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Attention: Ms Kate Wheeler (Le Mottee Group)

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

Geotechnical Engineering
Engineering Geology
Environmental Engineering
Hydrogeology
Construction Materials Testing
Environmental Monitoring
Noise & Vibration
Occupational Hygiene

PROPOSED METHODOLOGY FOR REVISED ODOUR ASSESSMENT, 792 SEAHAM ROAD, SEAHAM

This proposed methodology follows careful consideration of the outcomes expected by all parties (proponent, Council and nearby poultry farm owners), and has taken into account Council's comments and the discussion during the meeting with Council on 31st March 2021. The methodology has also taken into the account the logistics associated with sampling and practical limitations.

RCA appreciate that parties require reassurance that correct information is used in this assessment, e.g., the correct odour rates from the poultry sheds. The proposed methodology is aimed to "ground truth" the odour data used in the assessment; provide reassurance to parties that the data is representative of poultry operations and under representative conditions; and to provide an approach that is consistent with other planning proposals in Port Stephens.

1. PRELIMINARY WORK

The initial steps of the revised odour assessment are critical for the progress of this assessment and will include:

- Contact with farm owners regarding the schedule of bird growing within each farm. This information will be critical for the planning of the subsequent odour sampling at the farms. RCA will require contact details for both of the farms located to the south of the proposed site (chickens and turkeys).

- Prior to any odour sampling, RCA will conduct a preliminary inspection of both poultry farms. This will include checks of:

    - The positioning and orientation of exhaust fans and openings on the sheds and other odour emission sources which could be considered as 'significant' odour sources and to be incorporated in this assessment.

  - The topography surrounding the poultry farms, and other features which may affect the dispersion of odours from the farms.

- RCA will also check the prevailing weather conditions such as wind speed and direction so this can assist in the planning of odour monitoring at both the poultry farms and at the proposed site.

Following the completion of the preliminary work, RCA will organise and coordinate the odour sampling in a timely and efficient manner.

2. SITE SURVEYS AND ODOUR MONITORING

Odour monitoring will be conducted to 'ground truth' the presumed odour rates considered in RCA's previous assessment (Ref [1]) at:

- The poultry (chicken and turkey) farms situated to the south of the site along Seaham Road. Monitoring will be undertaken to ascertain the appropriate odour rates to be used in the odour modelling as part of the assessment.

- The proposed site. Monitoring will be undertaken to ascertain the odour impacts at the site from the nearby odour sources.

All monitoring will be aimed to coincide with the optimal stage of odour emissions for the odour assessment – RCA expect that this will occur between weeks five (5) and eight (8) of the growing cycle. It is noted however that the growing schedules at both farms may not be aligned such that monitoring can be undertaken when both farms are between five (5) and eight (8) weeks and a compromise may be needed whereby monitoring is undertaken only one of the farms is in this period.

It is noted that the collection of odour samples is dependent on the owners of each of the farms providing access for that purpose.

All odour sampling will be conducted in accordance with relevant Australian Standards and industry accepted methods with equipment maintained, calibrated and in accordance with Australian Standards. In summary this will require:

- The collection of samples by the "lung in drum" method.

- Analysis of odour samples by olfactometry at an 'odour panel' (a trained group of people). The analysis needs to be conducted within 24 hours of sample collection, due to the 'holding time' nature of odour samples.

Both of the above tasks will be carried out by RCA's subcontractor proposed for this assessment: The Odour Unit (TOU).

The planning and coordination of odour sampling will be carried out carefully, as there are a number of practical limitations involved such as the sample 'holding time', the number of samples that can be collected in a day, and logistics such as personnel required to transport the samples to the laboratory and within the holding time.

RCA appreciate that ideally, the sampling could be carried out under different weather conditions and times of the day – however, the following sampling plan will be the best approach for this assessment as it takes into account optimal poultry growth conditions; optimal number of samples at each area and location; and a forward booking of the odour laboratory to accommodate a limited number of odour samples on any day. The proposed sampling plan is also based on RCA's experience in conducting odour sampling at a number of poultry farms and the proposed plan is:

- After securing and establishing a suitable sampling 'day' with both TOU and the (2) poultry farms, take a total of twelve (12) samples at both the farms (both sheds, best fan locations, lab duplicate samples etc); and three (3) samples at the proposed site. The sampling will be planned, as best as practical, to coincide with a prevailing wind blowing from the farms towards the proposed site.

- Personnel to transport samples to the TOU laboratory in Sydney.

- RCA will also be present to record other critical information during the sampling – poultry and exhaust fan conditions; ambient weather conditions and any other factors that may affect the outcomes of the assessment. It should be noted that following the 'sampling day', RCA can return to the site and the poultry farms if clarification is needed for any aspect. Martin Belk lives in the Seaham area and travels along Seaham Road on a daily basis.

All site work to be completed within one (1) working day.

3. ASSESSMENT COMPILATION AND REPORTING

Upon the receipt of odour results from TOU, RCA will:

- Calculate the odour emission rates (individuals and averages) from each farm location (e.g., a shed exhaust fan or opening).

- Compare the calculated results to those used from reference material used in RCA's previous report (Ref [1]) to assessment whether odour modelling needs to be re-done. If the odour rates are greater than those used in the previous assessment, modelling will be required.

- Conduct additional research and calculations for the purposes of checks (e.g., other data obtained compared with the previous, desktop assessment).

RCA will compile the revised odour assessment incorporating all of the new data obtained: results of odour monitoring including odour rates; weather data and other observations. The assessment will also outline the odour impacts at the proposed site based on the new information. The assessment will also incorporate any relevant information obtained in RCA's previous assessment, for example the meteorological file required for the modelling.

RCA understand that Council will have RCA's Odour Assessment report peer reviewed by another consultant. As such RCA has allowed for a draft report to be provided in pdf format by email: RCA will provide any information required for the peer review at the same time as the completed of this assessment.

A final report would be compiled following comments by the peer reviewer and consultation with the proponent and client and provided in pdf format by email.

4. PROPOSED PERSONNEL

Mr Martin Belk, an RCA Associate Environmental Engineer, will undertake the odour assessment including the site inspection, odour modelling and reporting. Martin carried out the previous odour assessment for this development.

RCA will engage a sub-consultant: The Odour Unit (TOU) for the on-site sampling of odours and analysis of the samples. RCA have engaged TOU for many odour projects including poultry farms and Martin Belk will also supervise TOU on the day of the sampling to maximise the efficiency of the sample collection. Further details of TOU's capabilities, including the range of odour testings completed at poultry operations, can be provided on request.

Yours faithfully
RCA AUSTRALIA

Martin Belk
Associate Environmental Engineer

REFERENCES

[1] RCA Australia, *Odour Impact Assessment, Proposed Subdivision, 792 Seaham Road Seaham NSW*, RCA 15111-402/1, November 2020