monitoring will be undertaken via daily recording of mortalities in the farm log book and inspection of freezers.	Occurrences of non-compliance will trigger remedial action.	Actions are to be undertaken prior to the subsequent batch to ensure compliance.
2.9.10 Freezers are of a suitable capacity and are maintained in accordance with manufacturer's specifications and provided with on-farm backup power.	Grower	Freezers are inspected by farm manager at the completion of each batch. Backup generator is tested monthly.	Occurrences of non-compliance will trigger remedial action.	Actions are to be undertaken prior to the subsequent batch to ensure compliance.
2.9.11 Changes that will improve farm performance against EMP 2.9 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.10 OTHER ENVIRONMENTAL CONTROLS

EMP Objective: To ensure that those involved in broiler farming are environmentally aware, are trained and implement environmental and fire risk prevention and control practices.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.10.1 Broiler farm personnel participate in briefings and other activities arranged by the industry and other bodies to increase and share knowledge of best practice production and environmental management methods. Records of training completed are kept on-site.	Both	Annual inspection of on-site records will provide confirmation.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 12 months and may include attendance or talks at Processor, Grower Branch, Chicken Care, EPA/AgVic/TAFE meetings or workshops
2.10.2 The skills needed to carry out all farm activities safely, efficiently and environmentally soundly are defined. Suitable training is identified, planned, attended, recorded and reviewed. Records of training completed are kept on-site. The Farm Service Manager will help identify training needs.	Both	Annual inspection of on-site records will provide confirmation. The skills needed are identified in the *National Environmental Management System for the Meat Chicken Industry – Rural Industries Research & Development Corporation Publication No, 03/038.*	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 12 months and will address the deficiencies identified in the monitoring process.
2.10.3 Contingency Plans demonstrate that farm procedures and practices are proactive and cautious in their approach to foreseeable environmental risk events. Refer to Section 11.	Both	Annual inspection of contingency plans will provide confirmation.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 12 months and will address the deficiencies identified in the monitoring process.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.10.4 A Waste Minimisation Plan for all significant farm wastes is to be implemented. Refer to Waste Minimisation Plan in Appendix 1. Commercial waste operators are engaged to remove all farm wastes from the farm.	Both	Annual inspection of contingency plans will provide confirmation. The farm manager will regularly seek to identify opportunities and methods to reduce waste materials	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 12 months and will address the deficiencies identified in the monitoring process.
2.10.5 Clear requirements for fire prevention are documented and communicated to all people on the farm. Fire extinguishers are provided in the control room of each broiler shed. Fire fighting hoses are provided at the centre and the ends of each shed. Restrictions may be applied to smoking, welding, comfort heating, vegetation burn off or other activities involving potential sources of ignition.	Grower	Confirmation by annual inspection of documents and facilities.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 12 months and will address the deficiencies identified in the monitoring process.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.10.6 Appropriate facilities to prevent, detect and control fires are provided and maintained. Sheds are constructed from non-flammable materials including steel, concrete and fibreglass wool insulation. Water for fire fighting purposes is provided from the tanks which are fitted with CFA fire truck filling connections. Water can also be drawn from the dams.	Both	Confirmation by annual inspection of documents and facilities.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 12 months and will address the deficiencies identified in the monitoring process.
2.10.7 A fire management plan is prepared and held in the amenities service shed. All broiler farm personnel participate in briefings and training in implementing the plan.	Grower	Confirmation by annual inspection of documents and facilities.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 12 months and will address the deficiencies identified in the monitoring process.
2.10.8 Changes that will improve farm performance against EMP 2.10 objectives above will be identified and included in future development plans for the farm at the time of the annual EMP review.	Both			

2.11 CONTINGENCY PLANS

EMP Objective: To provide well thought out contingency plans and triggers for all foreseeable events to complement the planning and prevention of environmental impacts in earlier sections of the EMP.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.11.1 Documented contingency plans for all foreseeable odour and other environmental events and the trigger conditions for their implementation are defined and available on the farm. Contingency actions and triggers include those routine measures detailed in industry information (such as the *National Environmental Management System for the Meat Chicken Industry – Rural Industries Research & Development Corporation Publication No, 03/038*), chemical supplier SDSs and CFA Guidelines.	Both	Confirmation by annual inspection of documents and facilities.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 3 months and will address the deficiencies identified in the monitoring process. In cases where persistent or serious odour or dust problems are occurring, possible actions for consideration include increased litter depth, reduction in bird density, increased ventilation to dry litter, changed feed, earlier or emergency bird removal, dietary or odour control additives, air/dust system redesign, dispersion stacks and others. The choice of action(s) to be undertaken will be determined by the grower and processor together and will be dependant on the identified cause of the problem. Operational changes for persistent problems should be made within one week.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.11.2 In the event of an emergency where large numbers of dead birds must be removed, a bird disposal contractor having the capacity to remove large numbers of dead birds within 24 hours will be employed to remove the dead birds.	Both	Confirmation by annual inspection of documents recording details of potential contractors.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 3 months and will involve the identification of potential contractors and recording of their contact details.
2.11.3 Adequate means of disposal of dead birds in the event of an emergency disease outbreak or catastrophic mortalities are available, are used under direction of the State Chief Veterinary Officer and achieve the optimum overall health, environmental and economic outcome. This would normally involve off-site removal to a licensed landfill.	Both	Off-site dead bird removal will be undertaken by a licensed contractor under the direction of the State Chief Veterinary Officer. Compliance with such directives will be recorded in the farm log book.	Occurrences of non-compliance will trigger remedial action.	Any instances of non-compliance will be reviewed in association with the State Chief Veterinary Officer.
2.11.4 Chemical or fuel spill contingency plans and clean-up equipment and materials are available and meet the Safety Data Sheet (SDS) and other supplier recommendations. Clean up equipment and materials are kept within the machinery shed. Relevant documentation is maintained on-site in the amenity service shed.	Both	Confirmation by annual inspection of documents and equipment.	Occurrences of non-compliance will trigger remedial action.	Deficiencies in the fuel spill contingency plans or clean up equipment will be rectified prior to the commencement of the subsequent batch.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.11.5 Documented fire emergency control and response plan (Fire Management Plan) is located in the amenity service shed. This is practiced and updated for lessons learned from drills or actual events. Emergency drills will be undertaken every six months and plans updated where necessary.	Both	Confirmation by annual inspection of the plan and documents recording details of drills or actual events.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 3 months and will involve updating the plan / conducting drills as necessary.
2.11.6 Contract transport drivers are trained and familiar with their transport emergency response plan. A documented transport emergency plan is kept on-site.	Both	Confirmation by annual inspection of the plan.	Occurrences of non-compliance will trigger remedial action.	Corrective action is to be undertaken within the following 3 months and will involve the provision of the transport emergency plan.
2.11.7 Changes that will improve farm performance against EMP 2.11 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

2.12 COMMUNITY PARTICIPATION

EMP Objective: To provide processes for consultation with farm neighbours and the local Council so that their concerns and expectations are understood.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.12.1 All company and farm staff members demonstrate commitment to openness and two-way dialogue with all interested parties. Neighbour contacts and complaints will be logged in the farm log book.	Both	Confirmation by annual inspection of the farm log book. This will be compared with published industry average performance.	Significant variation from published industry average performance will trigger a review.	A review will be conducted to determine reasons for significant variance from published industry average performance.
2.12.2 Ways are sought to brief the community on the risks, controls and benefits of the meat chicken industry. Activities will be recorded in the farm log book.	Both	Confirmation by annual inspection of the farm log book.	Persistent complaints by neighbours will trigger a review of actions undertaken.	The review will be conducted to determine reasons for persistent complaints and the types of briefings given to neighbours / community.
2.12.3 Staff, neighbours and local Council will be briefed on the selected goals and targets, their rationale and historical performance. Annual contact with Council Planning Officers will be undertaken. Implementation is recorded in farm log book.	Grower	Confirmation by annual inspection of the farm log book.	Persistent complaints by neighbours will trigger a review of actions undertaken.	The review will be conducted to determine reasons for persistent complaints and the types of briefings given to neighbours / community.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.12.4 All complaints received are viewed as opportunities for improvement and addressed in a positive and co-operative manner. Neighbour complaints will be recorded in the farm log book. A written copy of complaint details using forms in the Victorian Code for Broiler Farms or similar will be provided by Council or other responsible authority to Growers promptly (typically within one day) to allow remedial action to be undertaken within one week where possible. An initial response to the complaint will be provided within 24 hours of receipt of complaint details.	Both	Confirmation by quarterly inspection of the farm log book.	Occurrences of non-compliance will trigger remedial action.	The review will be conducted to determine reasons for non compliance.
2.12.5 All complaints received including their type, complainant details and actions taken are recorded in the farm log book.	Grower	Confirmation by annual inspection of the farm log book.	Occurrences of non-compliance will trigger remedial action.	The review will be conducted to determine reasons for non compliance.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.12.6 Liaison with the local Council will take place over complaints received and on upset conditions that occur with potential to impact nearby residents. This liaison is to be recorded in the farm log book.	Grower	Confirmation by annual inspection of the farm log book.	Occurrences of non-compliance will trigger remedial action.	The review will be conducted to determine reasons for non compliance.
2.12.7 Complaints resolution using the local Council and industry processes and the Special Audits as outlined in the Code will be followed where required. The resolution activities will be recorded in the farm log book.	Both	Confirmation by annual inspection of the farm log book.	Occurrences of non-compliance will trigger remedial action.	The review will be conducted to determine reasons for non compliance. Potential resolution mechanisms may be found in various industry guidance documents.
2.12.8 The results of complaints, corrective actions, complaint resolution activities and audits are available to local Council and to neighbours. The availability of this information will be advised at the annual Council briefing outlined in Section 2.12.3.	Grower	Confirmation by annual inspection of the farm log book.	Occurrences of non-compliance will trigger remedial action.	The review will be conducted to determine reasons for non compliance.
2.12.9 Records of the properties, procurement and use of chemicals are maintained and available to the local Council.	Grower	Confirmation by annual inspection of the farm log book.	Occurrences of non-compliance will trigger remedial action.	The review will be conducted to determine reasons for non compliance.

Management Measures	Prime Resp.	Monitoring	Indicator / Trigger Level	Contingency Actions/Timing
2.12.10 Changes that will improve farm performance against EMP 2.12 objectives above will be identified and included in the future development plan for the farm at the time of the annual EMP review.	Both			

3.0 IMPLEMENTING THE EMP

3.1 OPERATIONS AND INCIDENT RECORDS

The operator will maintain a farm log book of their regular monitoring of the parameters or indicators identified in Section 2. This farm log book will be maintained on the farm to record the monitoring and corrective / contingency actions undertaken in situations and incidents considered to be outside normal operating parameters.

This log will be used in formulating operating targets for the next year and may be of assistance in the resolution of complaints.

3.2 INCIDENT INVESTIGATION

The operator and their processor will carry out a post-incident review of the causes of any significant incident and of the effectiveness of actions taken under the contingency plan for that incident. Both the grower and processor will undertake corrections to the root causes of the problem when identified. Results of individual incidents will be provided to the local Council and discussed with neighbours when requested.

4.0 AUDITING AND REPORTING

4.1 BIENNIAL FARM ASSESSMENT - EMP AND PLANNING PERMIT

A biennial assessment of the compliance with the site EMP and the Planning Permit and of the adequacy of the actions taken to meet farm improvement objectives and targets will be made and signed by the Grower, the Processor and an experienced auditor. The latter may be a Processor employee.

This assessment will use an audit document containing all the elements of the EMP and be conducted in detail sufficient to evaluate or confirm to the responsible authority that planning permit requirements are met.

The Grower and the Processor will retain audit documents for five years.

The audit will form the basis of the annual review of the EMP by the grower and processor.

The frequency of assessments and reviews may be adjusted based on the performance of the farm and with the agreement of the local Council.

Proof of the completion of the audit must be provided to Council at the conclusion of the audit. The grower will provide a copy of the full audit report to Council upon request.

4.2 COMPLAINTS HANDLING

As outlined under measures for Community Participation, complaints will be addressed as legitimate community concerns and opportunities for improvement. Where a verified off-site complaint occurs, the principles and measures outlined in the *National Environmental Management System for the Meat Chicken Industry – Rural Industries Research & Development Corporation Publication No, 03/038* will be adopted and implemented.

All complaints wherever received must be passed on to the grower within one working day and the grower must be advised in writing of a validated complaint within one day of its confirmation, so that causes and corrective actions can be identified and implemented.

When received, the grower, a suitably qualified processor employee and where possible a local Council or EPA officer and the complainant will investigate the problem. Complaints lodged with the responsible authority may trigger a Special Audit as outlined in the Code. Results will be provided to the local Council or EPA.

4.3 PUBLIC AND LOCAL COUNCIL REPORTING

A summary of the results of the audit will be provided on request to the local Council. Other interested parties may request summaries from the council or the grower.

APPENDIX 1 - WASTE MINIMISATION PLAN

Environmental Management Plan

Farrell Lane, Rosedale
April 2022

(2560R07)

WASTE MINIMISATION PLAN
BROILER FARM – FARRELL LANE, ROSEDALE

The following table outlines the potential wastes generated on the farm and their minimisation and disposal methods.

Waste Type	Method of Minimisation / Disposal
Used Litter	Spent litter will be taken off-site by contractors for re-use as fertiliser and soil conditioner.
Dead Birds	Dead birds will be collected on a daily basis, stored in freezers in the machinery shed and removed off-site by contractors on a regular basis.
Chemical Containers	Empty chemical containers are returned to the supplier for reuse.
Packaging & General Waste	Where possible, the need to minimise packaging will be taken into account when purchasing items for use on the farm.

airenvironment

PROJECT

Rosedale East Broiler Farm Expansion

PROJECT #

0057.1903.9

REPORT

Odour Risk Assessment

16 August 2024

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Air Environment

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Glossary

Term	Definition
Units of measurement	
A	Shed floor area (m^2)
Am^3/s	actual cubic metres per second (volumetric flow rate at actual temperature and pressure)
Atm	Atmosphere (unit of air pressure)
d	day
D	the average bird density (kg/m^2)
h	hour
ha	Hectare(s)
K	Kelvin (unit of temperature)
K-Factor	A scaling factor between zero and six representing a broiler shed's design and management
km	kilometre
km/h	kilometres per hour
m	metre
m/s	metres per second (velocity)
m^2	square metres
m^3	cubic metres
m^3/s	cubic metres per second (volumetric flow rate)
min	minute
°C	degrees Celsius
s	second
rad	radians (unit of angle)
Sm^3/s	standard cubic metres per second (volumetric flow rate at 25 °C and 1 Atm)
yr	Year
ou	odour units (odour concentration)
ou/s	odour units per second (odour emission rate)
V	ventilation rate
Abbreviations/Definitions	
3D	three-dimensional
AWS	Automatic weather station
BOM	Bureau of Meteorology
CALMET	Diagnostic three-dimensional meteorological model
CALPUFF	Gaussian puff atmospheric dispersion model
DEM	Digital elevation model
EPA	Environment Protection Authority Victoria
TAPM	The Air Pollution Model. Prognostic meteorological and air dispersion model developed by the Australian Government's Commonwealth Scientific and Industrial Research Organisation (CSIRO).
USEPA	United States Environmental Protection Agency

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Executive Summary

The Rosedale East broiler farm is seeking to expand by adding an additional module to the existing two-module farm. All three modules will utilise a staged shed ventilation regime using a combination of crossflow stacks, ground level crossflow fans, and tunnel ventilation fans. EPA has requested that results from a series of ten field odour intensity surveys conducted onsite by AOC be used to help assess the level of risk from the expanded farm, following methodologies contained within EPA Publication 1883.

The AERMOD model was used to was to simulate dispersion from Module 1 during each of the ten odour surveys, as this was the only module in existence at the time of the surveys. The meteorology for each hour was created using the AERMET meteorological preprocessor with input data collected at the Rosedale South AWS, supplemented by observations collected onsite during each odour survey. Odour emissions during each survey hour were estimated using the PEL K-Factor broiler farm odour emissions model, configured using actual meteorology, bird numbers, and bird ages at the time of each survey. A K-Factor of 1.9 was adopted as used in the original odour assessments for Module 1.

The predicted odour concentration at the transition point between observed obvious odour and subtle odour for each odour intensity survey was lower than would be expected and did not agree with the observed obvious odour intensity at that location. A number of possible explanations were canvassed, and extensive cross-checking and peer review failed to identify the reason.

Recent field odour intensity surveys from three other Victorian broiler farm sites were used to determine an average obvious to subtle transition concentration of 7 ou, allowing obvious broiler farm odour to be defined as three-minute odour concentrations at or above 7 ou.

Time series predictions were extracted at each sensitive receptor location, from the Module 1 to 3 crossflow modelling predictions for 2017. The annual frequency of obvious odour impacts was determined at each sensitive receptor location, allowing the odour risk class to be determined. A low level of risk was determined at each sensitive receptor location.

1 Introduction

Air Environment has prepared a series of AERMOD odour dispersion models for the Rosedale East Broiler Farm in Victoria. The most recent model (Air Environment, 2023; PEC, 2023) supports the expansion of the farm, from the currently approved Modules 1 and 2, with the addition of proposed Module 3 (1,155,552 birds in total). The assessment considered:

- Odour impact and risk assessment based on five years' worth of modelled meteorology and odour emissions (2013-17).
- A refined odour emissions profile, using crossflow ventilation, in the following phases:
    - Phase 1: Shed ventilation rates between 2.4 and 17.8 m^3/s — four DA600 crossflow fans in operation per shed, each directing shed emissions to a separate 600 mm diameter, 5.3 m tall stack.
    - Phase 2: Shed ventilation rates between 17.8 and 53.3 m^3/s — as per Phase 1, with all four DA600 crossflow fans operating at maximum capacity (4.4 m^3/s each) with the remaining required ventilation supplied by two DA1700 fans emitting at ground level.
    - Phase 3: Shed ventilation rates exceeding 53.3 m^3/s — shed operating in tunnel ventilation mode (as opposed to crossflow mode), with shed emissions being emitted at ground level.
- Comparison of K-Factors of 1.3 and 1.9.

At a meeting with EPA Victoria (EPA) on 22 April 2024, EPA requested that this model be evaluated to determine the level of risk, following Section 6.3 of EPA Publication 1883 (*Guidance for assessing odour*, EPA Victoria, 2022). This approach requires the model to be evaluated against a series of field odour intensity surveys conducted using the plume tracking method in accordance with Section 5.2 of EPA Publication 1881 (*Guidance for field odour surveillance*, EPA Victoria, 2021). A series of such surveys had already been conducted at the Rosedale Broiler Farm site by Air Odour and Compliance Specialist (AOC).

The AOC results would be used to determine the mean predicted odour concentration occurring during the surveys at the transition point between observed 'obvious' odour intensity and 'subtle' odour intensity, allowing an odour risk assessment to define the spatial extent of low and moderate odour risk.

Air Environment were commissioned to:

- Prepare a series of AERMOD meteorological files for the AOC survey periods using meteorological observations collected at the nearby Rosedale South automatic weather station (AWS), augmented by observed wind speeds collected onsite by AOC, with wind direction manually aligned to direct the observed plume over the transition point between obvious and subtle odour.
- Prepare an odour emissions inventory of the Rosedale East Broiler farm covering the AOC survey hours.
- Re-run the original AERMOD simulation for Module 1 on an hour-by-hour basis to directly simulate the impact of the meteorology, odour emissions, and odour dispersion occurring for each hour of the AOC surveys.
- Determine the average transition point concentration from the ten surveys to determine the threshold odour concentration defining obvious broiler farm odour.
- Review the Module 1 to 3 crossflow modelling scenario results to determine the frequency of each odour exposure risk class (negligible exposure to very high exposure) at sensitive receptor locations surrounding the Rosedale Broiler Farm site.

2 AOC Field Odour Intensity Surveys

AOC conducted ten surveys, with five occurring over the two-day period between 27 and 28 October 2022 and a further five between 20 and 21 December 2022. In each case the aim was to assess the extent of the odour plume emitted by Module 1, which was the only module in operation at the time.

The AOC October (AOC, 2022a) and December (AOC, 2022b) survey reports were used to determine the specific hour when the obvious to subtle odour transition point was identified for each survey. The survey dates and times are provided in Table 2-1 along with the number of birds housed in each shed at the time.

Table 2-1 AOC field odour intensity survey times and associated bird numbers at the Rosedale East Broiler Farm

Survey	Hour Commencing[1]	Shed 1 (north)[2]	Shed 2	Shed 3	Shed 4	Shed 5	Shed 6	Shed 7	Shed 8 (south)	Total Birds
Oct S1	27/10/2022 13:00	34,416	32,530	31,986	51,570	51,210	31,716	50,690	31,086	315,204
Oct S2	27/10/2022 16:00	34,416	32,530	31,986	51,570	51,210	31,716	50,690	31,086	315,204
Oct S3	28/10/2022 6:00	34,416	32,530	31,986	51,570	51,210	31,716	50,690	31,086	315,204
Oct S4	28/10/2022 9:00	34,416	32,530	31,986	51,570	51,210	31,716	50,690	31,086	315,204
Oct S5	28/10/2022 12:00	34,416	32,530	31,986	51,570	51,210	31,716	50,690	31,086	315,204
Dec S1	20/12/2022 11:00	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	400,000
Dec S2	20/12/2022 13:00	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	400,000
Dec S3	20/12/2022 16:00	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	400,000
Dec S4	21/12/2022 8:00	27,968	27,984	50,000	50,000	50,000	50,000	50,000	50,000	355,952
Dec S5	21/12/2022 11:00	27,968	27,984	50,000	50,000	50,000	50,000	50,000	50,000	355,952

Table Note: [1]The selected hours are for the estimated time that the most distant 'obvious' odour intensity was observed during each survey. [2]Bird numbers were calculated from information provided in the AOC reports.

The location of the obvious to subtle transition point for each AOC survey, defined as the most distant obvious odour intensity observation, is shown in Figure 2-1.

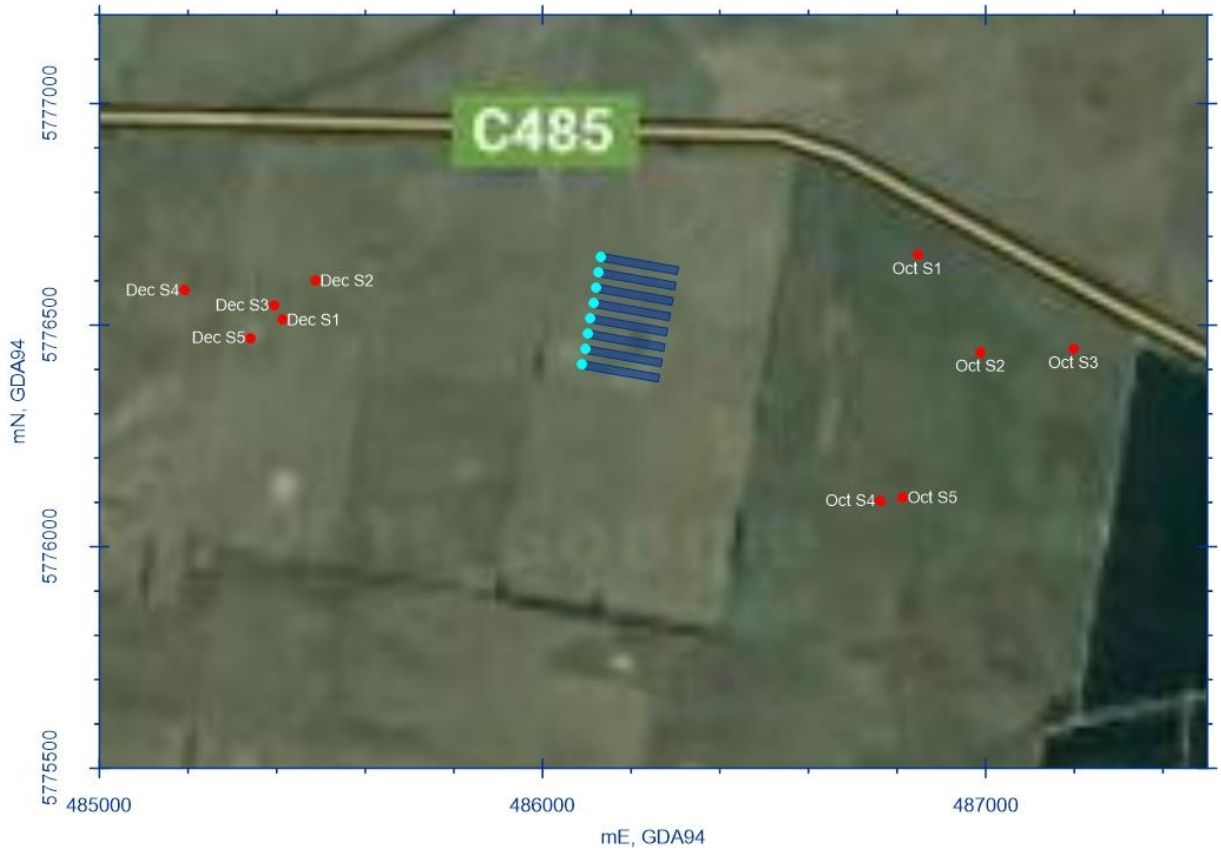

Figure 2-1 Location of the most distant obvious odour intensity observations recorded during the AOC surveys

3 Odour Emissions Model

The PEL broiler farm odour emissions model (Ormerod, R. and G. Holmes, 2005; PAE Holmes, 2011) was used to estimate the odour emission rate from each broiler shed for each of the ten AOC odour surveys.

The PEL model uses the observed meteorology, the bird breed, and the number and age of birds in each shed. A K-Factor of 1.9 was adopted, as used in the original odour assessments for Module 1. The bird ages for the four survey days are provided for each shed in Table 3-1.

Table 3-1 Bird age (in days) for each day of the AOC field odour intensity surveys at the Rosedale East Broiler Farm

Survey	Date	Shed 1 (north)[1]	Shed 2	Shed 3	Shed 4	Shed 5	Shed 6	Shed 7	Shed 8 (south)
Oct Day 1	27/10/2022	36	36	34	34	34	34	34	34
Oct Day 2	28/10/2022	37	37	35	35	35	35	35	35
Dec Day 1	20/12/2022	30	30	27	27	26	25	26	26
Dec Day 2	21/12/2022	31	31	28	28	27	26	27	27

Table Note: [1]Bird ages were calculated from information provided in the AOC reports.

The predicted odour emission rates for each AOC survey hour are provided in Table 3-2.

Table 3-2 Estimated odour emission rates by shed (ou.m^3/s) during each of the AOC field odour intensity surveys

Survey[1]	Shed 1 (north)[2]	Shed 2	Shed 3	Shed 4	Shed 5	Shed 6	Shed 7	Shed 8 (south)	Total OER
Oct S1	13,664	28,453	14,082	28,892	29,197	14,262	18,719	20,370	167,638
Oct S2	13,664	28,453	14,082	28,892	29,197	14,262	18,719	20,370	167,638
Oct S3	16,448	34,249	16,951	34,778	35,145	17,168	19,871	21,624	196,233
Oct S4	16,448	34,249	16,951	34,778	35,145	17,168	19,871	21,624	196,233
Oct S5	16,448	34,249	16,951	34,778	35,145	17,168	19,871	21,624	196,233
Dec S1	12,885	12,885	11,877	12,885	13,941	13,941	21,316	21,316	121,046
Dec S2	12,885	12,885	11,877	12,885	13,941	13,941	21,316	21,316	121,046
Dec S3	12,885	12,885	11,877	12,885	13,941	13,941	21,316	21,316	121,046
Dec S4	13,941	13,941	12,885	13,941	18,423	18,423	9,571	9,563	110,686
Dec S5	13,941	13,941	12,885	13,941	18,423	18,423	9,571	9,563	110,686

Table Note: [1]Odour emission rates are calculated for the estimated hour containing the most distant 'obvious' odour intensity observation during each survey using information provided in the AOC reports.

4 AERMOD Predictions by Survey

The individual AERMOD predictions for each hour of the AOC October and December surveys are shown in Figure 4-1 and Figure 4-2 respectively. The red dot in each figure marks the location of the observed transition point between obvious and subtle odour.

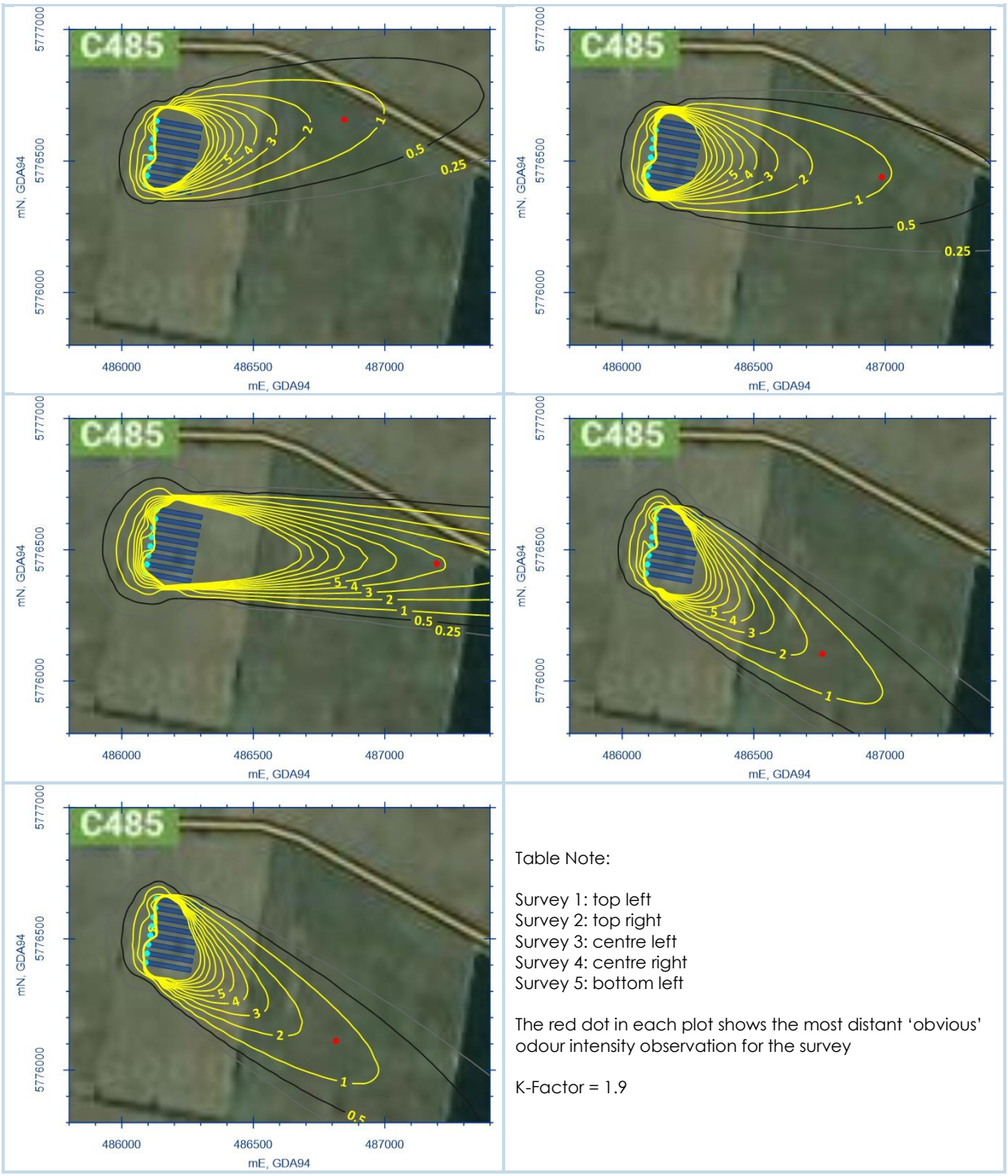

Figure 4-1 Predicted 3-minute peak odour plumes (ou) for the AOC October 2022 field odour intensity surveys

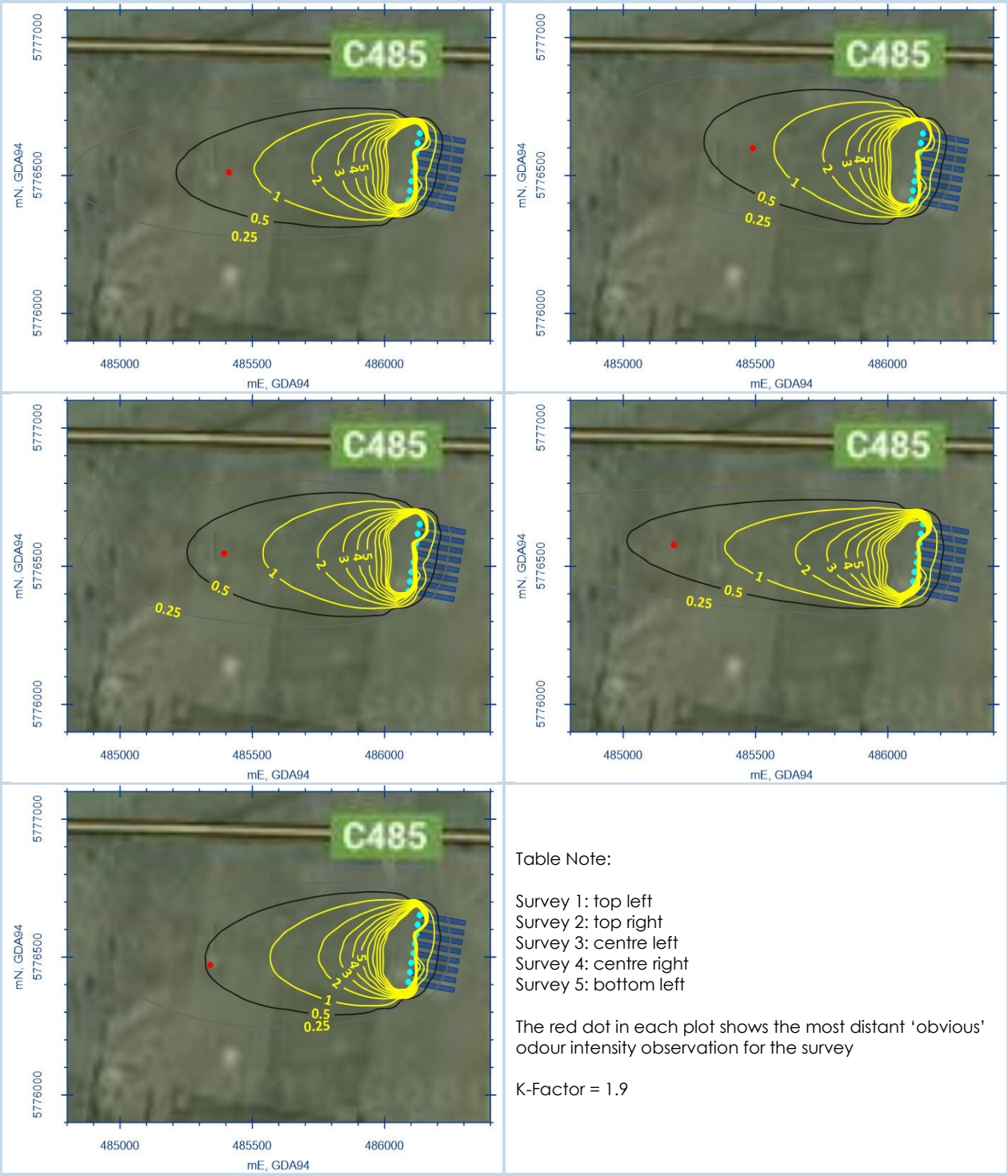

Figure 4-2 Predicted 3-minute peak odour plumes (ou) for the AOC December 2022 field odour intensity surveys

The predicted 3-minute peak odour concentrations occurring at each survey's obvious to subtle transition point are provided in Table 4-1.

Table 4-1 Obvious to subtle transition concentrations calculated for the AOC field odour intensity surveys

Survey	Obvious to Subtle Transition Concentration, ou[1]
October 2022: Survey 1	1.4
October 2022: Survey 2	1.1
October 2022: Survey 3	4.2
October 2022: Survey 4	1.7
October 2022: Survey 5	1.4
December 2022: Survey 1	0.8
December 2022: Survey 2	0.8
December 2022: Survey 3	0.7
December 2022: Survey 4	0.7
December 2022: Survey 5	0.5
Average	1

Table Note: [1]Based on peak 3-minute average concentration predictions made for each survey

The mean value of 1 ou shows that the model predictions for each survey hour underestimate the actual ground level odour concentrations, given that AOC were able to detect broiler farm odour at an obvious intensity level on each of these occasions.

There are several possible reasons for this underestimation:

- The supplied bird numbers and/or ages are incorrect
- The PEL odour emissions model was incorrectly applied
- The adopted shed K-Factor (1.9) is too low
- The AERMET-generated meteorological files are incorrect, either due to:
  - measurement error
  - the restricted number of available meteorological parameters to supply to AERMET
  - unrepresentative characterisation of the terrain and/or land-use classes of the modelling domain
  - errors in configuring AERMET
- The AERMOD sources used do not accurately characterise shed emissions occurring at the time of the survey
- The AERMOD model is skilled at predicting the magnitude of odour concentrations at peak percentiles, such as the 99.9th percentile, however it is not skilled at predicting dispersion on an hour-by-hour basis.

Each of these factors was carefully investigated and peer reviewed by both internal and external consultants, however no errors were identified. In particular, the following additional investigations were conducted:

- The sensitivity of the AERMOD meteorological file creator (AERMET) to different land use types, and combinations of available input meteorological data was tested. AERMOD was re-run using an array of different meteorological files created using different inputs There were some small

changes to the AERMOD predictions, however in each case AERMOD still vastly underestimated odour predictions when compared against AOC observations.

- The odour emissions spreadsheet for each survey hour was independently reviewed by both Air Environment and Pollock Environmental Consulting (PEC). The review could not find any error in the odour emission rate predictions.
- PEC compared the odour emission rates generated for each survey with emissions generated using the "GHD" odour emissions model. The comparison showed that both emissions models predicted similar odour emission rates.
- The odour emissions generated for each survey were compared against the distribution of Module 1 emissions for an entire year, showing that the survey emissions occurred at about the 70th percentile level. Predicted odour emissions would have been higher if the AOC surveys had occurred during peak hot weather conditions coinciding with peak bird numbers and age prior to pick.
- Calculations showed that any adjustment to the K-Factor would have to be large to obtain the expected odour concentrations of 6 to 8 ou at the obvious to subtle transition points.
- The modelling for each survey was repeated using Ausplume rather than AERMOD, to test whether the model itself caused the underestimated predictions. The results were similar to those obtained using AERMOD.
- The "Golder diagram" was used to check the dispersion formulations used in Ausplume (Pasquill-Gifford) against that used in AERMOD (Monin Obukhov length, L) to assess whether atmospheric stability was incorrectly specified in either of the two models. No issues were identified.
- The modelling for each survey assumed that the sheds were operating in tunnel ventilation mode. AERMOD was re-run with ground-level crossflow volume sources aligned along the shed length (there were no stub stacks at the time of the AOC surveys). Whilst a difference in the plume dispersion could be seen in the near field, there was very little difference in predicted concentrations at the obvious to subtle transition points.

No clear explanation for the degree of underestimation was identified.

5 Obvious to Subtle Transition Concentration from other Broiler Farms

In the absence of a clear obvious to subtle transition point it was decided to adopt a value calculated from recent Victorian broiler farm studies. Three studies were identified, each conducted by GHD, as shown in Table 5-1. An average obvious to subtle transition concentration of 7 ou was determined. Obvious broiler farm odour was therefore defined as three-minute average odour concentrations at or above 7 ou.

Table 5-1 Obvious to subtle transition concentration for recent broiler farm assessments

Assessment	Reference	Obvious to Subtle Transition Concentration, ou
Moolort and Strathlea Broiler Farms	GHD, 2024a	10
Lethbridge Broiler Farm	GHD, 2024b	5
Toongabbie Broiler Farm	Asimakis et al., 2024	6
Average		**7**

6 Odour Risk Assessment Results

The eight closest sensitive receptor locations to the farm are listed in Table 6-1, and are mapped in Figure 6-1. An odour risk assessment was performed for each sensitive receptor location, following the methodology established in Section 6.3.3 of the EPA guidance document for assessing odour ("Publication 1883", EPA Victoria, 2022).

Table 6-1 Location of the eight closest sensitive receptors surrounding the site

Receptor	Easting[1] (mE)	Northing[1] (mN)
R1	486,595	5,778,096
R2	487,276	5,777,982
R3	485,877	5,774,527
R4	484,935	5,774,441
R5	484,959	5,775,994
R6	484,511	5,775,915
R7	483,858	5,776,834
R8	484,265	5,777,618

Table Note: [1] GDA 94 coordinate system.

Figure 6-1 Location of the eight closest sensitive receptors surrounding the site

Time series predictions were extracted at each sensitive receptor location, from the Module 1 to 3 crossflow modelling predictions for 2017 (K-factor = 1.9). The annual frequency of obvious odour impacts (3-minute odour concentration of 7 ou or greater) was determined at each sensitive receptor location, allowing the odour risk class to be determined from Table 6-2. The results are summarised in Table 6-3, which indicates a low level of risk occurring at each sensitive receptor location.

Table 6-2 Risk of odour based on character, obvious odour intensity and frequency of predicted odour

Frequency	Hours per year (indicative)	Obvious odour character		
		unsafe	unwelcome	innocuous
0.5 - 2.0%	< 200			
2.1% - 6.0%	200 to 525.			
6.1% - 10%	526 to 875			
> 10%	(> 875 hrs/yr.)			

Negligible exposure	Almost no chance of odour exposure
Low exposure	Odour exposure unlikely
Moderate exposure	Likely chance of odour exposure
High exposure	Highly likely to have odour exposure
Very high exposure	Odour exposure near certain

Table Note: Copied from Table 12 and Table 11, EPA Victoria, 2022, p. 24. The first row of the risk matrix covers odour frequencies between 0.5% (approximately44 counts) to 2% (approximately 175 counts). Frequencies of unwelcome or unsafe odour character events below this range (1 to 43 occasions per year) are assumed to represent a low level of odour risk.

Table 6-3 Risk level at the identified sensitive receptors

Receptor	Annual number of 3-minute odour concentration events ≥ 7 ou	Risk Level
R1	11	Low
R2	9	Low
R3	2	Low
R4	1	Low
R5	16	Low
R6	20	Low
R7	6	Low
R8	11	Low

The level of odour risk was calculated for each model grid point, allowing odour risk to be plotted as shown in Figure 6-2. The region of very high exposure to odour risk was confined to the area immediately surrounding each farm module, spilling over the site boundary in a small region to the east of Module 2. The high exposure region was also largely confined to the site boundary, once again extending beyond the eastern site boundary. The moderate odour exposure risk region extends over the site boundary in all directions apart from at the southwest corner, however no sensitive receptors experience moderate odour exposure risk. Low exposure to risk is experienced at all other areas.

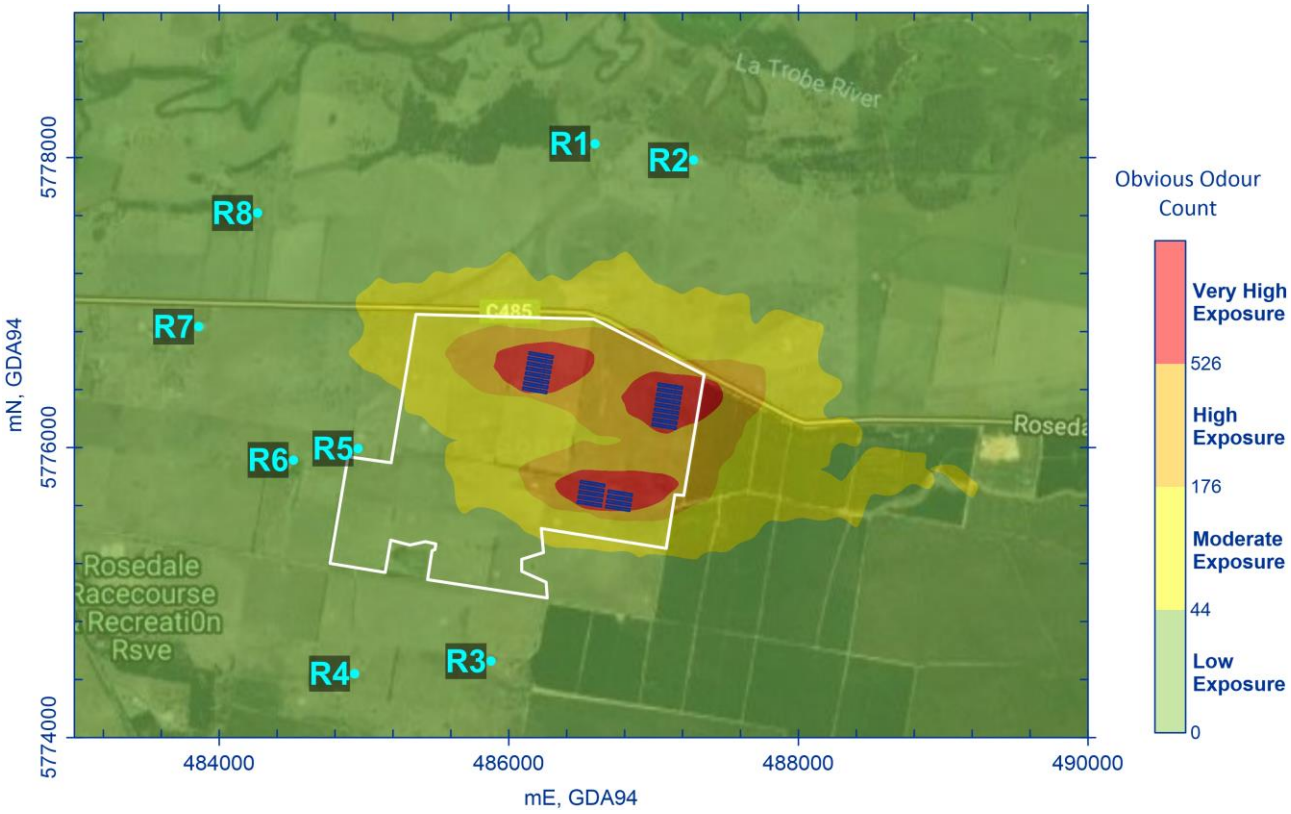

Figure 6-2 Predicted cumulative odour risk assessment for the approved and proposed farms

Assessment scenario: Approved and proposed farms — Cumulative Odour Risk Assessment, 2017 meteorology.	**Units**: Count of obvious odour (odour concentration ≥ 7 ou) at each model grid point
Contours: Low, Moderate, High, Very High Exposure	**Assessment criterion**: N/A
Location: Rosedale East Broiler Farm	**Data source**: AERMOD

Figure note: Plot created following the methodology established in Section 6.3.3 of the EPA guidance document for assessing odour ("Publication 1883", EPA Victoria, 2022)

7 Conclusions

The Rosedale East broiler farm is seeking to expand by adding an additional module to the existing two-module farm. All three modules will utilise a staged shed ventilation regime using a combination of crossflow stacks, ground level crossflow fans, and tunnel ventilation fans. EPA has requested that results from a series of ten field odour intensity surveys conducted onsite by AOC be used to help assess the level of risk from the expanded farm, following methodologies contained within EPA Publication 1883.

The AERMOD model was used to simulate dispersion from Module 1 during each of the ten odour surveys, as this was the only module in existence at the time of the surveys. The meteorology for each hour was created using the AERMET meteorological preprocessor with input data collected at the Rosedale South AWS, supplemented by observations collected onsite during each odour survey. Odour emissions during each survey hour were estimated using the PEL K-Factor broiler farm odour emissions model, configured using actual meteorology, bird numbers, and bird ages at the time of each survey. A K-Factor of 1.9 was adopted as used in the original odour assessments for Module 1.

The predicted odour concentration at the transition point between observed obvious odour and subtle odour for each odour intensity survey was lower than would be expected and did not agree with the observed obvious odour intensity at that location. A number of possible explanations were canvassed, and extensive cross-checking and peer review failed to identify the reason.

Recent field odour intensity surveys from three other Victorian broiler farm sites were used to determine an average obvious to subtle transition concentration of 7 ou, allowing obvious broiler farm odour to be defined as three-minute odour concentrations at or above 7 ou.

Time series predictions were extracted at each sensitive receptor location, from the Module 1 to 3 crossflow modelling predictions for 2017 (K-factor = 1.9). The annual frequency of obvious odour impacts was determined at each sensitive receptor location, allowing the odour risk class to be determined. A low level of risk of odour nuisance was determined at each sensitive receptor location.

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WATER TECHNOLOGY
WATER, COASTAL & ENVIRONMENTAL CONSULTANTS

Final Report

Flood Impact assessment of a proposed Poultry Farm Expansion at Rosedale-Longford Road, Rosedale, Victoria

14 February 2022

Document Status

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Client	
Client Project Manager	
Water Technology Project Manager	
Water Technology Project Director	
Authors	
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14 February 2022

Dear

Flood Impact assessment of a proposed Poultry Farm Expansion at Rosedale-Longford Road, Rosedale, Victoria

This report documents a flood impact assessment of the proposed poultry farm (Farm3) expansion at Rosedale-Longford Road, Rosedale. The report identifies the proposed development layout is adequate to convey 1% AEP flows without any significant adverse impacts to neighbouring properties. The impact of the proposed development on floodplain storage in the catchment is localized. The results also demonstrate on-site flood conditions across the proposed units are safe, and safe access is available from most of the properties via Rosedale-Longford Road during a 1% AEP flood event.

The report also addresses the consequences of development on the storage and passage of flood flows and a dam within the site are proposed to cater the surface flow from the shed roofs as well as the compensatory storage.

The raising of the finished floor level of the proposed shed to a minimum of 300 mm above the 1% AEP flood level is recommended to reduce the flood hazard associated with overland flow in a 1% AEP event.

If you have any queries regarding this report, please do not hesitate to contact me directly

Yours sincerely

WATER TECHNOLOGY PTY LTD

CONTENTS

LIST OF FIGURES

1 INTRODUCTION

1.1 Background

After the successful approval of the two poultry farms at Rosedale-Longford Road, Rosedale, the owner is seeking approval for a new farm, Farm3. There is currently one farm under construction at the site and a planning permit has been approved for a second. A concept sketch of the proposed farms is presented in Figure 1-1,

This report outlines the results of flood modelling undertaken to assess the impact of the proposed Farm3. Farm3 is an extension of the broiler farm and is located south of Farm2. Water Technology conducted past modelling to inform a planning permit application of the Farm1 and Farm2.

This work has been undertaken to address WGCMA's requirement for flood modelling to determine the flood extent across the subject site of the proposed Farm3. Specifically, the WGCMA were concerned the third farm may lead to changes in flood levels outside the subject.

Water Technology's previous modelling of the site was used for this assessment.

1.2 Site Description

The proposed development is on a property at Rosedale-Longford Road, Rosedale, Victoria. Currently, they have one farm (Farm1) under construction and the second farm (Farm 2) has been awarded a planning permit.

The site is subject to flooding from the Latrobe River and Blind Joes Creek.

The land is subject to flooding in 1% Annual Exceedance Probability (AEP) event, as highlighted during the Rosedale Flood Study (WT, 2016). Figure 2-1 shows the 1% AEP flood extent and the proposed farm site. Access to the site is from Rosedale-Longford Road to the north of the site.

The proposed development comprises of sheds, feed silos, water storage tanks and a machinery shed. A 15 m wide landscape buffer surrounds the farm. A proposed dam which is subject to detailed design is located immediately north of the sheds.

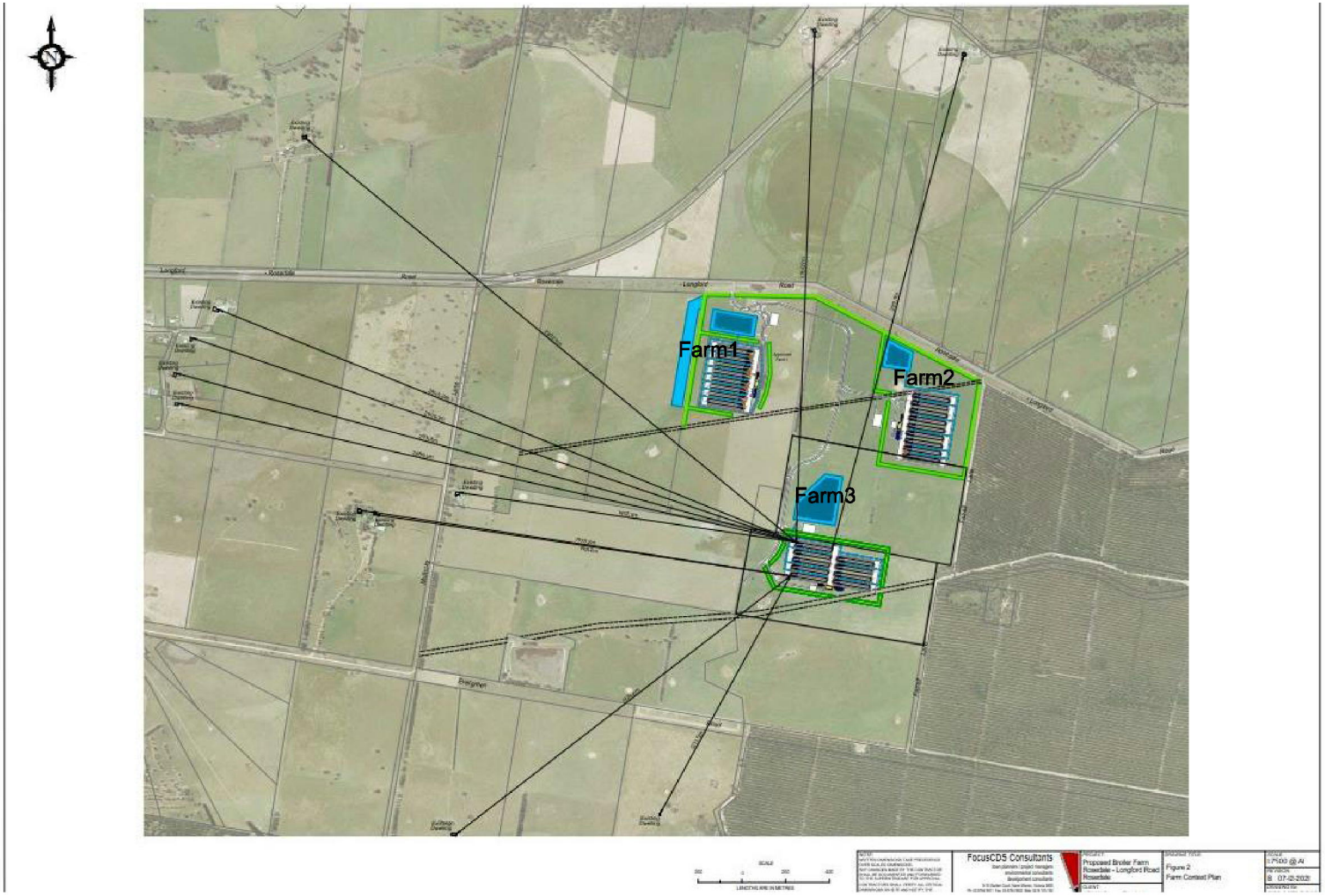

Figure 1-1 Rosedale Broiler Farm Master Plan

2 FLOOD IMPACT ASSESSMENT

2.1 Overview

Water Technology recently undertook the Rosedale Flood Study (Water Technology, 2016). This included detailed hydrological and hydraulic modelling of Blind Joes Creek. The model developed as part of that study has been used in this flood impact assessment, comparing pre and post-development water levels, depth and velocities.

The previously developed hydraulic model (TUFLOW) was clipped for the study area and used to model overland flooding under existing conditions. The model extent is shown in Figure 2-1. The existing conditions model was then modified to include the proposed broiler farm. Modifications are detailed in the following sections.

A review of previous flood modelling and mapping has shown flooding within the study site is likely to be dominated by overland flow from the upstream catchments and the local rainfall.

The flood investigation was carried out for the 1% AEP event. The AEP is a measure of the likelihood a flood is equalled or exceeded in any given year. The flood investigation consisted of hydraulic modelling. Details of the hydraulic modelling are presented in the following sections. The hydraulic model inflow boundaries were extracted from previous modelling (WT 2016)[1].

2.2 Hydraulic Modelling

Hydraulic modelling was carried out using a rain-on-grid TUFLOW model for both existing and developed conditions. The rain-on-grid approach allowed simulation of runoff generated from local rainfall on a two-dimensional grid that is representative of the site topography. Runoff moves across the grid based on the site topography and runoff characteristics as it would in a real storm event. Rainfall losses (interception/infiltration) are taken into account in the modelling along with the hydraulic (surface) roughness.

The model extent is shown in Figure 2-1. The inflow boundaries from catchments external to the model were extracted from the previous modelling. The boundary locations are shown in Figure 2-1.

The model Digital Elevation Model (DEM) was built using the available topographic LiDAR data, flown in 2015 (DELWP). LiDAR was available at a 1 m resolution. A 4m x 4m grid resolution was adopted for the 2D hydraulic model, which provided a suitable resolution to allow representation of the roadways.

The hydraulic model roughness was adopted from the Rosedale Flood Study. The adopted roughness was verified to the available planning layers and to areal imagery. A constant roughness (Manning's 'n') of 0.045 was adopted for the waterway with moderate vegetation. The farm, grassed areas or park roughness were specified at 0.04, while dam with open water with possible submerged vegetation was represented by 0.02 in developed condition modelling. The existing roads were represented by roughness value of 0.02 and buildings were modelled as 0.2.

In the developed modelling, the proposed Farm Shed 3 was included in the as a TUFLOW Z shape. The Z shape raised the land levels at the shed by 300mm. In the model, the dam was represented with an area approximately 28,000 m^2 and initial depth was set to 3.5 m below the top of the bank. It is understood that the dam is subject to detail design.

[1] Rosedale Flood Study, WT (2016)

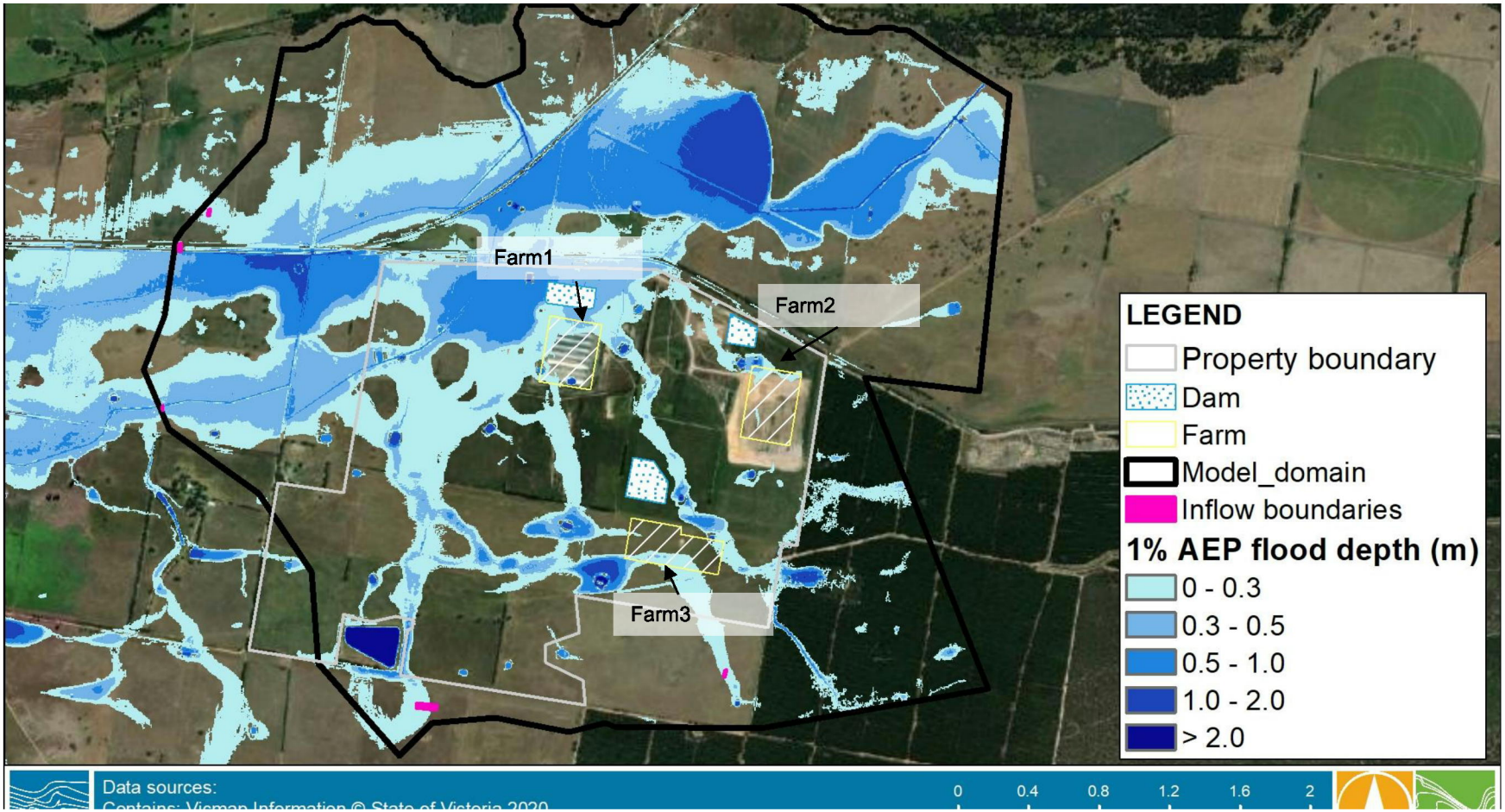

Figure 2-1 1% AEP flood extent, Model domain (Black polygon) and inflow boundaries

2.3 Existing Conditions

Existing conditions model results are consistent with the previous Rosedale Flood Study (Water Technology, 2016) and referred to by the WGCMA.

The model was run for the 1% AEP event for the 12 hour duration, which was shown as the critical duration for the site. The existing conditions flow paths are shown in Figure 2-2, the velocity vectors are shown in yellow arrows and the range of shaded blue areas represent the range of flood depths (the darker the blue, the deeper the water).

The site is shown to be at risk of flooding from waterways traversing the property. The maximum flood depth in 1% AEP event is presented in Figure 2-3. The maximum flood depth in the site remains at approximately 0.25 m, located in the south-west of the site. Flood depth immediately adjacent to the proposed broiler farm varies between 0.1 m to 0.25 m.

Flood velocities in the property site are generally less than 1 m/s as shown in Figure 2-4; however, a few areas to the west and south west of the site have velocities greater than 1 m/s. Flood velocities at the proposed Farm Shed 3 location are generally less than 0.5 m/s with the exception of a small area to the south west of the proposed farm having the maximum flood velocity of 0.8 m/s.

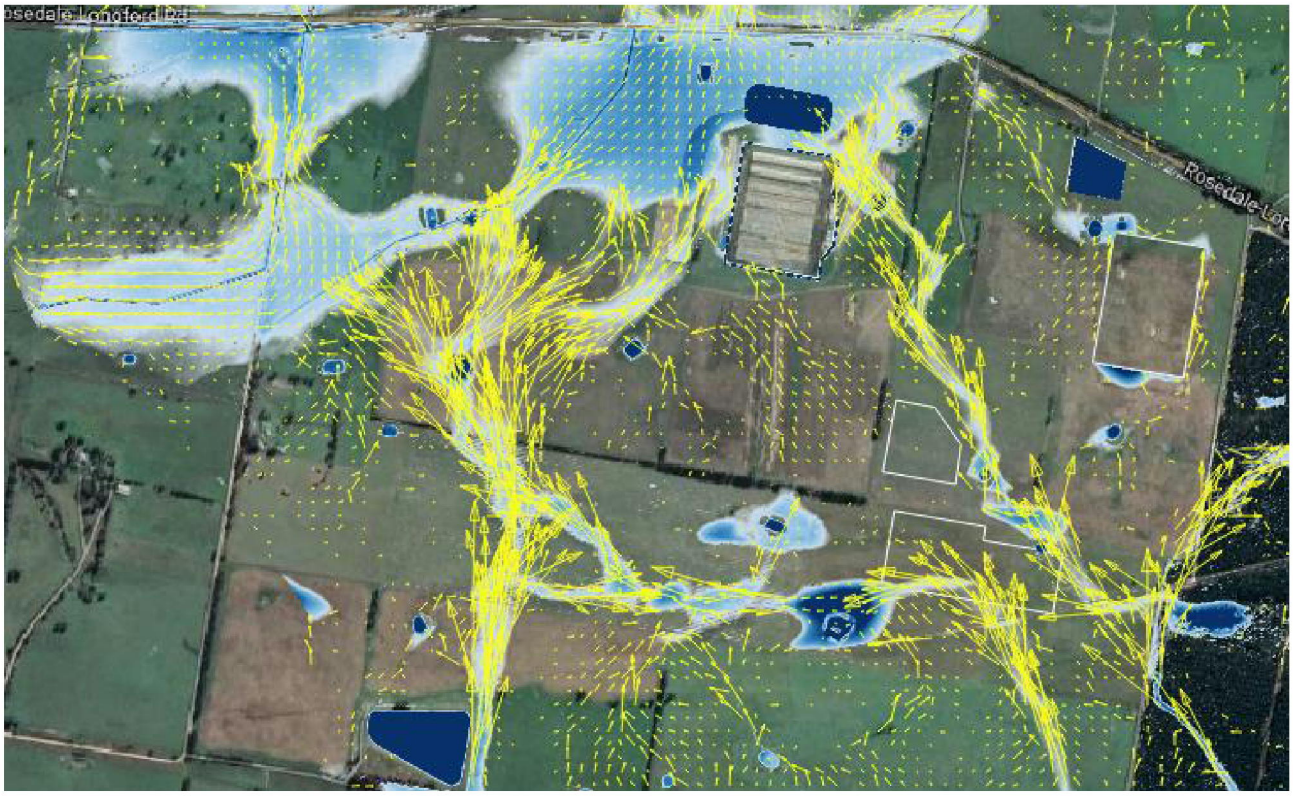

Figure 2-2 Flow path in 1%AEP event

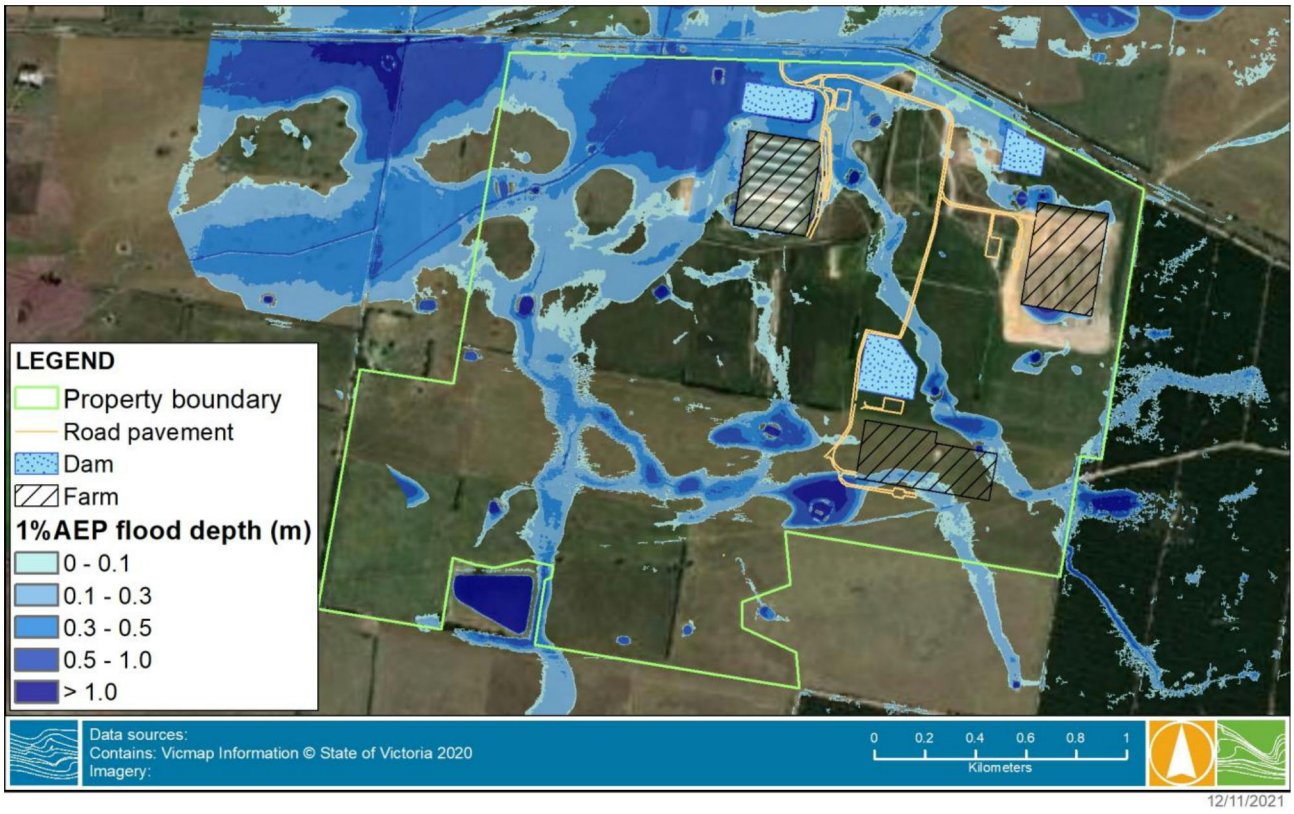

Figure 2-3 1%AEP flood depth in existing condition

Figure 2-4 1%AEP velocity in existing condition

2.4 Developed Conditions

The development of the broiler sheds causes a minimal difference to depths and velocities on site. The difference in flood levels and velocities between existing and developed conditions for 1% AEP event are presented in Figure 2-5 and Figure 2-6 respectively. There are no significant changes observed and the results show changes are localized to within the property boundary. There is a localised increase to flood levels, to the south and west of the Farm3, ranging from 10 to 30 mm, these increases are not considered significant.

Flood velocities within the development site (Figure 2-6) remain relatively unchanged from existing conditions.

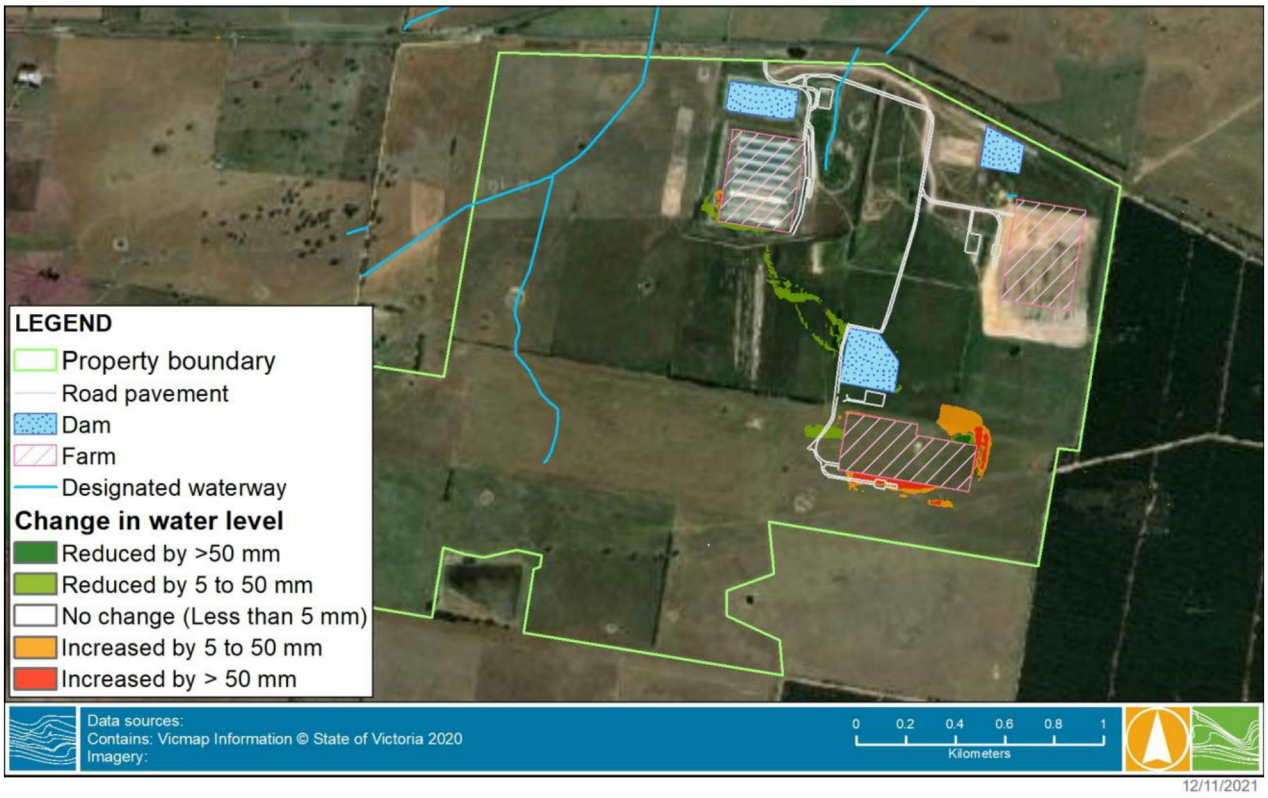

Figure 2-5 Changes in water level in developed condition in 1%AEP event

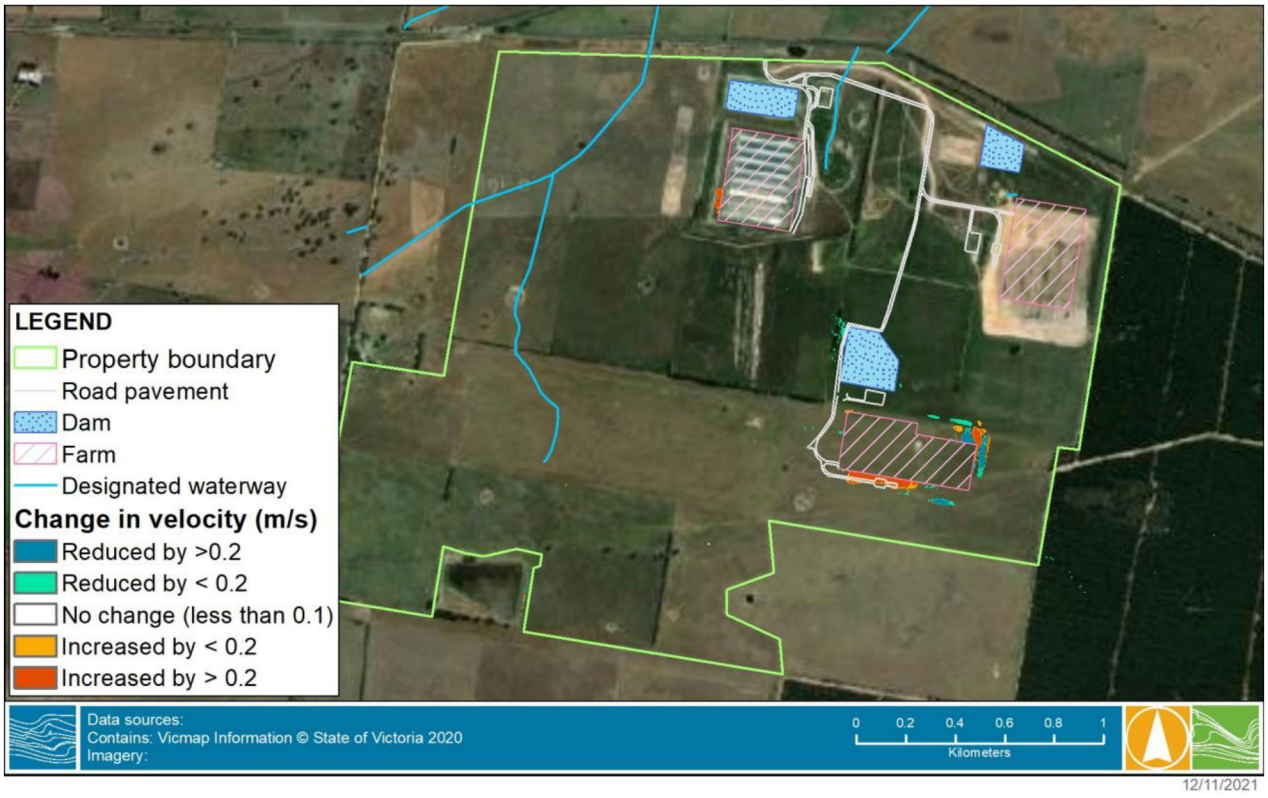

Figure 2-6 Changes in velocity in developed condition in 1%AEP event

3 RESULTS AND DISCUSSION

3.1 Overview

The hydraulic analysis has demonstrated the site can convey 1% AEP flows without any significant adverse impact to neighbouring properties with the development of Farm3.

The site was assessed according to the DELWP *Guidelines for Development in Flood Affected Areas* (February 2019).

The DELWP guidelines state that floodplain managers are to assess development proposals against four key objectives, which are further discussed below:

- Objective 1 – Safety.
- Objective 2 – Flood Damage.
- Objective 3 – Flood Impacts.
- Objective 4 – Waterway and Floodplain Protection.

3.2 Objective 1 - Safety

This objective aims to protect human life and health and provide safety from flood hazard.

To provide a safe development, safe access is required during a flood. The DELWP guidelines determine if it is safe for pedestrians to move about on a property during a flood event. Safety is defined in terms of the depth, velocity and velocity-depth product as follows:

- Depth should be no more than 0.5 m.
- Velocity be no more than 2.0 m/s.
- The product of depth and velocity (VxD) should no more than 0.4 m^2/s.

Flood hazard is also defined in ARR 2019 guidelines.

The proposed development will set floor levels 0.3 m above the 1% AEP flood level on a fill pad. Raising the finished level of the proposed development to a minimum of 300 mm above the 1% AEP flood level is recommended to reduce the flood hazard associated with a 1% AEP flood event.

The maximum VxD product for 1% AEP event is presented in Figure 3-1. The site can be accessed from Rosedale-Longford Road. In a 1% AEP flood event, the results show that the site will be mostly flood free except the waterways. The road is found to be flooded by less than 500 mm (Figure 2-3). Maximum velocities around the site are low, less than 0.3 m/s. There are some isolated spots other than the waterways where the velocities are ranging between 0.5 to 1 m/s (Figure 2-4). The product of depth and velocity at site is less than 0.4 m^2/s, only a part of the waterways experience higher value (Figure 3-1). The combination of depth, velocity and depth-velocity product defines the hazard which categorize the site as safe in a 1% AEP event (Figure 3-2).

Figure 3-1 1% AEP maximum (V x D) (Existing condition)

Figure 3-2 1%AEP hazard (Existing condition)

3.3 Objective 2 - Flood Damage

The proposed development would be raised on a fill pad and would have the finished level set at 0.3 m above the 1% AEP flood level so no damage in a 1% AEP event would occur. The floor level could be negotiated to a higher level if it was deemed necessary due to consideration of more extreme floods, but 0.3 m above the 1% AEP flood level is standard practice in Victoria.

3.4 Objective 3 - Flood Impacts

Development in flood affected areas can result in changed flood conditions on neighbouring properties, with flood levels and velocities potentially increasing. The guiding principle in this case is to protect the natural function of floodplains and overland flow paths to allow conveyance and storage of floodwater to be maintained.

Flood modelling has shown (Figure 2-5, Figure 2-6) that the proposed development does not divert flood water or increase flood levels or velocities to the detriment of neighbouring properties.

The raised fill pad will reduce the floodplain storage. Modelling has shown this has no impact on downstream flood levels but from a policy perspective this loss of storage may require mitigation to meet the performance criteria set in the DELWP guidelines.

The loss of floodplain storage due to the proposed earthworks is estimated to be around 2910 m^3. As per DELWP guidelines, the amount of compensatory cut required is 3786 m^3 which was compensated by the proposed dam having a capacity of 98,250 m^3. The dam area of 28,000 m^2 and a depth 3.5 metre is considered in the modelling. The dam would require 14,000 m^3 to cater the roof runoff in a 1%AEP event for 168 hours duration storm, rest will be available as compensatory storage. This loss of storage has been shown to have no impact on offsite flood levels.

3.5 Objective 4 – Waterway and Floodplain Protection

There are designated waterways passing through the subject site. The impact on the waterways was assessed in terms of velocity changes. The existing flow velocity within the designated waterways in 1% AEP event does not exceed 2 m/s (Figure 3-3).

The changes in flow velocity in developed condition is plotted in Figure 2-6 shows no changes in velocity in the waterways. The development is not likely to pose any increased erosion risk to the waterways.

Figure 3-3 Existing 1% AEP velocity in the waterways

4 SUMMARY

A detailed hydraulic analysis has been undertaken of the proposed broiler Farm3, Rosedale.

The flood modelling results and analysis presented in this report demonstrate:

- In 1% AEP event, the site and the road will be flooded to depths less than 500 mm.
- Velocities at the site are low and do not present a safety concern during a 1% AEP event.
- The site and access road has low flood hazard.
- The proposed development is unlikely to have any adverse impacts on peak flood levels or velocities and will not divert floodwater and change the current flood behaviour to the detriment of neighbouring properties.
- The proposed development should incorporate a fill pad raised above ground to the 1% AEP flood level and the floor levels set at 0.3 m above the 1% AEP flood level.
- The raised fill pad will reduce the floodplain storage. The loss of floodplain storage due to the proposed earthworks is estimated to be around 2,910 m^3. As per DELWP guidelines, the amount of compensatory cut required is 3,786 m^3 which was compensated by the proposed dam having a volume of 98,250 m^3. The capacity of the dam is sufficient to cater the roof runoff in a 1% AEP event and loss of storage. This loss of storage has been shown to have no impact on offsite flood levels.

It is recommended that this report be sent to CMA and Council for comment before lodging any changes to the proposed development.

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