Biosecurity Risks Development Application MCU/12/0184

Proposed Broiler Farm
136 Top Forestry Road, Ridgewood QLD 4563

Application:
MCU12.0184 & ERA 12/0087

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1.0 Introduction

The proposed meat poultry development (MCU12/0184) would be a significant biosecurity risk to the locality's natural resources, agricultural production and public health because of its location, scale, design, normal operations, and routine and emergency disease management procedures.

It is of particular concern that the development would be a source for the introduction and transmission of contagious viral poultry diseases that would have widespread, adverse environmental, social and economic impacts.

The physical characteristics of the site's catchment location impose significant constraints on routine and emergency disease procedures associated with the prevention of the introduction and spread of contagious poultry diseases.

Poultry disease micro-organisms can be carried by air, soil, water and animals. Wild birds, as well as poultry species, are sources of avian disease introduction and transmission via orifices, body wastes, feathers and skin debris. The valley is a wild bird habitat and flight corridor and they cannot be excluded from the development site or prevented from using other properties, dams and creeks.

North slopes of the development site run down to Blackfellow Creek North.

The outbreak of a contagious viral poultry disease (e.g. Newcastle Disease, Avian Influenza) requires the destruction of all poultry stock, the on-site disposal of all carcasses, animal matter and shed litter, and the chemical decontamination of the production complex.

The recommended AUSVETPLAN disposal (burial or incineration) and decontamination procedures would adversely affect the area's air, soil and water resources. This would have implications for the locality's biodiversity, agricultural integrity, public health and amenity.

Quarantine containment and movement restrictions would apply not only to the infected production site, but also to 1st and 2nd removed adjoining properties and nearby meat, breeder and layer poultry operations.

2.0 Background

The proposed development is located in the Mary River Catchment Locality and The Noosa Plan (2013) indicates that a development should not adversely affect the agricultural, environmental and amenity values of this locality.

The Qld industry guidelines (DAFF, 2012, p29) state that meat poultry waste management must be conducted so that:

- unlawful environmental harm is not caused,
- off-site release of contaminants does not occur,
- the quality of any surface water or ground water is maintained.

Queensland Department of Agriculture and Fisheries (DAF) also advises that a meat poultry development should have an Environmental Management Plan based on the RIRDC's pro-forma system and site-specific circumstances (DAFF, 2012, p24).

The poultry industry and the federal and Queensland governments require a poultry development to have a Biosecurity Management Plan to minimise risk of disease outbreak and off-site transmission.

The Queensland Biosecurity Act 2014 requires council to have a Biosecurity Management Plan to protect the shire from biosecurity risks.

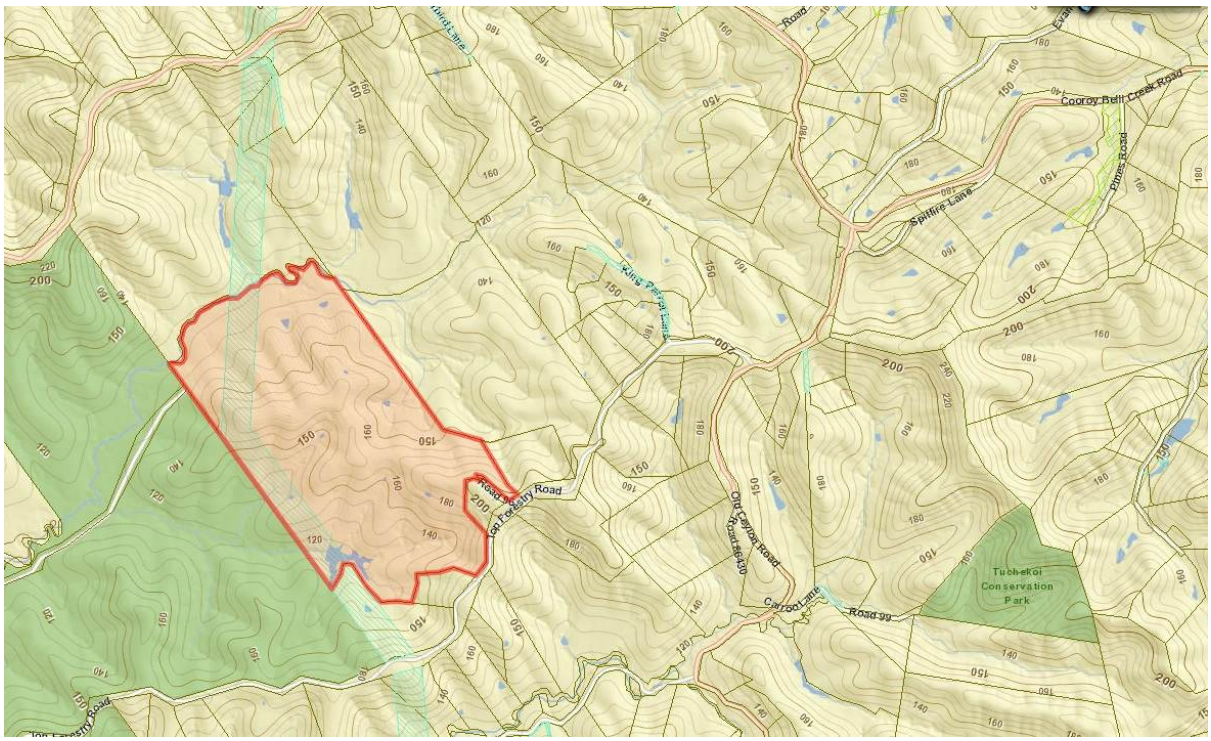
3.0 Site Location Characteristics

The development site is located in a steep, narrow Mary River catchment valley in a Landslip Hazard Zone. The valley's complex topography and drainage patterns feed water into property dams and the north arm of Blackfellow Creek.

The soil type on the proposed site is a dermosol derived from phyllitic shales with typical profile features of:

- shallow soil depth (often < 0.5 m),
- weak to moderate structure,
- moderate water holding capacity.

The topography of the proposed site is steep, dropping from 175 metres to 110 metres at Blackfellow Creek. The gradients of the slopes from the 8 poultry shed sites to the creek vary between 16% and 29%. Slopes of >15% are regarded as a high erosion risk.



Topographic detail of catchment. Development proposal boundaries in red.


Flooding and siltation of Blackfellow Creek (North).

Blackfellow Creek floods when > 150 mm of rain falls in 24 hours. This has occurred 7 times in the last 5 years, with 4 of these events having recorded falls of 200+mm.

The combination of shallow, highly erosion prone soil types, on steep topography in an area with frequent high volume rainfall and catchment flood events poses a high risk of stream contamination from the site in normal operations. This risk would be much higher in the event of a contagious disease outbreak.

4.0 Impacts of Emergency Disease Outbreak Procedures

The 8 shed operation would carry approximately 230,000 birds and require 1027 cubic metres of bedding material per batch cycle.

The operator would have to bury or burn approximately1,4527 cubic metres of infected carcasses (500m3) and contaminated litter (1027m3) in a worst case situation when the sheds were at full capacity (Week 5 prior to the first catchout). This would be equivalent to the volume of 12 standard shipping containers..

4.1 On-site Disposal

The **on-site burial** of infected carcasses, animal wastes and contaminated litter would:

- attract carrion feeders (dogs, rodents, insects, birds) that can carry the disease off-site and cause nuisance impacts,
- create odour from decomposition gases,
- create leachates from carcass fluids and organic matter that can contaminate soils, ground and surface water (dams, creek),
- cause erosion and siltation as excavation of burial pit alters drainage patterns and landform, and destabilises topsoil.

The **on-site incineration** (pyre or pit) of carcasses and animal wastes would:

- require large amounts of fuel and generate intense heat,
- contaminate air with odour, smoke and fine particles,
- contaminate surface water (dams, creek),
- increase the risk of bushfires in a non-reticulated water supply area within a high risk Bushfire Hazard Zone.

4.2 Site decontamination

The AUSVETPLAN decontamination manual (2008, p30) advises that disinfectants used in poultry disease control are potentially noxious and may have adverse environmental impacts.

The operation of the shed ventilation systems prior to and during decontamination would cause off-site transmission via bioaerosols and dust of disease micro-organisms.

The decontamination of shed interiors and exteriors, equipment, vehicles, machinery and poultry feed and water supplies would cause the on-site and off-site release of chemical residues via shed effluent and exhaust air.

5.0 Implications

The environmental, public health and economic impacts associated with poultry disease outbreaks and the public perception of those disease risks would adversely affect:

Surrounding and downstream properties and residents

- contamination of tank, dam and creek water supplies in a non-reticulated supply locality.
- respiratory health impacts.
- odour, dust and noise amenity impacts during disposal and decontamination procedures.
- risk of disease transmission to breeder poultry operations within 5km radius, meat poultry operations within 1km radius, egg producers and domestic bird keepers.
- quarantine restrictions on 1st and 2nd removed properties, commercial poultry operations and non-commercial domestic poultry and bird keepers.

Operator

- loss of income and costs of destruction, disposal and decontamination affect profitability and financial viability.
- restrict future uses of disposal site.

Noosa Shire

- degradation of remnant and regrowth Koala habitat.
- degradation of riparian habitat of the endangered Giant Barred Frog (*Mixophyes iterates*) and the threatened Cascade Treefrog. (*Litoria pearsoniana).*

Public perception of the health risks associated with poultry disease outbreaks (contaminated poultry products, disease transmission to humans) has economic consequences for the shire:

- decrease demand for locally produced poultry products.
- compromise its clean green food and environment reputation.
- have a significant and deleterious affect on Noosa's tourism industry.

6.0 Conclusion

The proposed development site is unsuitable for large-scale intensive meat poultry production because:

- the locality's physical characteristics impose significant constraints on routine and emergency disease operational procedures,
- its location, scale and design increase the risk of the introduction and transmission of contagious poultry diseases in the locality,
- it would put the security of the locality's natural resources, agricultural production, public health and amenity at risk, and
- infectious poultry disease outbreaks and the publicly perceived food contamination and health risks would have adverse economic impacts on individuals, the locality and the shire.

When assessing Development Application MCU12/0184, the NSC Planning Department should consider the biosecurity impacts associated with the development's location and operation.

References

Animal Health Australia, 2013, National Newcastle Disease Management Plan 2013-2016.
AUSVETPLAN, 2015, Operational Procedures Manual – Destruction.
AUSVETPLAN, 2007, Operational Procedures Manual – Disposal.
AUSVETPLAN, 2008, Operational Procedures Manual – Decontamination.
Commonwealth DAFF, 2009, National Farm Biosecurity Manual for Poultry Production.
Noosa Shire Council, 2013, The Noosa Plan, Part 8 Mary River Catchment Locality Plan.
Noosa Shire Council, 2013, The Noosa Plan, Part 14.2 – 14.7 Agricultural Uses Code.
Queensland Biosecurity Act 2014
Qld DAFF, 2012, Queensland Guidelines – Meat Chicken Farms.
RIRDC, 2003, Code of Practicefor Biosecurity in the Commercial Egg Industry.

Appendices 1–4 (see hard copy)

1 Major routes for disease and pathogen transmission
2 Biological hazards and means of spread and control
3 Decontaminants and procedures
4 Decontamination agents

Appendix 5

10 relevant wild birds species commonly seen in catchment

Australian Wood Duck	*Chenonetta jubata*
Plumed Whistling Duck	*Dendrocygna eytoni*
White-faced Heron	*Ardea novaehollandiae*
White-necked Heron	*Ardea pacifica*
Straw-necked Ibis	*Threskiornis spinicollis*
Australian White Ibis	*Threskiornis molucca*
Cattle Egret	*Ardea ibis*
Little Pied Cormorant	*Phalacrocorax melanoleucos*
Buff-banded Rail	*Gallirallus philippensis*
Brown Quail	*Coturnix ypsilophora*