IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER Proposed Private Plan Change 73 to the Operative District Plan: Dunns Crossing Road, Rolleston

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SUMMARY STATEMENT OF EVIDENCE OF CHRISTOPHER JAMES BENDER FOR SELWYN DISTRICT COUNCIL

(ODOUR)

29 SEPTEMBER 2021

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1. INTRODUCTION

Qualifications and experience

1.1 My name is Christopher James Bender.

1.2 I have over 20 years of experience specialising in air quality matters, including 12 years as an air quality consultant in New Zealand.

1.3 I am employed as a Service Leader (Air Quality) at Pattle Delamore Partners (PDP) where I have worked since April 2019. I provide technical advice on management of air discharges, measurement of discharges for compliance and to support consent applications, as well as assessing environmental effects for the consenting of air discharges.

Preparation of this evidence

1.4 This statement is a summary of my evidence in chief (EIC) dated 3 September 2021 and I have also addressed matters that have arisen since I prepared my EIC. In preparing this statement I have read and considered the following documents:

a) The application documents including the Odour Assessment provided as Appendix H;

b) Submissions on the proposal;

c) The s 42A report and its appendices**;**

d) The evidence of Cathy Nieuwenhuijsen and Donovan Van Kekem (Odour) on behalf of the applicant.

2. BACKGROUND

2.1 Rolleston West Residential Limited has lodged a private plan change request (PC73) with SDC to rezone approximately 160 hectares of rural zoned land in two separate locations on Dunns Crossing Road, Rolleston.

2.2 The potential air quality related reverse sensitivity effects from PC73 are those associated with odour discharges from nearby land uses.

2.3 The nearby sites that have the potential for odour discharges, and thus reverse sensitivity effects from PC73, are:

a) The Pines wastewater treatment plant (WWTP), which includes a sludge drying plant and spraying of treated effluent to land;

b) The Pines Resource Recovery Park (PRRP), which includes a waste transfer station and composting facility for green and household organic wastes; and,

c) A series of Tegel poultry sheds to the north of the Skellerup Block.

2.4 I have been engaged by SDC to assess the potential reverse sensitivity effects of PC73 on nearby land users from odour generated from operations undertaken onsite.

3. ODOUR ASSESSMENT

3.1 An assessment of reverse sensitivity effects resulting from PC73 was undertaken by Golder Associates, which has relied on separation distances from the proposed plan change areas to the various odour producing activities.

3.2 The buffer distances recommended by Golder for the proposed plan change areas were derived from a combination of those recommended by international guidelines and site-specific assessments.

3.3 The role of buffer distances includes addressing unintended or accidental releases of odour, and/or any effects that cannot be internalised even with adoption of the best practicable option for odour control. I agree that the provision of adequate buffer distances is an appropriate mitigation to avoid reverse sensitivity effects between industry and land users with a higher sensitivity to odour.

Recommended Separation Distances – Pines WWTP

3.4 The recommended buffer distances from the WWTP and associated activities were derived from Victoria EPA guidelines and have been assessed based on the 120,000 person equivalents (PE) of incoming flow that is projected for the WWTP.

3.5 The Holmes and the Skellerup Blocks are both at a greater distance than the recommended separation distances from the primary odour generating activities at the WWTP, being the wastewater treatment infrastructure itself and the sludge drying facility.

3.6 I agree in principle that the buffer distances recommended by Golder for the Pines WWTP are consistent with internationally accepted good practice and should adequately prevent the occurrence of offensive or objectionable odour beyond these distances.

3.7 I note, however, that Mr England states in his evidence that there have been 11 complaints of odour associated with the WWTP over a three-year period August 2018-August 2021. In my opinion, this suggests that adverse odour effects do occur beyond the WWTP site boundary, although it is not clear if these effects would extend to the PC73 areas. I understand from SDC staff that the adverse odour discharges have occurred because the WWTP is currently operating at the upper end of the current design capacity of 30,000 PE. The WWTP is in the process of being upgraded to a design capacity of 60,000 PE, and in future will be upgraded to a design capacity of 120,000 PE. It is my understanding that with the progressive upgrades, the plant will have additional wastewater treatment capacity controls, which are expected to mitigate the effects of odour particularly from the sludge drying activities at the site. Further to my EIC, I have formed the view that until the upgrades are made to the WWTP, there is potential for nuisance levels of odour to occur beyond the site boundary, which may extend into the PC73 area.

3.8 An odour setback area of 75 metres along the western boundary of the Holmes Block has been designated by the applicant to protect from the potential effects of microbial contaminants from wastewater spray irrigation. I agree that this is separation distance will be sufficient to avoid adverse effects from the spray irrigation of treated wastewater.

Recommended Separation Distances – Tegel Chicken Sheds

3.9 The applicant's recommended separation distance from the Tegel Poultry sheds of 150 metres results in odour setback areas within the northern boundary of the Skellerup Block. I agree that the 150-metre separation distance should be adequate to prevent reverse sensitivity effects arising from the proposal.

Recommended Separation Distances – PRRP

3.10 The main odour generating activity at the PRRP is the composting of green and organic waste. The PRRP currently accepts around 8,000 tonnes per year of organic and green

wastes for composting, which is projected to increase to up to 53,000 tonnes per year over the lifetime of the resource consent.

3.11 A separation distance of 600 metres is recommended by the applicant for the active composting area of the PRRP, which results in an odour setback area in the southwest corner of the Holmes Block.

3.12 As discussed in the Odour Assessment provided with the application and in the evidence of Ms Nieuwenhuijsen the separation distance was recommended based on the Victoria EPA guidelines for separation distances from composting facilities (June 2017), on the assumption that the PRRP had an acceptance rate of 4,200 tonnes per annum. As noted in both my and in Mr Boyd's evidence, the recommended separation distance by the Victoria EPA for an open air composting facility with annual acceptance of up to 53,000 tonnes of organic waste per annum is over 2,000 metres.

3.13 Separation distances are generally accepted as being guidelines; smaller separation distances may be adequate depending on site specific factors such as the makeup of the organic waste, procedures for ensuring the waste remains aerobic, and FIDOL factors, for example, the prevalence of winds which may carry odour from the composting site toward the sensitive locations.

3.14 A site-specific assessment of the PRRP, and in particular the potential for adverse effects of odour generated from the composting facility, was undertaken by Specialist Environmental Services (SES) in July 2018 to support a resource consent application for the windrow composting of organic wastes at the site, and a subsequent memo in June 2020 to support a change to conditions of the consent allowing for increased acceptance of organic material at the composting facility. The SES memo considered that the increase in composting volumes would not significantly increase the risk of adverse odour generated from the site provided, that the site is well operated and maintained, and the existing separation distances would be maintained. The conclusions of this assessment were accepted by Environment Canterbury, subject to development of an odour and dust management plan (ODMP) that outlines m

3.15 Mr Van Kekem in his evidence states that the odour management procedures in the ODMP were developed to ensure that the site can operate without generating adverse off-site air quality effects. On this basis, I accept that the site should be able to operate

without resulting in offensive odours beyond the separation distance of 600 metres. In practice, however, upset conditions may occur in which offensive odours are released. In my view, if abnormal emissions do occur, the increased density of housing and associated increase in sensitivity of the receiving environment, could contribute to additional odour complaints in the event of an incident.

3.16 Given the change in scale of the site operations projected over the lifetime of the consent, I consider there is a possibility of unforeseen circumstances which result in odour generation beyond what has been assessed in the PRRP application documents and which may result in adverse odour effects beyond the 600 metre buffer distance.

4. CONCLUSIONS

4.1 In my opinion the potential reverse sensitivity effects generated by the PC73 plan change areas on the Pines WWTP and PRRP can largely be avoided and / or substantially mitigated via the proposed separation distances.

4.2 The Pines WWTP has been the subject of odour complaints in recent years, which are attributed to the plant being under-sized to meet current demand for wastewater treatment. Consequently, I consider there is potential for reverse sensitivity effects from PC73 until such time as the WWTP can be upgraded to allow treatment of increased volumes of wastewater.

4.3 Finally, I consider that the proposed separation distance of 600 metres from the active composting activities at the PRRP is likely to be sufficient for avoiding adverse effects of odour from normal operations at PC73. There is potential, however, for reverse sensitivity effects from the open air composting operations at the PRRP due to the potential for abnormal emissions and the projected increased volumes of organic and green waste and the increased proportion of kerbside organics.

Christopher James Bender
29 September 2021