

Consents

**BEFORE HEARING COMMISSIONERS
APPOINTED BY TARANAKI REGIONAL COUNCIL**

Consent No: 5262-3.0

IN THE MATTER of the Resource
Management Act 1991
("Act")

AND

IN THE MATTER an application for resource
consent discharge
emissions into the air from
a free-range poultry
farming operation

BETWEEN **Airport Farm Trustee
Limited**
Applicant

AND **Taranaki Regional
Council**
Consent Authority

**SUMMARY STATEMENT OF EVIDENCE OF
DUNCAN BACKSHALL
ON BEHALF OF VARIOUS SUBMITTERS
(THE MCDONALDS, THE HIBELLS, THE BROWNS
& POPPAS PEPPERS 2009 LTD)
Dated: 16TH FEBRUARY 2022**

1. **INTRODUCTION**

- 1.1 My full name is Duncan Backshall. I am currently a director of Air Quality NZ, a company that provides air quality consulting and technical services.
- 1.2 I have prepared a statement of evidence dated 8 February 2022 in regard to the application by Airport Farm Trustee Ltd to operate a poultry farm at 58 Airport Drive, New Plymouth Airport. My qualifications and experience are stated in my evidence, and I have read and agree to comply with the Code of Conduct for Expert Witnesses contained in the Environment Court's 2014 Practice Note.
- 1.3 Since my statement was prepared, I have visited the poultry farm and neighbouring properties to the north and south. Observations made during the visits are presented below.
- 1.4 I have also read the summary statements of evidence prepared by Ms Ryan and Mr Pene, and the TRC supplementary officers' report.

Site visit on 14 February

- 1.5 I visited the poultry farm and neighbouring properties between 3:45 and 6:30 PM on 14 February. Mr Donovan accompanied me to the poultry farm and 46 Airport Drive.
- 1.6 The weather was fine with the wind from the south. Average wind speeds measured at the airport AWS were from 31 to 33 km/h, and air temperatures were 19 – 20 degrees C. Wind speeds appeared lower than this at all three properties.
- 1.7 We were shown around the poultry farm by Mr Whiting. All of the birds had been removed from the sheds prior to our visit. The litter had been cleaned out from sheds 3 and 4, but this had not been completed for the other two sheds due to the high winds and rain. These sheds were ventilated, but at a lower rate than during a growth cycle.
- 1.8 Installation of the DACS system was continuing, as discussed in the TRC Supplementary Officer Report dated 11 February. Mr Whiting showed us through shed 3, where most of the installation had been completed. All of the roof inlet and exhaust fans were operational, and the control system was demonstrated by Mr Whiting. He explained that both the new roof fans and existing exhaust fans had were used during the previous growth cycle.

- 1.9 Some odour from the litter remaining in sheds 1 and 2 was apparent within the site. This was variable and most noticeable between the sheds, although we did not walk between shed 2 and the boundary with 62 Airport Drive.
- 1.10 I went to the McDonald property at 62 Airport Drive before visiting the poultry farm and walked along the drive beside the shelter belt on their southern boundary with the poultry farm. I observed odour at places along this boundary, mainly where the drive is adjacent to shed 2. Where odour was apparent, the intensity varied between weak and distinct. The odour was manure-like and quite unpleasant, between -2 and -3 on the hedonic tone scale depending on intensity.
- 1.11 The wind along the driveway was light and from the south and was subsequently observed to be noticeably stronger at the poultry farm and 46 Airport Drive.
- 1.12 I observed that the shelterbelt along the northern boundary was a similar height to the new roof exhaust vent stacks. The trees along the west and south boundaries were higher than the stacks.

Summary of evidence

- 1.13 I have described the existing environment in section 3 and was able to verify the description given of the shelterbelts along the poultry farm boundary during my site visit.
- 1.14 The sensitivity of the receiving environment is described in section 4. The following observations were made during my visit to the site:
- (a) The McDonald residence on the land to the north is predominantly surrounded by lawn. There are also garden areas, trees, and low hedges.
 - (b) The land to the east is fenced into small paddocks and used for grazing a few animals.
 - (c) The area to the south of the site between the boundary and 46 Airport drive is currently used for cropping.
- 1.15 I would not expect any of these activities to result in more than typical background rural odours.
- 1.16 I discuss odour control and mitigation in 4.13 – 4.20 of my evidence. While I expect the change from side-mounted exhausts on the sheds to

tall, roof vents will improve dispersion, I note the results of the CALPUFF dispersion modelling conducted by Mr Pene. If the effects of the stocking rate reduction are subtracted from the percentage change in odour concentrations shown in figure 3 of his evidence, the percentage reduction in odour varies from 25% close to the site to 5% to the south-west.

- 1.17 I have summarised the results of the odour surveys by the experts and TRC. I note that surveys beyond the site did find odour on occasion, and it was detected 320 m downwind at SH3. I agree with the comment by Ms Ryan regarding the potential for even low levels of odour to result in chronic effects beyond the site.
- 1.18 While odour complaints are often used as an indication of effects from an existing operation, these should not be relied on to give a complete picture of the community response. Many people are reluctant to complain, and I note that even though TRC encouraged residents to lodge complaints at the pre-hearing meeting, comparatively few have been received since then.
- 1.19 The evidence of the residents consistently describes significant, adverse effects from odour emissions from the poultry farm. While some describe acute effects that may have resulted from activities such as shed cleanouts, others describe chronic effects due to exposure to odour during periods when their property is downwind of the farm.
- 1.20 I discuss chronic odour effects and note the difficulties in the assessment of chronic effects, including during complaint investigations by council officers. I conclude that even with the reductions in odour predicted by the dispersion modelling, the potential for chronic effects may remain.
- 1.21 I have discussed buffer distances and note the number of residences within the 300 m separation recommended in the RAQP. I conclude that odour effects are likely within this distance, even for a well-managed operation.
- 1.22 The effects of PM10 emissions and health effects from odour are discussed briefly. It is important to note that health effects can result from exposure to odour even when the exposure level to a pollutant is below that recognised as having the potential for health effects.
- 1.23 I conclude that there is significant potential for odour effects due to the number of sensitive activities within 300 m of the site, and the odour assessment by the applicant has not adequately assessed the community response, especially regarding chronic odour effects.

1.24 I acknowledge that the reduced stocking density and the change to roof exhausts is likely to reduce odour emissions and improve the dispersion of odour discharged from the sheds. I remain concerned that these measures will not adequately mitigate chronic effects. I also note my concerns regarding odour emissions from activities such as cleanout of the sheds, and the potential for abnormal operation to result in adverse odour effects.