

BEFORE THE INDEPENDENT COMMISSIONER

UNDER the Resource Management Act 1991
IN THE MATTER of an application for air discharge consent by Airport Farm
Trustee Limited to operate a free range chicken farm at 58
Airport Drive, New Plymouth (5262-3.0)

**SUMMARY STATEMENT OF EVIDENCE OF DONOVAN VAN KEKEM
ON BEHALF OF VARIOUS SUBMITTERS (THE MCDONALDS, THE
HIBELLS, THE BROWNS & POPPAS PEPPERS 2009 LTD)**

14 February 2022

**CONNECT LEGAL TARANAKI
LAWYERS**
Private Bag 2031
DX NX10021
NEW PLYMOUTH
Telephone No. 06 769 8080
Fax No. 06 757 9852
Lawyer acting: SWA Grieve
Email: scottg@connectlegal.co.nz



1. Summary

- 1.1 My name is Donovan van Kekem. I am the managing director of NZ Air Limited an independent air quality consultancy. I have over 18 years' specialist air quality experience.
- 1.2 I have been engaged to prepare air quality evidence and provide my expert opinions in relation to nine interested parties' (the Submitter Group) submissions in opposition to the air discharge consent application made by Airport Farm Trustee Limited (the Applicant, **AFT**) for a proposed free range broiler farm at 58 Airport Drive, New Plymouth.
- 1.3 I am familiar with the area surrounding the existing farm, and conducted a site visit on 21 January 2022.
- 1.4 My qualifications and experience are outlined in my evidence in chief.
- 1.5 My evidence addressed the following matters:
 - (a) A critical assessment of the T+T Odour Assessment Report for the application;
 - (b) The existing air quality environment;
 - (c) Potential for discharges to air;
 - (d) Assessment of potential off-site effects of the proposed free range farm and proposed mitigation measures;
 - (e) Comments on the Section 42A Report;
 - (f) Comments on the Applicant's expert evidence and associated additional technical assessments;
 - (g) Comments on the Ms Ryan's review evidence;
 - (h) Comments on the recommended Conditions of Consent; and
 - (i) Conclusions.
- 1.6 In my evidence I discussed how the T+T assessment used a limited number assessment tools recommended in the Ministry for the Environment Good Practice Guide for Assessing and Managing Odour (2016). I consider that the T+T assessment should have included community consultation and an odour annoyance survey in line with the recommendations in the MfE guidance, given the proximity of receptors.
- 1.7 In the absence of this assessment in the application, I undertook an unbiased independent community survey of three of nearest neighbours (the McDonalds, the Browns and the Hibells) and have assessed odour diaries of neighbouring receptors to better ascertain the current level of odour effects.
- 1.8 Based on the submitter evidence, community survey, and odour diaries I have reviewed it appears that there have been, and continue to be, observable offensive and objectionable odour beyond the boundary of the

site. In the most part, this appears to be at odds with the observations of TRC and the other experts.

- 1.9 The site is surrounded by neighbouring residents from southwest – north east. Given the proximity of the McDonald residence and workplace, and the horizontal discharges of the shed ventilation (and wind tunnelling effect as identified by Ms Ryan), during still/calm conditions odour is likely to be observable on the McDonald property. Therefore, in a relatively large proportion of wind conditions (winds towards a receptor and still calm conditions) there are sensitive receptors downwind from the farm.
- 1.10 This appears to be represented in the limited odour diary information that I have been able to collect. It is also represented in the submission statements.
- 1.11 Given the fact that all of the submitters within 300 m of the site have identified that they have experienced offensive or objectionable odour to varying degrees, I consider that it is very likely that there is an existing adverse odour effect associated with the existing/historic operations of the AFT farm.
- 1.12 The neighbours observations are almost unilateral and given the number of submitters, consistency in the description of odour effects, and accuracy in the odour diaries (noting the gap in observations when the sheds are empty), I consider it is unlikely that there is some form of bias in the neighbour's description of the existing environment.
- 1.13 Furthermore, in my experience it is unusual that a broiler farm is situated within 55m of a dwelling. I am not surprised by the descriptions of the odour effects experienced by the McDonalds. Their residence and workplace are very close to the sheds and associated wall mounted ventilation fans.
- 1.14 I agree with the other experts and Council officers that the proposed shed design improvements are consistent with industry best practice and will reduce odour discharges from the sheds.
- 1.15 I also agree that the reduction in bird stocking rates will reduce the odour mass emission rates from the sheds. Subsequent to preparing my evidence I have been able to review the odour emission rate data (Figure 2 in Mr Pene's evidence) and agree that the reduction in odour emission rates presented are consistent with what I would expect (associated with the proposed farm conversion).
- 1.16 I also agree that the use of roof vents will reduce peak off-site odour concentrations beyond the boundary of the site, especially at nearfield receptors, due to better dispersion of the odours emitted from the sheds.
- 1.17 However, my concerns are that the reduction in peak off-site odour concentrations will not be substantive enough to eliminate potential adverse off-site odour effects.
- 1.18 I consider that it would have been appropriate for the applicant to present the peak modelled off-site odour concentrations from the air dispersion

modelling assessment undertaken by T+T. Not just the proposed reduction in off-site concentrations. These could then have been compared against accepted off-site peak odour concentration criteria.

- 1.19 I noted in my evidence in chief that a 50% reduction in off-site odour concentrations does not necessarily equate to the removal of potential offensive or objectionable odour effects. For example, if the peak 1 hour average 99.5%ile odour concentration at the McDonald residence under the existing farm modelling scenario was 50 OU, then a 50% reduction would make the peak concentrations 25 OU, which would still be above the generally accepted criteria (5 OU at a rural dwelling).
- 1.20 I accept that the premise for the T+T conclusions, that it is unlikely that adverse odour effects will occur beyond the boundary of the site from the proposed farm, is based on the assumption that there is no or little effect occurring at present. As discussed in my evidence, based on the evidence I have gathered this may not/is unlikely to be the case.
- 1.21 I have also reviewed all of the odour survey data provided by TRC and the applicant. Whilst there are a lot of observations presented by multiple observer, my biggest concern was the low number of observations made off-site. As in the few observations which were made off-site odour was detected beyond the boundary, my concern is that on-site observations were not providing the full extent of odour plumes beyond the boundary. This would be particularly relevant if the roof stacks were operational at the time of the observations or if there were buoyant plumes dropping to ground level at distance from the site.
- 1.22 I also discussed my concerns around odour and dust emissions from the ranging area and recommended best practice for maintaining ground cover.
- 1.23 I also commented on future dust emissions from the roof stacks, noting that it was evident to me that there have been substantive dust emissions from the side wall fans in the past. Whilst I consider that the stacks will provide better dispersion of dust, it will now travel further from the site. The applicant has not provided an assessment of potential effects from vertical dust discharges.
- 1.24 I reviewed the draft Consent Conditions and made some suggestions to amendments which could be considered by the commissioners.
- 1.25 I have been provided with the Supplementary Officer Report produced by Gary Bedford dated 11 Feb 22. Having read through this I have some comments.
- 1.26 I note that Mr Bedford has made comparisons of wind data observed at the Hillsborough weather station. I consider that comparisons with measured wind directions from the on-site weather station would be most applicable for analysing complaints/odour diary records. However, if this is not available using data from the New Plymouth Airport station would be the next most representative. I believe that the experts agree that the local wind conditions/air movement within the sheltered farm surrounds

and associated with the wall mounted fans are not necessarily consistent with wind conditions measured at off-site weather stations.

- 1.27 Mr Bedford has made additional odour observations off-site in response to the concerns I raised in my evidence and via the McDonalds in communications with them. I note that on 8th Feb Council officers did detect odour on the McDonald property at Mr McDonalds office (place of work) which was described as 'mild'. Whilst the officers did not consider this level of odour to be offensive, I consider that low level odour experienced frequently can result in chronic effect (particularly for sensitised neighbours). I also note that the McDonalds stated that it was stronger earlier in the day, whilst this was not independently confirmed by Council, if stronger odour is observable on occasions this could constitute a acute effects.
- 1.28 I also note that odour appears to still be observable beyond the site boundary after some of the site improvements have been made.
- 1.29 I do however share Council's frustration that odour complaints/observations made by neighbours are not being phoned through to Council at the time of the incident so that Council can make off-site observations during periods when neighbours consider off-site odour is at its strongest.
- 1.30 In conclusion, I do not believe that there is sufficient evidence to be certain that the proposed farm will not result in chronic odour effects beyond the boundary of the site. I agree with the other experts and Council that off-site odour concentrations will decrease as compared with historic operations, due to the proposed farm upgrades and conversion to free range, as such I consider that future acute off-site effects are unlikely. However, I am uncertain as to whether or not the farm changes will sufficiently reduce observable off-site odour to below the level of detection or low enough that it would be acceptable in a rural environment.
- 1.31 I note that Mr Bedford has made comment on some of my recommended draft condition changes. I am happy to answer any questions that the Commissioners may have on these matters.



Donovan Van Kekem

14 February 2022

Hibell

Date	Intensity	Wind Direction - New Plymouth Aero	AFT weather station	Downwind
12/01/2022	3	W in morning - SSE in evening		No
15/01/2022	3	Downwind around 9-10am then again in evening (7-10pm)		Yes
31/01/2022	4	NE - E all day		Yes
1/02/2022	4	NNE all day		Yes
3/02/2022	Mild on/of	NE afternoon - evening		Yes
6/02/2022	Mild	Strong S-SE at time of record (11:45am - 12 noon)	ENE. Note this is quite different to Aero data	Yes
7/02/2022	Mild on/of	Light winds, breif E early in the morning (5-6am) Then very late at night (10-midnight), otherwise SE winds	Very light winds, predominantly SE, but breif periods where wind extended to ENE	Possible
8/02/2022	Mild throu	Light winds all day, NNE most of the morning, then again from 5pm onwards		Yes

Brown

Date	Intensity	Wind Direction - New Plymouth Aero	AFT weather station	Downwind
1/01/2022	2.5	WD highly variable, but at 11am and 8-9pm Browns were downwind.		Yes
9/02/2022	5	Downwind all day N - NE all day	Very light winds. 9:30 - 12:45 NNE - ENE. Then from 5pm onwards browns downwind	Yes