

Before the Selwyn District Council

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*under:* the Resource Management Act 1991

*in the matter of:* Proposed Private Plan Changes 81 and 82 to the  
Operative District Plan: Dunns Crossing Road, Rolleston

*and:* **Rolleston Industrial Developments Limited** and  
**Brookside Road Residential Limited**  
*Applicant*

Statement of Evidence of John Iseli (Odour)

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Dated: 26 August 2022

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## STATEMENT OF EVIDENCE OF JOHN ISELI

### INTRODUCTION

- 1 My full name is John Graham Iseli. I hold a Master of Science degree from the University of Canterbury. During the past 29 years I have worked on a range of resource management matters in New Zealand as an Air Quality Scientist, Consents Officer and Hearings Commissioner. This work has required me to provide air quality advice to councils, central government and industries and to prepare numerous decisions on consent applications to discharge contaminants to air.
- 2 I have been an Air Quality Scientist with Specialist Environmental Services Limited for the past 23 years. During this time, I have reviewed discharge to air applications and assessed the environmental effects of emissions to air from a wide range of industrial and commercial facilities throughout New Zealand. As part of this work I have presented evidence at numerous resource consent hearings, including at the Environment Court. I have prepared assessments of effects (as part of consent applications) for various activities that discharge contaminants into air, including composting operations. I have also been engaged by Regional Councils to undertake technical reviews of many consent applications, including composting operations and wastewater treatment plants (*WWTPs*).
- 3 My work has included significant technical input to various Regional Air Plans. I am regularly employed by several councils in New Zealand to undertake technical reviews of air discharge permit applications.
- 4 I have been appointed as a commissioner to hear and determine resource consent applications on more than 70 occasions, having achieved certification by the Ministry for the Environment as a Resource Management Act Decision Maker and Hearing Panel Chair. I have sat on panels that decided on changes to air quality plans for several regions in New Zealand. I have also acted as commissioner on numerous hearings involving discharges to air from a range of industrial activities, including several composting operations.
- 5 I am familiar with:
  - 5.1 The plan change application by Rolleston Industrial Developments Limited to rezone approximately 28 hectares of rural land in Rolleston to Living MD (*PC81*); and
  - 5.2 The plan change application by Brookside Road Residential Limited to rezone approximately 110 hectares of rural land in Rolleston to Living MD and Business 1 (*PC82*).

- 5.3 I refer to these applications together as the *Proposed Plan Changes*, and I refer to Rolleston Industrial Developments Limited and Brookside Road Residential Limited together as the *Applicants*.

### **CODE OF CONDUCT**

- 6 Although this is not an Environment Court hearing, I note that in preparing my evidence I have reviewed the Code of Conduct for Expert Witnesses contained in Part 7 of the Environment Court Practice Note 2014. I have complied with it in preparing my evidence. I confirm that the issues addressed in this statement of evidence are within my area of expertise, except where relying on the opinion or evidence of other witnesses. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

### **SCOPE OF EVIDENCE**

- 7 My evidence will deal with the following:
- 7.1 My involvement in assessment of the effects of the composting operation at the Pines Resource Recovery Park (PRRP) in support of the application for the current consent.
  - 7.2 Peer review of Mr Van Kekem's evidence.
  - 7.3 Comments on the use of separation distance guidelines.
  - 7.4 Site specific assessment and odour survey data.
  - 7.5 Comments on the evidence of Mr Bender and Mr Boyd.

### **MY INVOLVEMENT IN CONSENTING OF THE PRRP**

- 8 In July 2018 I prepared an assessment of effects (AEE) of the discharges to air from the PRRP<sup>1</sup>. That AEE considered separation distance guidance from several jurisdictions, the complaints record for the site, meteorological conditions at the site, site management practices and a proposed Odour Discharge Management Plan (ODMP).
- 9 The 2018 AEE concluded that, based on the mitigation proposed, the discharge of odour from the windrow composting system is not likely to adversely affect existing dwellings neighbouring the site. Specifically, the conclusion to the report stated: "*The nearest*

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<sup>1</sup> Specialist Environmental Services Limited, 2018. Assessment of Effects of Discharges to Air – SDC Pines Resource Recovery Park Composting Operation. 19 July, 2018.

*dwellings are 410m and 590m from the active composting area (the primary source of odour) at the RRP. These dwellings are located to the east of the site and are not downwind of the composting operation during the prevalent north easterly winds. Review of local wind conditions and published evaluation distances for greenwaste composting indicates that the separation distance to dwellings is likely to be sufficient if appropriate site-specific controls, as detailed in the ODMP, are implemented."*

- 10 In June 2020 I prepared an update to the AEE<sup>2</sup> to consider the need for any volume restriction on the consent for the windrow composting operation. The conclusions to the updated report stated: *"Taking into account the nature of the Selwyn District Council's Pines composting operation and the local wind conditions, SES concludes that the separation distances to neighbouring dwellings are sufficient to prevent adverse odour effects. Providing composting of greenwaste and kerbside organic material occurs within the area designated and in the manner prescribed by the ODMP, a specific limit on the quantity of compost produced is not considered to be necessary."*
- 11 As part of his technical review of the consent application for Environment Canterbury, Mr Van Kekem conservatively calculated the existing dimensions of the composting area would allow up to 53,000 tonnes per year of compost to be produced. My opinions are based on composting ultimately occurring at this rate.

#### **PEER REVIEW OF MR VAN KEEKEM'S EVIDENCE**

- 12 I have reviewed the evidence of Mr Van Kekem. The key area of disagreement between the parties is the setback from the PRRP to PC82 land and I have focussed on that issue. I agree with Mr Van Kekem regarding the potential effects on future dwellings within PC82 and consider that a 600m setback distance is sufficient to prevent adverse odour effects. My opinion takes into account the site specific assessment and is consistent with my findings when assessing effects for the PRRP discharge permit application.
- 13 Mr Van Kekem has undertaken a comprehensive site specific analysis of the extent of predicted odour effects from the PRRP. I note that he has appropriately taken into account local meteorological conditions, mitigation required by the conditions of consent, odour survey data and odour scout monitoring. The recent odour scout observations (during the week of 22<sup>nd</sup> August 2022)

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<sup>2</sup> Specialist Environmental Services Limited, 2020. Letter report titled: Assessment of Effects of Odour and Dust from Windrow Composting at Pines RRP, Rolleston – Update to Consider any Requirement for Volume Restrictions. 26 June, 2020

provide useful additional information regarding the expected extent of the odour plume from the PRRP operation.

- 14 The odour scout observations indicated that the odour plume from composting did not extend beyond 350m from the PRRP. Odour at this distance was described as musty/earthy. These observations are consistent with Mr Van Kekem's experience of other similar composting operations in New Zealand. They are also consistent with my experience of windrow composting operations that are undertaken in accordance with good practice.
- 15 The ODMF and the specific odour mitigation measures employed at the PRRP are also important considerations. I agree with Mr Van Kekem that the condition preventing turning of windrows when winds blow towards PC82 is a key factor. Taking into account the site specific factors, I agree with Mr Van Kekem that the potential for reverse sensitivity effects within PC82 (and PC81 at greater distance) is low.

#### **USE OF SEPARATION DISTANCE GUIDANCE**

- 16 I recommend caution against using separation distance guidance from international sources in isolation, without considering a site specific assessment for odour sources such as the PRRP. A wide range of setback distances for composting are specified by various jurisdictions. In the New Zealand context, such guidance is typically used as a screening tool to indicate where site specific assessment may be appropriate.
- 17 Mr Van Kekem has provided a description of his experience of the extent of odour effects associated with other existing windrow composting plants in New Zealand. His evidence regarding the observed extent of the odour plume (up to approximately 400m from the source) is generally consistent with my experience of well-operated composting operations with comparable feedstock material to that processed at the PRRP. I note that this distance is substantially less than indicated by Victorian EPA guidance that specifies very conservative setbacks of up to 2000m in relation to composting of greenwaste material.

#### **SITE SPECIFIC ASSESSMENT AND ODOUR SURVEY DATA**

- 18 I am familiar with the PRRP composting operation, having visited the site and surrounding area when undertaking the AEE to support the recent consent application. I also visited the area surrounding the site on 24<sup>th</sup> August 2022 and participated in odour scout monitoring being undertaken by Mr Van Kekem and subcontractors. During that visit Mr Van Kekem and I walked around the boundary of the PRRP site and were able to view operations occurring on site from various points at the boundary.

- 19 During the site visit on the morning of Wednesday 24<sup>th</sup> August light, variable winds (generally from the northeast) prevailed. I participated in three 10-minute odour recordings at sites downwind of the composting operation. I confirm that the odour scout monitoring supervised by Mr Van Kekem was being undertaken in accordance with good practice.
- 20 The odour scout monitoring supervised by Mr Van Kekem indicated that the odour plume from composting did not extend beyond approximately 350m from the PRRP. These observations are consistent with experience of well operated composting plants of this type in New Zealand.
- 21 Mr Van Kekem has considered meteorological data relevant to the Rolleston area. The wind roses shown in his evidence indicate that the frequency of west to north-westerly winds blowing from the PRRP towards PC82 land is relatively small. I agree with Mr Van Kekem that the presence of the forestry block to the south of the PRRP will result in increased turbulence and mixing of the odour plume during north-westerly winds blowing towards the nearest dwellings on PC82 land.
- 22 I further note that the ODMP requires that windrow turning does not occur during west to north-westerly wind conditions that blow towards PC82 land. This factor significantly reduces the risk of composting odour being detected at dwellings on PC82 land at a distance of over 600 metres from the PRRP.

#### **COMMENTS ON THE EVIDENCE OF MESSRS BENDER AND BOYD**

- 23 I have reviewed the evidence of Mr Bender and Mr Boyd for the Selwyn District Council (*SDC*), appended to the Officer's Report. At paragraph 30 of his evidence, Mr Bender *"accepts that the site should be able to operate without resulting in offensive odours beyond the separation distance of 600 metres."* However, in practice, he notes that *"upset conditions may occur in which offensive odours are released, e.g. if pockets within a windrow of active compost become anaerobic and are subsequently exposed to air."*
- 24 I consider that such "upset conditions" are not likely to occur in this case, given the detailed ODMP in place and the conditions of consent. The complaints record relating to the existing operation supports that view. Such upset conditions would result in a breach of the conditions of consent. I am not aware of any evidence that the PRRP is (or has been) non-compliant with the "no offensive or objectionable odour beyond the site boundary" condition.

- 25 I note that there is good drainage at this site and the windrows should be able to be managed so that they do not become waterlogged at the base. Appropriate management of the windrows can prevent the onset of anaerobic conditions or “upsets”.
- 26 Mr Bender considers that the strength of odour will be proportional to the scale of the composting operation. I do not agree with that assumption for this type of windrow operation. That is because the primary source of compost odour is from turning of the windrows. As the site increases in capacity over time, more active windrows will be maintained and therefore the loader (or similar machinery) will need to operate for longer periods each day to turn windrows and maintain aerobic composting in accordance with the ODMP. Thus there will be an increase in the frequency of windrow turning and associated odours in close proximity to the site boundary, but the extent of the detectable odour plume is not expected to change substantially.
- 27 In summary, I consider that the increase in scale of composting during the term of consent will result in an increase in the frequency of earthy/musty type odours detectable beyond the site boundary (within approximately 400m). Because the odour plume from composting operations does not normally extend beyond the proposed odour setback distance of 600m, a significant change in effect with increasing scale is not anticipated. The prohibition on windrow turning in the ODMP when wind is blowing towards PC82 provides additional assurance on this matter.
- 28 Mr Boyd suggests that the odour setback distances should be calculated from the edge of the entire composting site, including the maturation area. In my experience the maturing compost piles are not a significant source of odour, relative to the active windrows. I agree with Mr Van Kekem that the edge of the active windrow area is the appropriate reference point for setting setback distances.
- 29 Mr Boyd expresses concern that the increased density of dwellings in the PC82 area would increase the probability of a person/s complaining regarding odour from the PRRP and thereby requiring further mitigation. However, in my opinion the detection of typical earth/musty type odours from composting on an infrequent basis would not normally be deemed to be a breach of the “no offensive or objectionable odour” condition of consent. In practice, Environment Canterbury officers would investigate any complaints and determine compliance based on the FIDOL factors (*Frequency, Intensity, Duration, Offensiveness, Location*) in accordance with the guidance in Schedule 2 of the Canterbury Air Regional Plan (*CARP*).
- 30 If occasional complaints did arise from a residential area and Environment Canterbury did not determine an offensive and objectionable odour effect, I do not consider that such complaints

would necessitate changes to the PRRP composting operation that require additional expenditure.

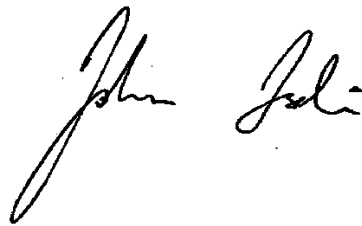
## **CONCLUSION**

- 31 I have previously undertaken an assessment of effects of discharges to air from the PRRP composting operation that took into account site specific factors. I have also reviewed Mr Van Kekem's evidence and considered the odour survey and odour scout monitoring results now available. In summary, I agree with Mr Van Kekem's conclusions regarding the extent of predicted odour effects from the PRRP and note that they are consistent with my earlier assessment of effects.
- 32 Caution should be used when applying separation distance guidance in isolation, without considering a site specific assessment for odour sources such as the PRRP. A wide range of setback distances for composting are specified by various jurisdictions. In the New Zealand context, such guidance is typically used as a screening tool to indicate where site specific assessment may be appropriate. Mr Van Kekem's evidence regarding the observed extent of the odour plume (up to approximately 400m from the source) is generally consistent with my experience of well-operated composting operations with comparable feedstock material to that processed at the PRRP. This distance is substantially less than indicated by Victorian EPA guidance that specifies very conservative setbacks of up to 2000m in relation to composting of greenwaste material.
- 33 I consider that the odour scout observations relating to the PRRP site and also other well operated windrow composting plants in New Zealand adds to the body of evidence supporting the conclusion that adverse odour effects are unlikely to occur beyond 600m from the active windrows. The active windrows are the primary source of odour from the site. Consent conditions and the ODMP prevent turning of windrows under wind conditions when odour may affect PC82 land. Given these controls and the relatively small frequency of winds from the west to northwest (blowing from the site towards PC82), it is my opinion that residential development more than 600m from the composting site is not likely to result in reverse sensitivity effects.
- 34 Concern has been raised that "upset conditions", such as windrows becoming anaerobic, could result in odour effects beyond 600m from the plant. I consider that such upset conditions are not likely to occur in this case, given the detailed ODMP in place and the conditions of consent. The complaints record relating to the existing operation supports that view. Such upset conditions would result in a breach of the conditions of consent. I am not aware of any evidence that the PRRP is (or has been) non-compliant with the "no



offensive or objectionable odour beyond the site boundary”  
condition.

Dated: 26 August 2022

A handwritten signature in black ink, reading "John Iseli". The signature is written in a cursive style with a large, stylized 'J' and 'I'.

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John Iseli