In The Matter of the Resource Management Act 1991 ("the Act") And

In The Matter Rolleston Plan Change 81/82

OFFICER COMMENTS OF ANDREW BOYD

Introduction

1. My name is **ANDREW GARETH BOYD.** My qualifications are BSc (Geography) and MA Sc (Environmental Management).

2. I am the Solid Waste Manager for the Selwyn District Council ("the Council") and I am authorised to present this statement on its behalf. I have been employed by the Council since June 2015, and prior to that, in the wider waste and resource recovery industry for 20 years, and I am familiar with a range of facilities across New Zealand.

3. I have the responsibility of managing Council's Solid Waste Activities for both strategic planning, projects and operations. This includes the district kerbside collections, Pines Resource Recovery Park ("Recovery Park"), composting, as well as preparation of Activity Management Plans (AMP), Waste Minimisation and Management Plans (WMMP).

4. I have read the single paragraph (#76) the applicant has provided relating to odour in the application. I have also read later response to RFI in the document *PC82-RFI-Response-from-Fiona-Aston.pdf* relating to reverse sensitivity (Pages 2-5).

5. Because of my role at the Council, my evidence considers the plan change application primarily in relation to the proximity of the dwellings within the plan change site, to the Recovery Park, and the operations associated with the Recovery Park. Specifically, my concerns are that the development of residential dwellings and activities near to the Recovery Park would result in reverse sensitivity issues that would affect the ongoing operation of the Recovery Park – classified as a core Council service under the Local Government Act, as well as to residents and businesses. By being the district's sole site

designated for reducing waste to landfill, the Recovery Park is a key facility for Selwyn to meet its obligations under the Zero Carbon Amendment Bill. The flow-on effects of reverse sensitivity issues would be significant increased costs associated with mitigating effects, the potential for Council to have to look at relocating the site or no longer being able to accept the district's kerbside, commercial and public organic material for composting.

Pines Resource Recovery Park

6. The Recovery Park is located at 183 Burnham School Rd, to the South-West of Rolleston township. It is the district's only general waste receiving facility, and the only facility in the district consented to compost kerbside foodwaste. As an odorous operation, it was located here, next to the Pines Wastewater Plant (also odorous), to be sufficiently distant from residential dwellings. Over the last 10-15 years, Rolleston has expanded increasingly closer to the Recovery Park.

7. The site receives general waste as well as garden waste and foodscraps from across the district. In the year ending 30 June 2022, the site received 21,295 tonne of general waste, and 10,401 tonne of organics (an increase of 24% over the previous year) as well as 1044 tonne of hardfill and tonnes of other recyclable and hazardous waste streams. The general waste is received from kerbside bins, commercial and industrial waste from private collectors, building waste and the general public. Some sorting and separation of waste occurs, and this is planned to ramp up over time. Residual waste and recovered materials are consolidated before being (generally) trucked off site for further processing.

8. The facility is currently undergoing a significant expansion staged over several years, known as the 'Reconnect Project'. This will culminate in the provision of a reuse shop, salvage yard, micro enterprise/maker space units, education centre, garden hub, multipurpose waste hub, landscape supplies yard and high temperature pyrolysis plant processing waste materials into oil and gas for beneficial reuse.

9. As Council works towards meeting its obligations under the Climate Change Response (Zero Carbon) Amendment Bill, efforts to reduce waste are planned to intensify. Within the kerbside refuse bins, considerable food waste still exists. Council plans to trial food waste

caddies within households, with biodegradable liners (bags) in an effort to divert that organic material from the general waste. Food caddy liners would be placed in the kerbside organics wheelie bins. These are collected and taken to Pines Resource Recovery Park for composting. As the food waste content grows, the potential for odour increases.

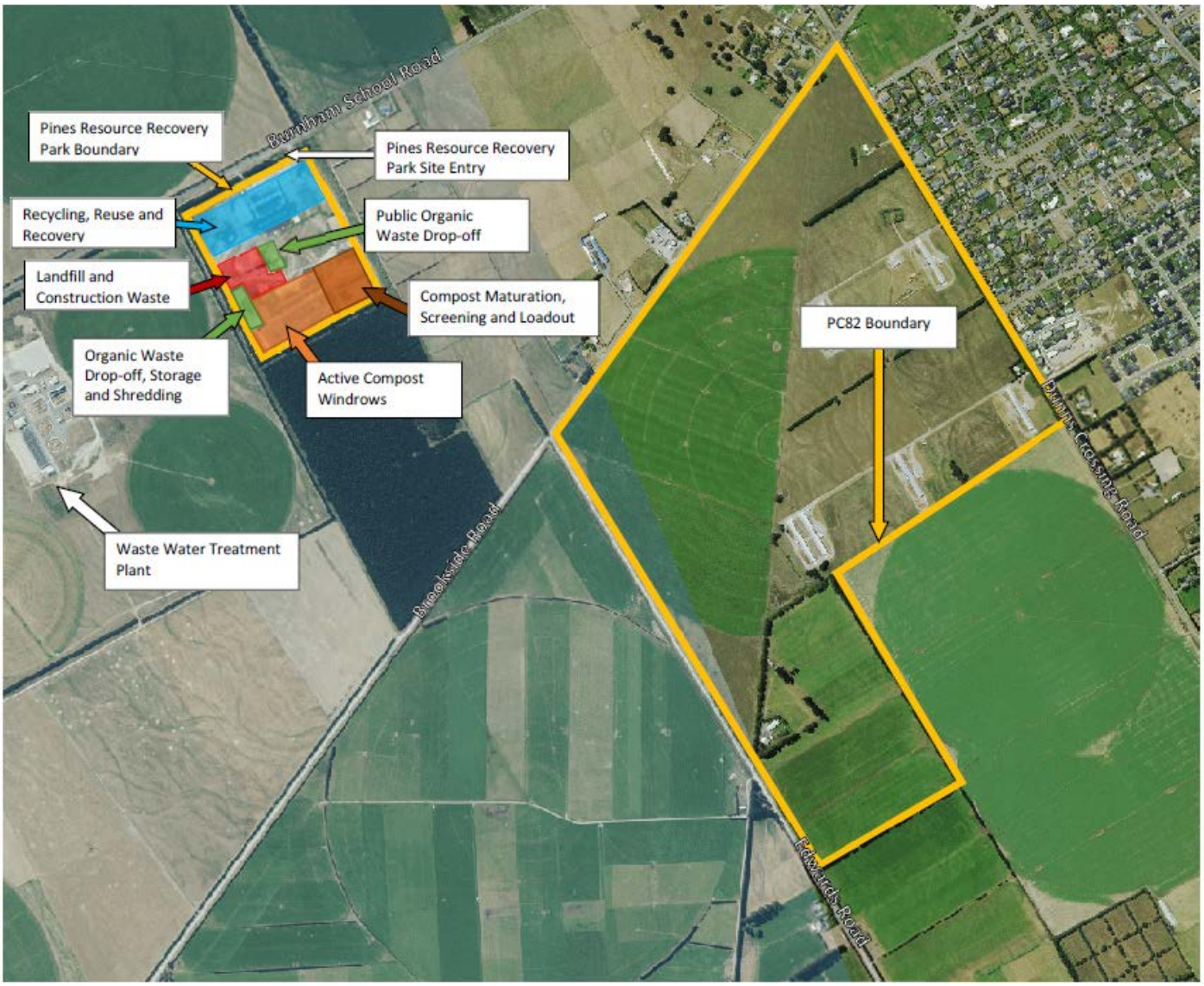

Figure 1. Recovery Park activities in relation to Plan Change 82 land.

Consents

10. The site operates under a District Plan Designation (#412) and Regional Council Air discharge consent CRC211594, as well as stormwater consent CRC201524. The designation is proposed to be rolled over in the proposed Selwyn District Plan (SDC-70)).

11. Consent CRC211594 expires in December 2044 and provides for the following limits within condition 2:

    a. The quantity of waste received by the Recovery Park authorised by Condition (1) of this consent shall not exceed the following:

        i. Organic material (feedstocks) to be composted - 53,000 tonnes per year;
        ii. General waste - 120,000 tonnes per year;
        iii. Hazardous waste - 1,000 tonnes per year;
        iv. Cleanfill - 5,000 tonnes per year; and
        v. Plasterboard - 5,000 tonnes per year.

    b. There shall be no limit on the volume of recyclable or reusable waste that can be received on site.

    c. The organic material (feedstocks) to be composted shall be limited to:

        i. Kerbside organics;
        ii. Commercial food waste; and
        iii. Green waste.

12. Organic waste is defined in the consent as:

    a. **Kerbside organics** means organic waste, comprised mostly of domestic garden waste and food scraps, and includes compostable packaging and products.

    b. **Commercial food** waste means food waste generated by commercial operations such as restaurants, cafes, commercial food producers and events, and includes compostable packaging and products.

    c. **Green waste** means organic vegetation, garden waste, tree prunings, etc

Forecast tonnes

13. Projections for general waste and organic waste through to 2044 have been made, and these are reflected in the limits within the consent condition 2a (provided above in paragraph 12).

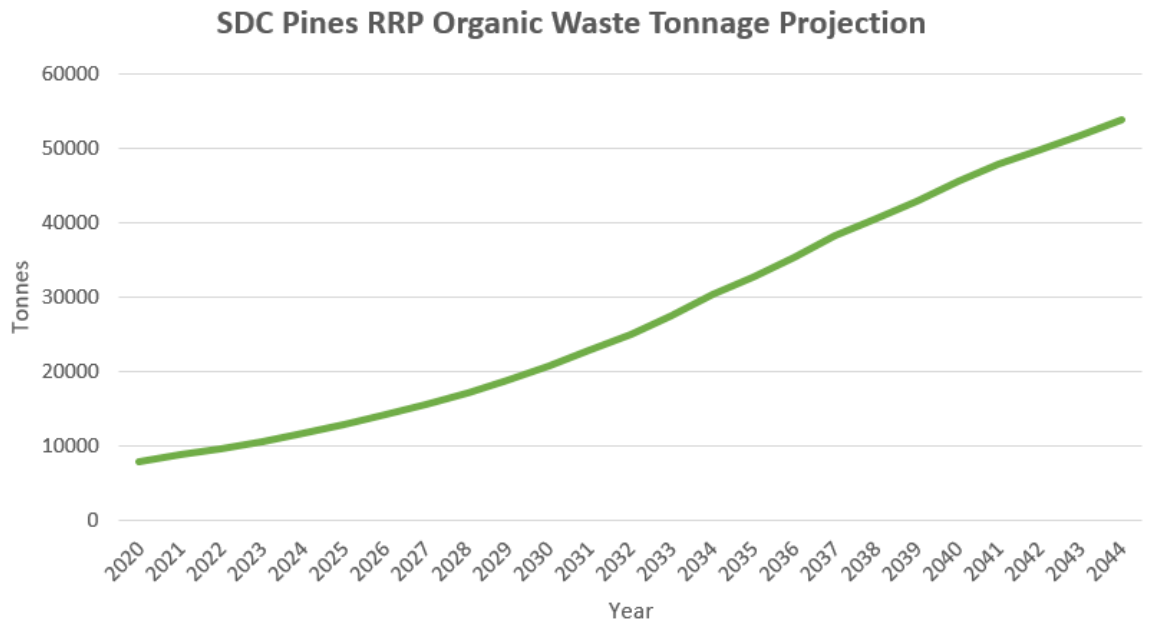

Figure 2. Organic waste tonnage projection to end of consent in 2044

Reverse Sensitivity

14. Reverse sensitivity concerns noted in my introduction are well documented at other facilities. For example, Living Earth in Bromley has been undergoing a very public process where residents are complaining about odours from the plant. I am very familiar with this site and its operations. Despite the composting operation being in place for decades, and with significant capital expenditure to upgrade the facility, complaints that originally were predominantly from two individuals eventually gathered enough momentum for the media to take hold of it and inflame the situation further. This increased the number of residents complaining about the site. While there was still reasonable doubt among parties about the Living Earth site being the cause of the odour complaints, Christchurch City Council looked to enclose the entire facility so that it could argue that the composting operation was not the cause of the complaints. The cost of this was expected to be $23million, but tenders came back significantly higher, so much so, that the Council is now investigating moving the composting operation in its entirety. This scenario is what I want to avoid for Selwyn. The ratepayers of Christchurch will be paying for the composting plant upgrade or relocation.

15. Another example of a situation with similarities (incompatible land uses) is the Gelita Factory in Woolston. The Tannery development of high end retail premises was established across the road from the 100year old Gelita factory, in the middle of a heavy industrial area. Signage at the Tannery advised customers to complain to ECan about the odours from the factory,

listing the phone number to call. Complaints to ECan grew exponentially.

16. Other examples across other industries and sites exist where important facilities have been developed. Residential dwellings are permitted to be constructed nearby, and subsequently complaints arise about noise (like odour, noise can have reverse sensitivity issues). For example, at Western Springs Speedway, Eden Park, and Christchurch Airport. We have an opportunity now to not be the next example.

17. The Pines Resource Recovery Park, and the Pines Waste Water Treatment Plant were specifically located where they are, so as to avoid this situation. I understand that the Council has specifically planned for growth to occur to the South-East of Rolleston (as opposed to the South-West), so that urban areas did not encroach on this critical council infrastructure, and this is reflected in the Rolleston Structure Plan (2007).

18. To reduce potential complaints about odour, improvements to the composting methods could be made by way of forced aeration static piles, or tunnel composting. I would note that none of these mitigation measures are currently required, in large part due to the separation of the facility from sensitive activities. However, any mitigation measures such as these would come at considerable capital expense to the ratepayers of Selwyn. Even with improvements in composting technology, setback guidelines advise a minimum 1000m setback for new developments.

19. Furthermore, as expanded on further in subsequent paragraphs, in New Zealand the guidelines typically used when considering setback distances for new activities are the Victorian and South Australian EPA guidelines. These recommend setbacks of up to 2,000m for composting operations of the type conducted at Pines Resource Recovery Park. The odour experts may argue that the controls within the Odour and Dust Management Plan (ODMP) are such that the setback can be reduced down from 2,000m in the guidelines. However the controls in the ODMP are typical of any well managed windrow composting operation and the EPA guidelines were established with those typical management controls in mind.

20. In the PC82 application, the proposed setback distances are taken from the edge of the active composting area. The consented composting area extends to the edge of the maturation area. Given that screening, and loading out of mature compost occurs from the maturation area, there is potential for odour and dust effects to result in reverse sensitivity issues on composting operations, from residences within the PC82 area. I would propose that a more

appropriate point at which to take the setback buffer, would be from the edge of the maturation area, as marked in figure 1. Albeit in my view a larger buffer than what is currently proposed. One that is more in line with Victoria EPA guidelines would be more appropriate to protect essential Council infrastructure.

Wind directions

21. The wind blows from the North West, towards the PC82 block, approximately 18% of the time.

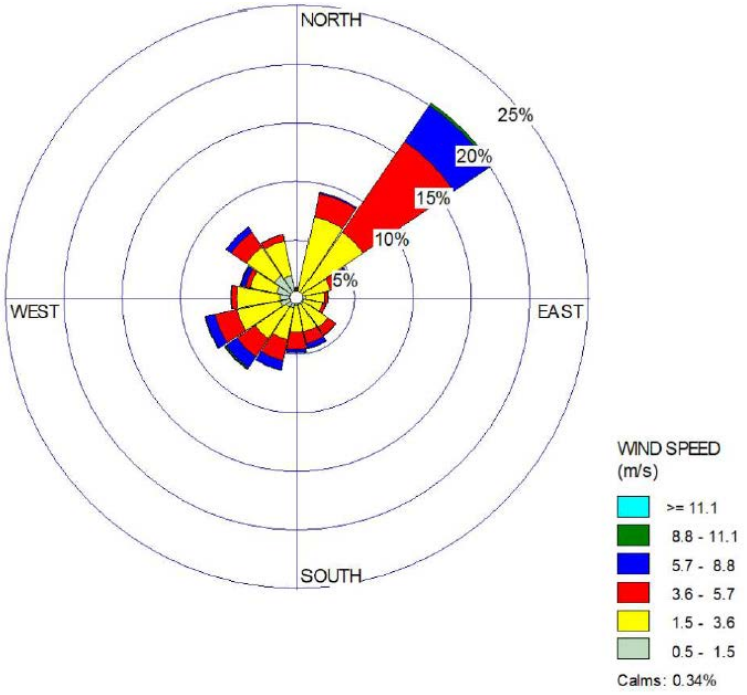

Figure 3. Wind rose for Burnham (closest anemometer), 1 June 2017 to 31 May 2018, all hours (wind direction is blowing from).

22. Two concerns are present relating to wind speed.

    a) Low speed winds from the north west have the potential to blow odour across to the proposed dwellings within PC82.
    b) High and sometimes gale wind speeds during Canterbury's renowned strong nor wests have the potential to blow dust from compost stockpiles within the maturation area, across to dwellings within PC82.

Sensitive receptor density

23. Currently five rural lifestyle block dwellings exist along Brookside Rd, to the South East of the Recovery Park. The properties are semi-rural, with some having horses or sheep, and others storing and feeding out hay and silage bales.

24. Within the land that is the subject of PC82, there currently exists only a single rural house

exists at 1300m from the Recovery Park's active composting area, one at 1400m, and one at 1615m.

25. Currently the rural zoning allows for a density of one house per 20ha. Over the PC82 site (110ha) , this equates to a maximum of 5 houses. At the typical occupancy of 2.8 people per house we would expect 14 residents. Under PC82 with 1320 households anticipated, we could expect 3,696 residents. Common sense would dictate if you have 14 people vs 3,696 people, that the mathematical probability of someone taking issue with odour would be greater.

Review of Odour Assessment

26. PC82 references the PC73 odour setback proposed. For this reason the following sections relate to the odour assessment completed for that plan change. The Golders odour assessment in Appendix H of the PC73 application, refers to consents that were in place at the time this was reviewed (CRC19042). A number of assumptions have also been made that are incorrect.

<u>Organics</u>

27. I note that the assumed volumes were not clarified with Council prior to submitting the odour assessment. Incoming organics volumes were already at 8,000 tonne per annum at the time PC82 was lodged in October 2021.

28. Council had been seeking clarification from ECan on organic volumes because some risk of ambiguity still existed, as CRC190492 provided no limit on the volume of organic material composted at the Recovery Park. This review led to the variation being treated as a new air discharge consent (CRC211594). Within the new consent, limits were applied to the materials able to be received onsite. For this reason the assessment (Section 1.3.1, Appendix H) of odour effects based on 4200 tonne of organic waste is not accurate.

29. Section 2.2.2 of Appendix H states that "*In summary on the basis that the throughput is maintained close to the current throughput, i.e., limited to 4,200 tonnes/annum and there is a high degree of control in the manufacture of the compost, the leachate management (particularly maintaining both of these in an aerobic state), and given the location of the proposed residential area, a buffer distance of 600 m is considered to be reasonable. This*

is consistent with the distance to the existing dwelling to the north east of the compost operation".[1]

30. At the time of lodging PC73, organics tonnes were at 8,000 tonne per annum. Condition 2a of CRC211594 provides for 53,000 tonne per annum. Council expects organic tonnages to increase to 53,000 tonne per annum over the duration of the consent, i.e., through to December 2044.

31. On the basis of the Australian guidelines referenced in Appendix H in the Plan Change application, I consider that the buffer distance should be increased to ensure an appropriate distance is achieved between the Resource Recovery Park and the Plan Change site:

    - The **South Australian EPA** clearly states in their guidelines "Existing composting facilities should be protected from encroachment from new developments. In the absence of site-specific risk information an effective buffer is 1,000 m between new developments and composting facilities, measured from the outer boundary of the area licensed to undertake composting".
    - **Victoria EPA** recommend separation of 2000m for the tonnages Council forecast[2]:

Table 3 – reference facility 2

Types of feedstock	Technology being used	Size of the plant	Recommended separation distance (metres)
Green wastes	Open air receival Open turned windrow Open air maturation	1,200 tonnes per annum	>600
		14,000 tonnes per annum	>1,100
		36,000 tonnes per annum	>2,000
		50,000 tonnes per annum	>2,000

Table 1. Victoria EPA recommended setback distances for greenwastes (not food waste)

32. It is important to note that the Victoria EPA recommendation is for "Green Waste" – Garden and Landscaping Organics. It classes garden and landscaping organics as Category 1 – Lowest Risk level. The Recovery Park receives both Food Organic and Garden Organic ('FOGO') waste. This increases the odour potential and therefore arguably the setback distance

[1] Novo Group, *Golder Associates Odour Assessment,* (2020), 6
[2] Environment Protection Authority Victoria, *Designing, Constructing and Operating Compost Facilities,* (2017), 9

further than the 2,000m in the table above. The Victorian EPA classifies kerbside FOGO material as '#3 Medium to High risk category'.

33. Even if Council invested significant funding into significantly upgrading the technology associated with composting, the Victorian EPA guidelines still recommend a minimum setback of 1000m (for a site of 55,000tn), as provided for in the table below:

Table 2 – reference facility 1

Types of feedstock	Technology being used	Size of the plant	Recommended separation distance (metres)
Green waste Vegetable organics Grease inceptor trap waste	Open air receival Enclosed aerobic composting with secondary odour capture and treatment equipment Open air maturation	1,200 tonnes per annum	>300
		14,000 tonnes per annum	>500
		36,000 tonnes per annum	>800
		55,000 tonnes per annum	>1,000
		75,000 tonnes per annum	>1,200
		90,000 tonnes per annum	>1,400

Table 2. Recommended setback distances based on different, higher technology composting processes and vegetable organics

34. The Golder letter dated 1 February 2021, responding to requests for further information, reads: "*Based on review of aerial photographs it is considered unlikely that the throughput will be able to substantially increase beyond what is currently being undertaken within the footprint defined in the current consent application, i.e., the area defined appears currently to be close to full utilisation. Accordingly, the conclusions reached by Golder in respect of reverse sensitivity effects associated with this activity and its location are considered to be robust".*[3]

35. This assumption regarding capacity is factually incorrect. During the issuing of Consent CRC211594, a maximum limit of 53,000 tonnes input per annum was established as appropriate for the composting area. The existing area is partially used for storage of overburden (which may appear as composting activity on aerial photographs). The existing area has been under-utilised (with current volumes) as there is no need to efficiently use the available space. Volumes of mature compost material onsite at any time varies because arrangements to sell compost vary from year to year, and seasonally within years. With

[3] Golder Associates RFI letter dated 25 February 2021

more efficient utilisation of the entire available space, the maximum volume of 53,000 tonnes per year could be composted.

36. Golder's assumption that composting operations could be extended Westward is incorrect. Immediately adjacent is the Wastewater Processing Plant. Composting operations are directly adjacent to the border pine plantings – a requirement of the site designation.

Refuse

37. Section 1.3.2 of the Golders Odour Assessment (Appendix H) Refuse transfer Operations states that "*there has been no documented or consented changes associated with refuse handling".*

Section 2.2.1 of the Golders Odour Assessment (Appendix H) states that *"the waste transfer operations have not changed since Golder (2008)".*[4]

38. This is also incorrect. Refuse tonnages have increased (changed) considerably since that time. See table below containing weighbridge data for refuse tonnes[5]:

Year	Total waste to Landfill
2008/09	10462
2009/10	9959
2010/11	11479
2011/12	11629
2012/13	12506
2013/14	14240
2014/15	17169
2015/16	18453
2016/17	19203
2017/18	18646
2018/19	18555
2019/20	18347
2020/21	21136
2021/22	21295

[4] Novo Group, *Golder Associates Odour Assessment,* (2020), 6
[5] Pines Resource Recovery Park Weighbridge Tonnage Report

39. As per projections, tonnages of general waste are expected to continue to increase with the increasing population in Selwyn District.

Other

40. Golder's response regarding differences in sensitivity between rural and suburban dwellings reads: *Regarding the potential difference in sensitivity of a rural dwelling vs a suburban dwelling of a scale and character proposed by the plan change request. Golder considers that while rural dwellings may be generally less sensitive to rural odours, the potential odours effects from the composting operations and WWTP are not consistent with what would be considered rural odours*.[6]

41. I contend that composting odours are similar to silage odours released when silage bales or silage pits are opened to feed out – the nature of which is to be expected in rural environments. Furthermore, farmers are increasingly composting onsite to dispose of organic waste such as shelter belt trimming, as well as animal carcasses – ECan's preferred method for managing livestock mortalities.

Recovery Park Complaints

42. I have been asked to provide details about any odour complaints made about the current operations at the Recovery Park. ECan confirmed that one complaint was received several years back. However, this was found to be attributed to another premise and not the Recovery Park.

43. While there have not been any recorded odour complaints, our concern is that higher density residential dwellings, closer to the Recovery Park leads to more sensitive receptors, and an increased risk of complaints.

Conclusions

44. I consider that the odour assessment should be revised and separation distances applied to the plan change site increased more in line with Victorian EPA guidelines of a 2000m setback. On this basis, I do not support proposed Plan Change 82 as currently drafted. I believe that if the setback distances are not sufficient, residents living close to the Recovery

[6] Golder Associates RFI letter dated 25 February 2021

Park will invariably complain about real or perceived odour issues, resulting in significant costs, either to enclose or relocate the facility.

45. Furthermore, should any part of PC82 proceed, I would request that the sections have a no-complaints covenant placed on them, in relation to operations at the Pines Resource Recovery Park. Although I believe this has limited effect at a regional council level, it would at least put residents on notice about the Recovery Park's operations.

Andrew Boyd
11 August 2022