

**BEFORE THE**

**Selwyn District Council HEARING  
COMMISSIONER**

**IN THE MATTER**

of the Resource Management Act 1991

**AND**

**IN THE MATTER**

Requests by Rolleston Industrial  
Developments Limited and Brookside  
Road Residential Limited to rezone land  
in Rolleston (PC81 and PC82)

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**SUMMARY STATEMENT OF ANDREW CURTIS**

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**1.0 QUALIFICATIONS AND EXPERIENCE**

- 1.1 My Name is Andrew Curtis, I am a Technical Director at Pattle Delamore Partners (PDP), with over 35 years of experience. I have specialised in air quality for over 25 years. I have a Bachelor's Degree in Chemical and Material Engineering from Auckland University and a Post Graduate Diploma in Toxicology RMIT University in Melbourne. I am also an accredited Hearing Commissioner and a Certified Air Quality Professional.
- 1.2 I am experienced in dealing with the issue of reverse sensitivity as it affects industrial activities and have most recently presented evidence on this issue in respect to the Proposed Waikato District Plan.
- 1.3 I am familiar with the operation of both wastewater treatment plants and composting operations and have been involved in consenting and reviewing applications for a large range of these activities.

**2.0 INVOLVEMENT WITH PC81 and PC82**

- 2.1 PDP was engaged by Selwyn District Council (SDC) to prepare the odour related section of the S42A report for private Plan Changes 81 and 82 (PC82). This work was undertaken by my colleague Mr Chris Bender.

- 2.2 Mr Bender was not able to attend this hearing as he is in Australia for business this week, and as he is then going on extended leave to America for a month, PDP proposed to SDC that I become involved in this hearing, as well as the ongoing mediation and Environment Court Proceedings for Private Plan Change 73 which Mr Bender has also been involved in.
- 2.3 While I have not previously presented information with respect to PC82, I have been involved internally at PDP with providing advice to Mr Bender and as the peer reviewer on the documents that he has prepared. For the purposes of this hearing I adopt the S42A odour memo (Odour Memo) prepared by Mr Bender and confirm that I agree with its content and conclusions.
- 2.4 I have read all of the relevant odour related material that has been presented to the Hearing Commissioner and in particular the evidence of Mr Van Kekem and Mr Iseli.
- 2.5 I visited the area on the 7 September 2022 including undertaking site visits to the Pines Resource Recovery Park (ORRP) and the Pines Wastewater Treatment Plant. I also drove along Dunns Crossing Road and visited the location of the land that is subject to PC82.
- 2.6 Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person. Write project details:

### **3.0 SCOPE OF SUMMARY**

- 3.1 The scope of my summary is to provide:
- a. A Brief summary of the conclusions of the Odour
  - b. Comment on the evidence of Mr van Kekem
  - c. Comment on the evidence Mr Iseli.
  - d. Respond to some questions asked by the Commissioner

### **4.0 WHAT IS REVERSE SENSITIVITY**

- 4.1 Before talking about the evidence, it is important in an air quality context to acknowledge that the primary issue in contention from my perspective is whether there is the potential for reverse sensitivity effects to occur on SDC assets if PC82 were granted. Therefore it is important to understand what is meant by reverse sensitivity.

- 4.2 There is not a definition of reverse sensitivity in the operative Selwyn District Plan, but the Proposed Plan contains the following definition.

*“The potential for an approved (whether by consent or designation), existing or permitted activity to be compromised, constrained, or curtailed by the more recent establishment or alteration of another activity which may be sensitive to the actual, potential or perceived adverse environmental effects generated by an approved, existing or permitted activity.”*

- 4.3 I think that this is a very helpful definition and encapsulates well the issues that are at the heart of the difference views that are held by Mr Bender and myself and Mr van Kekem and Mr Iseli. In particular, it identifies the potential for reverse sensitivity to arise because of potential or perceived adverse effects, which is something I discuss later into response some comments from Mr van Kekem.

## **5.0 SUMMARY OF CONCLUSIONS OF THE ODOUR MEMO**

- 5.1 Overall it is agreed that the using separation distances applicable to the nature and scale of the odour-generating activities is appropriate for minimising the potential for reverse sensitivity effects of sensitive receptors on the PRRP and the PWWTP. However, I consider the proposed separation from the PRRP activities to be low.
- 5.2 The proposed separation distance of 600 metres from the active composting area of the PRRP is significantly less than the separation distances recommended by various international authorities for a composting facility of the size and type of the PRRP.
- 5.3 The site specific assessment of potential odour discharges from the composting facility undertaken by SES, as accepted by Environment Canterbury, assessed the effects of the composting operations on the nearest residences as being minor or less than minor. The site specific assessment of the composting facility furthermore states that the PRRP should be able to increase the scale of operations to allow an increase in organic matter processed of up to 53,000 tonnes per year provided the procedures in the ODMP are followed.
- 5.4 While I consider this a reasonable assertion, I note that there is potential for upset conditions to occur in any large scale composting facility, which may lead to adverse odour effects being experienced. I also consider that residual odour from composting operations which may be considered acceptable in a rural residential area may be considered offensive in a more developed environment such as a medium density zoning, and that any agreed separation distance should be determined from the composting area as a whole including the compost maturation and processing area. In my opinion the Odour Setback Control Area proposed for PC82 is insufficient to avoid the potential for reverse sensitivity effects on the PRRP.

## 6.0 EVIDENCE OF MR VAN KEKEM

### Separation distances

- 6.1 In paragraph 45 Mr van Kekem discusses separation distances between residences and WWTP in some locations in New Zealand. I am familiar with most of these sites and can say that the Hamilton Fitzroy site is actually a water treatment plant and therefore not a relevant comparison.
- 6.2 I also note that the construction of virtually all these plants predates the VicEPA and other guidance on separation distances and therefore it is not appropriate to state that there will be no odour experienced by nearby residents from the facilities because of distance. It would have been helpful to have had data presented to demonstrate that the distances were appropriate.
- 6.3 For example I have often detected odour from the Mangere WWTP while driving along SH20 approximately 1.6 kilometres from the plant.
- 6.4 That having been said I consider that the 1,000 metre setback that will exist between the PWWTP and PC82 should be sufficient to minimise most odour impacts.
- 6.5 In paragraphs 53 to 57 Mr van Kekem discusses separation distances and quotes extensively from the South Australian guidance document. I do not disagree with those quotes and think they are helpful in providing some guidance on the purpose of the separation distances. In a more recent publication<sup>1</sup>, the Victorian Environmental Protection Authority (VicEPA) sets out some further guidance which I consider is relevant to consider as follows:

*It needs to be recognised that where there are industrial air emissions from premises, even with good pollution control technology and practice, there may still be unintended emissions which must be anticipated and allowed for. While it is the objective of the SEEP (AQM) that such emission should be eliminated, it is recognised that even 'state of the art' facilities are not always guaranteed to achieve this goal 100 percent of the time. Equipment failure, accidents and abnormal weather conditions are among the causes that can lead to emissions affecting sensitive land uses beyond the boundary of the source premises*

*Unlike routine emissions, unintended emissions – industrial residual air emissions (IRAEs) – are often intermittent or episodic and may originate at or near ground level. Separation distance seek to avoid the consequences of IRAEs. An adequate separation distance should allow IRAEs to dissipate without adverse impacts on sensitive land uses.*

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<sup>1</sup> Victorian Environmental Protection Authority, Recommended separation distances for industrial residual air emissions, March 2013,

*In addition, under the VPPs, industrial land uses have rights which enable the industry to operate, provided they comply with relevant regulations. Accordingly, planning authorities and other responsible authorities need to carefully consider the appropriate separation of industrial land uses from sensitive land uses.*

6.6 Taking the above into account VicEPA has, as set out in Table 2 of the Odour Memo, identified that separation distances of greater than 2,000 metres are required for the type of composting being undertaken by SDC at the PRRP.

6.7 The VicEPA does allow for the consideration of reduced separation distances and has identified what it considered might need to be considered if a reduction were to be considered. In particular it notes that:

*Separation distances seek to mitigate the consequences of IRAEs. Any proposal to vary from a recommended separation distance should detail why consequences of IRAEs are such that variation from the recommended separation distances is justified.*

6.8 While Mr van Kekem has correctly identified that there are a range of published separation distances I consider that when taking into account the VicEPA guidance and my experience with odour issues (real and perceived) from compost operations that the acceptance of a 1,000 metre separation distance due to the measures in place at the PRRP provides a more appropriate level of protections than 600 metres to deal with the potential consequences of IRAEs.

#### Potential for Odour nuisance from the PRRP

6.9 Mr van Kekem describes the potential for odour from the various activities undertaken by SDC and considers that the one with the highest potential for reverse sensitivity effects on PC82 is the PRRP.

6.10 I note that in paragraph 58 Mr van Kekem talks about “reverse sensitivity effects on PC82/81”. I consider that this statement is incorrect, because SDC’s assets already exist it is therefore them that will experience the reverse sensitivity effects not any sensitive activities that may be established in PC82.

6.11 I agree with Mr van Kekem that composting leachate has the potential to be odorous if not well managed, but I do not agree with him that not having some form of leachate storage is a “major factor” as to why a reduced separation distance might be appropriate. Based on my experience well operated composting sites are able to manage the potential for odour from leachate.

6.12 Therefore while not having a leachate pond may remove one factor that can lead to odours, the remaining factors exist, as they do on most composting sites of this type.

- 6.13 In paragraph 66, Mr van Kekem identifies various odour sources associated with composting and I agree that this is a reasonable list.
- 6.14 I am unsure in his paragraph 67 when he lists the activities with the “highest potential for odour discharge”, whether this is in general or whether he is talking about odours that might be detected off-site and considered offensive. Either way I would consider that the turning of active compost rows has the greatest potential to generate odours as that activity generally occurs for the longest period of time, with the odours associated with receipt and mixing occurring quite quickly.
- 6.15 In paragraph 71 Mr van Kekem talks about upset conditions, and that based on the site management procedures and consent requirements, these should be minimal. I agree that should be the case, however as VicEPA states, these types of events can occur on occasions and therefore having a separation distance is appropriate.
- 6.16 However my experience is that even when compost sites are operating well, there is the potential for them to generate odours that can be distinct and detectable off-site. These are not odours that I would classify as being “offensive or objectionable” but they are odours that some individuals might consider unpleasant, particularly if they are highly sensitive to odour. For example I have detected weak compost odours 1,600 metres from the Uruti compost facility that has given rise to odour complaints.
- 6.17 This potential risk increases as the number of receptors (or residences) in proximity to a site increases, particularly if the amenity expectation of that population becomes higher.

#### Odour Surveys

- 6.18 Mr van Kekem has helpfully undertaken two types of odour surveys; a community odour survey with people living or working near the PRRP (paragraphs 76 to 114) and some odour scouting undertaken by an independent person (paragraphs 140 to 172).
- 6.19 I think that the community survey demonstrates that odour associated with the RRP can be detected more than 600 metres from the site (paragraphs 89, 96 and 102). While this odour did not generally appear to be strong it was apparent (that is noticeable).
- 6.20 This is an indication of the highly variable effect that odour has on people, which is in part based on the sensitivity of their sense of smell.
- 6.21 I note that as far as I am aware there is no indication that the PRRP was not fully compliant with its resource consent when the survey was being undertaken and consequently the odours experienced by the community are likely to be simply those residual odours that will be experienced near any composting site.
- 6.22 The odour scouting also observed residual odours out to at least 350 metres on occasions (paragraph 149). However as the composting is currently only operating at about 16

percent of its consented capacity, I do not consider that the odour scouting provides any useful information on the future odour potential from the site.

- 6.23 In paragraphs 173 to 175, Mr van Kekem describes the sensitivity of the area to odour and how it might change with PC82 is granted. I agree with his analysis.
- 6.24 However as I have already stated I fundamentally disagree with Mr van Kekems's conclusions in paragraphs 177 to 188 in relation to the potential for reverse sensitivity effects on SDC's assets if residences are allowed to develop within 1,000 metres.
- 6.25 Specifically based on my experience, the amenity expectation of residential communities is such that they are unlikely to tolerate occasional low intensity odours from composting that are likely to occur when the site is operating well and in compliance with its resource consent. The community is also extremely unlikely to tolerate what VicEPA refer to as IRAEs. Consequently the greater the distance between residences and SDC's assets, the lower the potential that reverse sensitivity effects may be experienced by those assets.
- 6.26 I do not think that the presence of the pine plantation (paragraph 183) can be relied on to provide dispersion and mixing in the future as at some stage these trees will be harvested, and any benefit they may provide in terms of dispersion will be removed. Consequently I do not consider that it is appropriate to discount the potential for the PC82 area to be exposed to odours from compost turning or other activities on site.
- 6.27 Finally I note that based on the Burnham windrose presented in Figure 2 of Mr van Kekem's evidence, there is in the order of 18% of the time when there will be light winds (less than 3.8 m/s) that will blow from the RRP towards PC82. This is not, in my opinion, a particularly low percentage of the time.
- 6.28 Consequently I consider that overall Mr van Kekem has downplayed the potential for odours to affect the PC82 site.
- 6.29 I do agree that the potential for odour effects to be experienced at PC81 is very much less than for PC82.

#### Comments on Officers Report

- 6.30 Mr van Kekem has made some comment on the Odour Memo which I would comment on.
- 6.31 Firstly I do not agree that any distances should only be measured from the active compost area. I agree that the character of the odours are different in the maturation area, however the area still has the potential to generate odours, particularly when activities such as screening and load out occur. These low level odours have just as much potential to result in reverse sensitivity effects as do those from the more active phases of the composting process.

- 6.32 In paragraph 195 Mr van Kekem indicates that he does not consider that increases in throughput will change the potential for odour, as he does not consider that the intensity of odour from the activity will change.
- 6.33 While I do not necessarily agree with this statement, as I consider that there is potential with increased quantities of food waste for odour intensity to increase, although not to extent that the site becomes noncompliant with its consent, I do not consider that Mr Kekem has appropriately accounted for the increase in duration or frequency of odours from onsite processing. This means that any odours that might be generated could be experienced off-site for longer and potentially more frequently.
- 6.34 This is exactly the type of situation that can give rise to chronic odour effects in some cases when people are especially sensitive to odours. In my opinion the only way to avoid this is to ensure that sensitive receptors are as far away as possible.
- 6.35 Finally I note that Mr van Kekem discusses no complaints covenants in paragraph 201. I personally do not consider that no complaints covenants provide any protection to SDC from complaints, and in fact, do nothing more than provide a note on the property title that may alert some purchases to the fact that they are purchasing a property near to an activity that may produce odours on occasions.

## **7 EVIDENCE OF JOHN ISELI**

- 7.1 Specifically I disagree with the conclusions in:
- a. Paragraph 14 in relation to the conclusions of the odour survey for the reasons set out in paragraph 6.22
  - b. Paragraph 21 in relation to the meteorological data for the reasons set out in paragraph 6.35
  - c. Paragraph 27 in relation to the potential for off-site odour for the reasons set out in paragraph 6.33
- 7.2 In paragraph 24 Mr Iseli states that he considers that “upset conditions” are not likely to occur. While I agree with him that the PRRP site is well run, it is my experience that even on a well run site there is the potential for things to happen, such as the refuse compactor breaking down, or adverse weather conditions that prevent compost piles being turning for extended periods of time, which will lead to upset conditions. On a site such as this, these upset conditions will have significant potential to generate odour. This is exactly the reason that VicEPA has specified such a large separation distance for this type of activity.
- 7.3 In paragraph 28 Mr Iseli comments on where the separation distance should be measured from. It is my opinion that it should be from the boundary of the property because of the potential that activities such as screening compost will generate odours that will cause



annoyance or offense to some people, albeit that that odour would not normally be considered to be offensive or objectionable. I note that this is slightly different to what is stated in the Odour Memo, however having been on site I am comfortable that this is more appropriate.

- 7.4 In addition, I note that Mr Iseli's comment in paragraph 30 is exactly the type of reverse sensitivity effect that the separation distances are intended to avoid. Whether or not Environment Canterbury consider the odour is offensive, it will still have to investigate the incident, as will SDC, and if the complaints occur on a regular basis there is the potential that Environment Canterbury could identify that there is a chronic odour issue, and take action against SDC. Having larger separation distances reduces the potential for this to occur.

## **8 QUESTION RESPONSES**

- 8.1 Finally I thought it would be helpful to set out some additional comments on matters that were raised by Mr van Kekem and Mr Iseli in response to questions that were asked by the Commissioner.
- 8.2 Firstly Mr van Kekem stated a number of times that the PRRP is not able to turn compost in certain wind conditions, and there is sufficient time for the site to operate within the consent. However I understand from Mr Boyd, that the effects of the restriction in Table 3 of the Odour Management Plan (OMP) eliminate approximately 51% of daylight hours.
- 8.3 In addition, as I understand the requirements in the OMP do not prohibit turning in westerly wind conditions. Rather it states that the site should "avoid" turning. While I understand that "avoid" in a regulatory planning context has a specific meaning, in the context of an OMP that is going to be used by site staff, it does not have that same meaning.
- 8.4 Therefore if the site needs to turn windrows to maintain the compost in a healthy condition, and to avoid it becoming anaerobic, and that needs to occur in westerly winds then it will do so.
- 8.5 Mr van Kekem and Mr Iseli also talked on a number of occasions about odours only being experienced off-site that might breach the offensive or objectionable test in the consent. As I have already stated my experience is that even when composting is going well, there will be odours from turning and processing that some people find objectionable.
- 8.6 The potential for this to occur around the PFFP will increase as the sensitive population nearby increases, and in my experience the potential for complaints will be greater if the separation distance is 600 meters compared to 1,000 metres.
- 8.7 I would also note that as the site processes more compost, and that compost contains a higher percentage of more putrescible food waste, the need to turn the windrows to

maintain the aerobic conditions will increase, and consequently the need to turn in westerly wind conditions will also potentially increase.

- 8.8 The Commissioner also asked a question about the need to change processes in the future. Mr van Kekem indicated that as a new consent had been granted this was probably not required. Mr Iseli stated that he considered that the current processes were low tech and the site might need to change technologies.
- 8.9 While it is true that SDC has a consent that has recently be granted and is valid until 2044, if it wanted to vary that consent or seek a new consent for some reason in the future to consent new technologies o the site and PC 82 as requested has been granted, then based on my experience there is the potential for significant opposition from the local community. This is based on my experience with communities generally becoming less tolerant of actual or potential changes in amenity in the local area.
- 8.10 I consider that this potential risk to the SDC's assets is reduced if PC82 is not granted.
- 8.11 The Commissioner asked a question about the potential for dust effects off-site. I agree with the responses from Mr van Kekem and Mr Iseli that it is unlikely that any effects will be experienced for than 200 metres from the site boundary. The potential exception would be if a strong northwesterly wind occurred when there was freshly screened relatively compost on site, in which case the effects could extend beyond that distance.
- 8.12 Mr van Kekem also talked about the odour benefits associated with the removal of the chicken breeder farm. I have extensive experience with chicken farms and have prepared a number of documents relating to effects from them. It is my experience that chicken breeder farms do not give rise to odour effects because of the low stocking densities.
- 8.13 Finally the Commissioner asked a question of Mr Iseli about where the separation distances should be measured from. I have already commented on this, but consider that it should be from the maturation area. This is for two reasons. Firstly as I have already stated, I consider that there are some odours from the processing of mature compost which could give rise to odours that caused annoyance to some people if they are living close to the site.
- 8.14 Secondly there is the potential as the volumes of material that are processed on site increases for processes to change, with the material in the maturation area having a stronger odour particularly if the site changes to using a forced aeration composting system.
- 8.15 These stronger odours while still meeting the site offensive or objectionable limit will have greater potential to be detectable off-site, especially when the maturation piles are turned.