

Resource Consent Applications under
the Resource Management Act 1991

an application to discharge contaminants
(including odour) into the air from the
Roto-o-Rangi piggery at 30 Kairangi
Road, Roto-o-Rangi (renewal of existing
consent AUTH 136796.01.01)

to irrigate treated piggery waste water
onto land and associated discharge to air
at 83 and 62 Kairangi Road, Roto-o-Rangi
(renewal of existing consent AUTH
136796.02.01)

STATEMENT OF EVIDENCE OF LEIGH-ANNE PEAKE

Witness introduction and background information

1. My name is Leigh-Anne Peake. I have a BSc (Bachelor of Science), a DipEnvMgt (Diploma of Environmental Management), DipOSH (Diploma Occupational Health and Safety), CQA (Certificate of Quality Assurance). I am an EXEMPLAR internationally registered Lead Environmental Auditor, and have been for 21 years. I am a Worksafe certified hazardous substance compliance certifier. I am an ACC Senior health and safety auditor. I am the Managing Director at QEC Ltd, 62D Victoria Street Cambridge, a role I have held since 1997.

2. I am a calibrated olfactory assessor. I have been certified by Lincoln Environmental Ventures Ltd, Lincoln University, as having a certainty threshold of 43. It is considered that people with a certainty threshold of between 20 and 80ppb/v such as myself, have an average sense of smell. I am a 95 percentile, which means 95% of a sample population will have an odour sensitivity the same as me. The European Standard: Air quality - Determination of odour concentration by dynamic olfactometry requires that an odour assessment panellist must have an average certainty threshold in the range of 20 to 80ppb/v. I meet this criteria.

3. QEC was contracted to Waratah Farms to conduct four odour assessments in relation to their piggery located at 30 Kairangi Road, Roto-o-Rangi. ("the ROR piggery")

4. Although this evidence is not to be used in an Environment Court hearing, I confirm compliance with the Code of Conduct for expert witnesses in the Environment Court NZ Practice Note 2011:
 - 4.1. I have read the Environment Court Code of Conduct Practice Note 2011 requirements for expert witnesses and confirm that

I agree to comply with it. In particular I have complied with the Code of Conduct in preparing my evidence and will comply with it in giving any further evidence in the course of this hearing.

4.2. The evidence that is contained in this Statement, and that I will give at the hearing, is and will be within my area of expertise, except where I rely on the evidence of another witness, in which case I have referred to that witness.

4.3. I have considered material facts known to me that might alter or detract from the opinions that I have expressed and I have specified literature and other material used or relied on in support of the opinions expressed in my evidence.

5. This statement is in relation to the provision of a set of four targeted environmental odour monitoring assessments. QEC was engaged to undertake these assessments by Bindi Ground of Waratah Farms, in relation to the ROR piggery. The scope of the work was four odour assessments taken at just after sunset or early dawn in low or no wind conditions. The dates and exact times were to be determined by QEC. Assessments commenced from the 04 September 2018. I understand that the assessments were to be carried out in these conditions to match as closely as possible the weather and wind type on the days when complaints had most commonly been received from the neighbour at 37 Kairangi Road.

QEC Experience in Conducting Odour Assessments for Waikato Regional Council

6. I and my staff have conducted many odour assessments for private clients and councils. In 2009 QEC was contracted by David Stagg of WRC to provide complaint and proactive odour assessments for a composting facility in 2010. The work involved

41 proactive assessments and 12 complaint responses. The methodology and reporting templates and training were supplied by WRC and were in accordance with the MfE Good Practice Guide for Assessing and Managing Odour. To conduct this work we had to have at least one calibrated olfactory assessor on the team, and that person was me.

7. In 2014 we were again engaged by David Stagg of WRC to provide odour complaint assessments at a chicken farm. There were a total of five complaint assessments completed. There was no requirement at this time to have a calibrated assessor involved. WRC opted to train the QEC assessors in their methodology.

Odour Assessment Methodology and Assessor Independence

8. In both the 2009 and 2014 WRC contracted jobs QEC was provided with defined methodology to conduct and report the assessments by WRC. The WRC documents were adapted from the MfE Good Practice Guide for Assessing and Managing Odour which states consistent procedures for odour complaint investigation and reporting are critical. This is the same guide QEC used to define the methodology for the Waratah Farms odour assessments.
9. It is very important to protect the assessor's impartiality, independence and safety during assessments. There are many reasons for this, but the generation of a truly independent assessment of odour requires the assessor to be free from any bias or inappropriate influence. Many affected persons become emotive and it is not uncommon for affected parties to interfere in the assessment process. This can, and in our experience does, include confrontation, videoing the assessor, yelling at the assessor, and accusing the assessor of doing the job wrong. Interference can be more subtle by engaging in conversation

about the assessment or the odour, or comments about odour on other occasions.

10. Methodology for conducting the assessment must provide the assessor with information on how to prevent and react to interference. Prevention of interference includes not entering into communications with any affected party and particularly the complainant, remaining independent. Reacting to interference usually means the assessment will be abandoned if communication cannot be avoided. As an example the 2014 methodology WRC Doc # 3054939/v2 stated “Phone neighbouring land owners prior to arriving on land to undertake assessment (does not include complainants). *Do not actively engage in conversation with the complainants beyond letting them know what you are on-site to do, should they persist, please advise them to contact the WRC representative.*” The QEC methodology for the Waratah Farm assessments stated “If neighbours or onlookers begin to ask questions and wish to record or photograph the assessors, the visit is to be abandoned. Do not engage in discussion about the process with anyone during the visit.”

How many assessments to conduct

11. An assessor is engaged to conduct an assessment. This could be as a result of a complaint, called a complaint response. It could be a scheduled or random assessment, called a proactive response. The methodology for both is documented. Indeed WRC have documented methodologies for these and has provided them to QEC for contracted assessments in 2009 and 2014. All of these methodologies allow for one assessment to be conducted and reported at each visit.

Odour assessment methodologies

12. The Waratah Farm assessments conducted by QEC were targeted proactive assessments. The desired weather conditions, location of assessment and preferred time of day had been agreed in advance in discussions between WRC officers and WFL representatives. This methodology attempts to recreate the conditions that have resulted in complaints. It is often extremely hard to replicate the weather conditions, and many times the exact same weather conditions do not result in an odour. Targeted assessments such as this specifically exclude any odours generated from the site that may traverse a boundary in any other direction from the site, therefore are not in my opinion truly reflective of odour generated by consent holder activities. By targeting one neighbouring property in a specified set out conditions, there is a missed opportunity to determine if there is odour migrating across other boundaries. Hence I refer to these as targeted and not proactive assessments.
13. In the s42A Report it is stated that Jayne Metcalfe does not agree with the conclusions drawn from the proactive assessments, for a number of reasons but including *“the majority of assessments haven’t been undertaken at a time of year or time of day when complaints have previously been received”*. I do not disagree with that statement. QEC had a short period of time in which to conduct the assessments and made every attempt to carry out the assessments in the weather conditions that had been discussed between WFL and WRC. We felt further constricted when Jennifer Matthys made adverse comments about the timing of a site visit proposed for 5 September 2018. We undertook assessments at all available opportunities when the weather conditions were as close as possible to those that existed when complaints had been made. The time of year was different to the summer 2017/2018 period when complaints were more frequent, but that could be

more the result of the amount of time people spend time outdoors in summer when compared with September and October.

14. I do however believe that the wind conditions were consistent with the wind conditions that had been agreed with WRC, being calm or near calm conditions with any breeze being from the southerly quarter. Those were precisely the conditions in which all but one of the assessments were carried out. Somewhat ironically, the assessment carried out in stronger wind conditions on 4 September 2018 was the only assessment when any odour exceeding a strength level of 2 out of 6 was noted.
15. I note that Jennifer Matthys completed an odour assessment on 8th March 2018 and recorded the wind as a 5-6 on the Beaufort scale, a fresh breeze. (Appendix A, paragraphs 1 and 4). This is not “almost zero wind” however she has considered that assessment to be relevant.
16. I conclude that the odour assessments carried out by QEC at WFL’s request were targeted assessments intended to be in conditions as close as possible to those that existed when complaints were most frequently made. The assessments do not disclose any significant odours from the piggery when the assessments were undertaken.

Odour Perception

17. The relationship between measured thresholds of odour according to the guidelines and the occurrence of odour nuisance is highly complex. It is profoundly influenced by the atmospheric processes determining the dispersion of odours, the quality of the odour (hedonic tone) and finally by the receptor characteristics of those exposed to the odour. These characteristics not only vary strongly between individuals, but also in time with each individual. As I

have previously said I have a threshold of 43, and a 95% of a sample population should have the same odour perception as me.

18. I note that in the WRC s42A report in the section titled Applicant's assessment of odour effects it states that "Janet Smith is likely to be representative of the ordinary reasonable person." I have not seen any strong evidence to support this subjective statement. In order to verify this, Janet Smith would need to be herself a calibrated olfactory assessor, or have undertaken training and a side by side with a calibrated assessor. Janet Smith has complained statistically more than any other neighbour or affected party and is the only person to complain since 2012. No complaints have been made by the neighbours who live directly between the piggery sheds and the Smith dwelling. Those neighbours gave written approval for the application. The only available follow-up investigations of her complaints have reported low or nil odour, or indicated that the odour event had been short-lived. I have formed that view from the evidence of follow-up of complaints by Mr. Ellis, Mr. Andersen and Mr. Dysaght, also from the notes of investigation by WRC officers N. Crowe and R. Isaac on 15 February 2018. Those officers reported odour at the roadside, at strength 2 out of 6(R. Isaac) and 3/6 (N. Crowe). The complaint was of odour further away on the Smith property at 4/6. In my opinion this combination of factors calls into question any view that Mrs. Smith is representative of the population norm.
19. The 2009 WRC methodology for conducting odour assessments states "A person can become sensitised to odour. Sensitisation is a response that the ordinary reasonable person may experience in relation to persistent odour. Neighbours will often become sensitised and will therefore honestly describe odours as worse than a person less frequently exposed to the odour e.g. a Council Officer. You can become hypersensitised. Hypersensitisation is a physiological response and is medically diagnosed. It will only be

experienced by a small portion of the population (i.e. not the ordinary reasonable person) and requires both a stimulus (odour) associated with a negative stressor (for example powerlessness or frustration).” By relying heavily on unverified complaints by one neighbour, in the context of no complaints from other neighbours, and a high rate of written approvals, there is a reduced ability to provide representative assessments of odour effects.

Response to Complaints

20. There are several file notes that refer to complaints received at WRC from Janet Smith. Unfortunately WRC has not deployed assessors to investigate these, except on one occasion in February 2018 when the officers did not go onto the complainant’s property, one of the officers detected odour at the roadside of strength 2/6 and the other at 3/6. This has resulted in missed opportunities to take a witness statement and conduct independent odour assessments.
21. I note that WFL has carried out investigations as quickly as possible in response to complaints in August and November 2018 and no or little odour was detected.

WRC officers’ odour investigations and assessments

22. I have read the report of Jennifer Matthys’ odour assessment undertaken on 5 December 2017. In this report Jennifer noted there was no odour detected at the Smith residence. She did report a piggery odour at the gateway of 39 Kairangi Road. However she did not conduct a ten minute assessment and did not conduct an upwind assessment in order to identify potential odour sources not related to WFL. She instead entered the farm and conducted odour assessments at various locations around the sheds and ponds all within the boundary. This process does not match the defined methodology in the guidelines which requires at

least an upwind boundary assessment when concluding an odour is generated from a consent holder's property. Upwind interference is a known and documented occurrence.

23. I have read the report of Jennifer Matthys' odour assessments undertaken at the Smith dwelling on 8 March 2018. Two aspects of the report of that assessment strike me as unusual and inappropriate.
24. I was surprised to read that there was some general chat and discussion about odour at the property while the assessments were being undertaken, or between the two assessments. In my experience, and from the contents of the WRC process guideline, discussions with people at the complainant address when an assessment is being undertaken is not acceptable. The purpose of that protocol is to avoid the risk of the assessor being affected by comments from the other person, being influenced in how and when the assessment is undertaken, or interpretation of the odour received. (Referred to WRC).
25. The second issue that I noted was the decision to undertake the second assessment when odour was detected, after a period when there was no odour detected. The apparent selection of an assessment period through the detection of odour skews the assessment in comparison with an assessment that is not triggered by detection of odour.
26. These two points call into question the reliability of the process undertaken on 8 March 2018 by Ms Matthys, and her impartiality.
27. I have read the report of Novalea Crowe's odour assessment undertaken on the 15 February 2018. This odour assessment was a complaint response, as a result from a complaint from Janet Smith to WRC on 15 February. Several things about this report strike me as non compliant to the accepted methodology for

complaint responses. The file note does not state a witness statement was taken from the complainant. The assessors entered the piggery and pond walked around the piggery and pond areas before conducting their odour assessment. The assessors did not conduct an upwind assessment. This is despite them acknowledging the upwind neighbour who operates a goat farm had been spreading manure as recently as three days earlier, which included shed scrapings. The file note goes on to say that Martyn thinks this is quite a 'musty' type smell however the author could not discern this above the pig effluent smell. The lack of an upwind assessment to rule out other sources of odour is non compliant with WRC methodology and the Good Practice Guide for Assessing and Managing Odour which states *"When investigating a complaint it is important to complete all off-site investigations before going onto the site of the alleged odour source. This is for two reasons:*

- 1. (All assessors): It prevents an assessor from becoming desensitised from exposure to strong odours at the source before investigating the nature of the effects in the receiving environment.*
- 2. (Council officers): Under section 332 of the RMA, an enforcement officer can only enter a site to investigate if a breach is occurring – not to gather evidence of a confirmed contravention (this requires a search warrant).*

Conclusion

28. I conclude the WRC odour assessors have used flawed methodology.
29. I conclude that the lack of complaint responses from WRC has resulted in loss of opportunity to gather critical evidence. The WFL

response investigations in August and November 2018 partly fill that gap in the information available.

30. I conclude there is no reliable evidence to justify the view that Mrs. J. Smith is representative of the population norm in relation to odour from the WFL piggery.
31. I conclude that the criticisms in the s42A report of the relevance and reliability of the QEC odour assessments are unjustified.

DATED: 5 December 2018



L Peake