

26 February 2026

West Coast Regional Council
388 Main South Road
Paroa
Greymouth 7805

Application by von Ah Contracting Limited for consents to undertake composting operations of various waste/feedstock products for commercial use including its discharge to land (compost leachate) and air (odour).

1. The following is public health technical advice on an application from von Ah Contracting Limited for consents to undertake a commercial composting operation of various waste/feedstock products at 1047 Kaniere-Kowhitirangi Road, Kokatahi.
2. This advice has been compiled by the National Public Health Service (NPHS) Te Waipounamu region, Health New Zealand - Te Whatu Ora. NPHS Te Waipounamu provides services across the South Island including the West Coast region.
3. NPHS Te Waipounamu recognises its responsibilities to improve, promote and protect the health of people and communities of Aotearoa New Zealand under the Pae Ora (Healthy Futures) Act 2022 and the Health Act 1956.
4. The Pae Ora Act 2022 requires the health sector to protect and promote healthy communities and health equity across different population groups by working together with multiple sectors to address the determinants of health.
5. NPHS Te Waipounamu is focused on the achievement of equitable health outcomes. The Ministry of Health/Manatū Hauora have this definition for equity:

In Aotearoa New Zealand people have differences in health that are not only avoidable, but unfair and unjust. Equity recognises different people with different levels of advantage require different approaches and resources to get equitable health outcomes.¹

6. This advice sets out matters of interest and concern to NPHS Te Waipounamu, and information included is based on evidence about public health and equity.
7. NPHS Te Waipounamu has sought expert advice from the New Zealand Institute for Public Health and Forensic Science (PHF Science), which is attached as **Appendix A** and referred to at specific points below.

8. NPHS Te Waipounamu opposes this application and submits that if consent is granted, appropriate conditions need to be imposed to protect the health of people and the community.
9. The decision sought is that if consents are granted, conditions are imposed to protect public health (see 36, 37, 38 and 39 below).
10. There are several aspects of the proposal that have the potential to affect human health. In addition, there is insufficient information in parts of the application to properly assess these risks.

Specific Comments

Air Quality and Odour

11. Physical and mental health and wellbeing can be affected by exposure to unpleasant and offensive environmental odours. Such exposure can cause a range of symptoms including nausea, vomiting, headaches, exacerbation of asthma, stress, depression, frustration, insomnia, and difficulty concentrating. One or more of these symptoms can independently or collectively reduce overall quality of life (MFE 2016).
12. The proposed activity includes the composting of animal waste and DAF sludge, so it fits the highest risk feedstock category defined by the EPA Victoria (2017) Designing, Constructing and Operating Composting Facilities Guidelines.
13. The proposed composting operation does not incorporate the technology requirements recommended by the EPA Victoria for the type and volume of feedstock that will be used in the process. It will be an open-air facility and there will not be any secondary odour controls in place. This is not in line with best practice recommendations.
14. Odour generation is a risk from the processing and composting of organic material. Given the ingredients of the feedstock that will be used and the lack of mechanical controls, NPHS Te Waipounamu is concerned that the odour from this operation will be objectionable and will have adverse effects on the health, well-being and amenity of people within the Kokatahi community.
15. NPHS Te Waipounamu considers that the separation distances between the proposed composting site and neighbouring properties are insufficient for the category of feedstock that will be used, and the lack of appropriate technology to mitigate the potential risk of exposure to offensive odours.
16. Kokatahi-Kowhitirangi School is located less than 500 metres from the location of the proposed activity. This proximity is concerning given the sensitivity rating for schools is high according to the Ministry for the Environment (2016) Good Practice Guide for Assessing and Managing Odour.

17. We note that the updated Mote report from May 2025 (Recommended odour notification zone associated with von Ah Contracting Composting Application) determines that the potential affected area is up to 870 metres from the location of the proposed activity.
18. The risk assessment undertaken by the applicant lacks detail regarding odour mitigation measures, how odour will be assessed, and what controls will be in place in relation to the proposed composting process.
19. NPHS Te Waipounamu is also concerned that the proposed method for receiving and mixing of the feedstock is neither appropriate nor consistent with best practice. For example, there is no information in the application about how potential contaminants in organic waste will be managed through an acceptance criteria process.
20. Community engagement plays a vital role in ensuring that environmental proposals are developed and implemented in a way that respects and protects the health and wellbeing of local residents. It allows those who may be affected by a project to share their perspectives, raise concerns, and contribute local knowledge that might not be captured through technical assessments alone.
21. NPHS Te Waipounamu recommends that a local community liaison group (or similar) is established to allow feedback from the community and to address any concerns during the construction and operational phases of this project should consents be granted.
22. NPHS Te Waipounamu notes the comments of its expert advisor in Appendix A (8-12) and refers the reader those sections for more detailed information.

Surface Water, Groundwater and Land Contamination

23. The weather conditions on the West Coast (and the potential for heavy rainfall and/or flooding), combined with the feedstock that will be composted means that the resulting leachate poses an increased risk of surface water, groundwater and land contamination.
24. One of the issues that these weather conditions poses is that the composting process could be compromised, meaning that the pasteurisation and maturation phases are not completed adequately, which will in turn affect the quality of the leachate produced, and increase the associated risks (see Appendix A 5.6).
25. There is little detail in the application regarding the compost leachate and the potential impact it could have on groundwater given that the area is above an unconfined aquifer, or the impact it may have on downgradient groundwater quality. Major wet weather events and/or flooding

Biological Pathogen Generation

26. The proposed activity includes the use the compost leachate to spray irrigate land on the property that the operation will be located on. This practice could result in odour and generate bioaerosols that may pose a risk to human health, and contamination of the environment.
27. Composting facilities have the potential to discharge bioaerosols potentially containing viable pathogenic bacteria such as *Legionella*.
28. The feedstocks that will be used in the proposed operation increase the risk and range of other pathogenic bacteria. *E. coli*, *Salmonella* spp., and *Campylobacter* spp. are specifically identified as risks in the New Zealand biosolids guidelines (NZS 4454:2005)
29. There are also aspects of the process of spray irrigation that pose a higher risk of bioaerosol generation. A number of these also rely on mechanical processes which will need contingency plans in place in case of process and mechanical failure.
30. NPHS Te Waipounamu notes the comments of its expert advisor in Appendix A (4,5 and 6), and refers the reader to those sections of the Appendix for more detailed information on the potential leachate and generation of bioaerosols pertaining to this application.
31. NPHS Te Waipounamu recommends that monitoring for pathogens should be implemented as a consent condition.

Contingency Plans to Mitigate Effects of Process Failure

32. While there are aspects of the proposal that seek to mitigate potential impacts on human health, these measures rely on best practice composting processes being maintained and an assumption that environmental conditions will always allow for that.
33. Insufficient detail is provided on contingency plans in the event of process failure around stockpiling of materials and when pasteurisation and maturation phases are inadequate or maintained.
34. Insufficient detail is provided on the volume of materials, processes and plans to avoid stockpiling of materials in an outdoor exposed environment, especially in wet conditions or adverse weather events, including flooding.

Offensive Trade

35. Schedule 3 of the Health Act 1956 includes “septic tank desludging and disposal of sludge” in the list of offensive trades. Given that the feedstock used in the proposed operation includes the composting of abattoir DAF sludge, NPHS Te Waipounamu believes that the process can be reasonably described as an offensive trade; an activity which requires the consent of the local authority and the Medical Officer of Health.

Recommendations

36. In the event the application is granted, NPHS Te Waipounamu seeks the following conditions:

To minimise the potential for offensive and objectionable odours offsite, and to reduce the risk of pathogen transmission, it is critical that composting complies with best practice. This requires careful monitoring and management of the compost, and appropriate quality assurance, to ensure that adequate temperatures, moisture, oxygen and pH are achieved and maintained so that every part of the material is effectively pasteurised; and the product does not become re-contaminated.

We draw your attention to the following statement in the foreword to NZ 4454:2005:

During the development of the Standard there were some matters identified that require further consideration during future reviews, with possible inclusion in updated versions. At present the microbiological quality of pathogens in compost is to be determined using an indicator bacteria, E. coli, as used for the Guidelines for the Safe Application of Biosolids to Land in New Zealand (hereafter referred to as the Biosolids Guidelines). How this organism relates to the removal of specific pathogens, such as Campylobacter, Giardia, Cryptosporidium and Legionella in the composting process is unclear at this time and future work is required to confirm that the best indicator is being used to protect public health. The results of this work may require a different microbiological testing regime. In addition, if there was a particular health issue, which could be related to compost, a Medical Officer of Health may require additional microbiological monitoring.

We have augmented the (sole) indicator limit for *E. coli* in NZ 4454:2005 with recommended limits for *Campylobacter* spp., *Salmonella* spp., enteric viruses and helminth ova in accordance with the New Zealand Biosolids Guidelines (Wastewater New Zealand 2003).

Accordingly, the following conditions are recommended to “ensure the products produced ... do not present a hazard to the environment nor to public health” (NZ 4454:2005). These draw directly from the New Zealand standards for composting (NZ 4454:2005) and the New Zealand Biosolids Guidelines.

- a) A condition requiring shredding or chipping of all woody material to 12 – 40 mm in diameter and up to 400 mm in length. This will enable good structure for aeration during the compost process and to assist decomposition of ‘woody’ material.
- b) A condition requiring thorough mixing of materials prior to forming windrows of a maximum height of 2 metres.
- c) A condition requiring odorous materials to be mixed and formed into windrows with cover placed over them immediately (i.e. no standing in the open air).
- d) A condition requiring the core of the compost mass to be maintained at 55°C, or higher, for 15 days or longer, during which the windrow must be turned a minimum of five times.
- e) A condition requiring oxygen concentrations of at least 12-14%, and never less than 5%, be maintained throughout the pile.

- f) A condition requiring a minimum curing period of 2 months.
- g) A condition requiring the windrow moisture to be controlled to between 45-65% during the above composting period.
- h) Conditions requiring daily measurement and recording of windrow temperature and oxygen profiles commencing 30 cm below the surface and every 30 cm to the centre of the pile at varying heights and sufficient locations along the length of windrow to be representative of the composting process.
- i) Conditions requiring the finished product for any composting of material containing any animal manures, kitchen/food residues, meat processing residues and/or fish/shellfish as ingredients meets the limits in Table 2.
- j) Conditions requiring statistical sampling for microbiological indicators and metals and reprocessing of compost that does not meet the requirements of Table 2 (Appendix M of NZ4454:2005).
- k) Conditions requiring verification testing for pathogens in accordance with s2.6.3.1.1 of NZ 4454:2005 to ensure that the temperature-time control is adequate. This requires 15 grab samples to be taken over a month with individual samples to be sent to the laboratory immediately. There shall be 15 consecutive results that meet the value given in Table 2.
- l) Conditions requiring routine testing for pathogens in accordance with s2.6.3.1.2 of NZ 4454:2005. Specifically, that after verification, routine testing shall be carried out weekly on grab samples, or more frequently under the manufacturer's testing programme. If there are any changes to the process or any failures to meet the stipulated value, the verification process must be repeated.
- m) A condition requiring routine testing for metals in an annual sample composited from samples taken every two months (s2.6.2.2 of NZ 4454).
- n) Conditions requiring records to be kept of volumes of materials received and composted including dates of processing and dates windrows turned.
- o) A condition requiring separation of the feedstock and product handling equipment, vehicles and area to avoid reinfection.
- p) A condition requiring washing of machinery between use for handling untreated feedstock and compost product to avoid reinfection.
- q) A condition requiring no application of contact water to composted material after it has gone through the heat treatment stages for pathogen control (i.e. full enclosure of process or storing product undercover).
- r) Conditions requiring regular testing the compost for pathogens (refer Table 2 in Appendix A) including at the start of production of each new product type and every time there is a significant change in feedstock or processing procedures.

It is noted that some, but not all, of the above conditions have been included by the applicant through reference to a (yet to be prepared) Composting Site Management Plan (CSMP). Management Plan requirements as condition of consent can be less effective in practice than explicit conditions requiring explicit performance outcomes (e.g. demonstrate minimum core

compost temperature of 55°C for 15 days or longer, during which the windrow must be turned a minimum of five times). Good practice is to have clear, enforceable conditions of consent and not to rely on (yet to be prepared) management plans.

37. If the decision is made to grant consents, NPHS Te Waipounamu considers the following conditions necessary to reduce the risk of offensive or objectionable odours offsite.
- a) Conditions limiting the materials to be processed at the site to the type and volumes in tonnes per annum described in the application.
 - b) Conditions requiring enclosing the entire composting operation and installing a biofilter (this will further assist with moisture control and the feasibility of attaining sufficient temperatures to achieve pasteurisation in practice).
 - c) Conditions for minimum performance requirements for the biofilter including:
 - (i) Media composition, depth, porosity and pH range
 - (ii) Moisture content
 - (iii) Bed temperatures
 - (iv) Residence time
 - d) Conditions requiring the installation, calibration and operation of a meteorological monitoring station (wind speed, wind direction, rainfall and air temperature) with a (minimum) 10 metre meteorological mast located and operated in accordance, as far as practicable, with the requirements of AS/NZS 3580.14-2014 (Methods for sampling and analysis of ambient air – Part 14 Meteorological monitoring for ambient air quality monitoring applications).
 - e) Conditions requiring recording of meteorological conditions to inform investigations into odour complaints.
 - f) Conditions requiring the consent holder to keep a record any odour complaints along with relevant details including meteorological conditions and site activities at the time of the complaint.
38. In the event the application is granted, the above controls should be no less stringent than the provisions of the relevant New Zealand Standards or guidelines to protect the health of people and communities.
39. A local community liaison group should be established to allow feedback from the community to address any concerns during the construction and operational phases of this project.
40. Had this advice been provided in time, NPHS Te Waipounamu would have wished to be heard in support of this advice. In the event it was not, and we accept that we will not be heard but can be available on the day of the hearing to assist the Commissioner if required.



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