

**BEFORE THE HEARINGS PANEL  
AT THE FAR NORTH DISTRICT COUNCIL**

**IN THE MATTER** of the Resource Management Act (“**the Act**”)

**AND**

**IN THE MATTER** of the hearing of submissions on the Proposed  
Far North District Plan  
Hearing Stream 9: Rural, horticulture and  
horticulture processing.

**STATEMENT OF EVIDENCE OF HANNAH RITCHIE**

**FOR NEW ZEALAND PORK INDUSTRY BOARD**

**(NZPork)**

**November 2024**

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## **SUMMARY STATEMENT**

1. This statement of evidence has been prepared in relation to a submission from the New Zealand Pork Industry Board (NZ Pork) on the Proposed Far North District Plan.

### Definitions relating to pig farming

2. NZ Pork supports the definitions relating to pig farming activities in the proposed plan and the s42A recommendations report. We support the insertion of a definition for Intensive Outdoor Primary Production and the exclusion provided within the definition for 'extensive pig farming' for systems where ground cover is maintained
3. The presence or absence of groundcover is heavily influenced by the stocking rate in an outdoor piggery operation. In turn, the stocking rate is a heavy influence on the potential amenity effects, including dust and odour, produced by the activity.
4. Therefore, the extent of groundcover can be linked to the different amenity effects expected from high intensity or low intensity operations, and therefore, the level of control that the plan should exert on such activities.
5. However, we recommend an amendment to the definition to recognise industry codes of practice in the determination of appropriate levels of groundcover.

### Activity status for pig farming activities

6. NZ Pork supports a restricted discretionary activity status for intensive indoor and intensive outdoor primary production under rule RPROZ-R23. However, we do not support the non-complying activity status for activities that do not comply with the required setback distance from sensitive activities.
7. In my opinion, a non-complying activity status does not give effect to RPROZ-P1, which seeks to enable primary production activities in the RPZ, and overly constrains intensive primary production activities by not providing adequate opportunity to consider the many variables that contribute to the potential nature and scale of amenity effects from pig farms and available mitigations.

### Reverse sensitivity and incompatible activities

8. NZ Pork supports the s42A Report Recommendation to include a setback for new sensitive activities from intensive primary production activities by way of new standard SRPROZ-SX as a means of preventing reverse sensitivity in the RPZ.
9. I note, however, that the activity status for sensitive activities that do not comply with the required setback distance is restricted discretionary. This is far more permissive than the corresponding rule requirements for new intensive primary production activities (as outlined above) and creates a disparity in the frameworks that favours sensitive activities over intensive primary production activities in the RPZ.
10. With respect to visitor accommodation, NZ Pork is concerned that the permissive rule framework presents a particular risk for reverse sensitivity constraints on established intensive primary production activities.
11. Combined, rules RPROZ-R3 (Residential activity) RPROZ-R4 (Visitor accommodation) could provide for up to 60 guests at one property per night as a permitted activity. While the recommended addition of sensitive activities setback Standard RPROZ-SX to visitor accommodation will go some way to alleviating potential complaints, setbacks will not eliminate 100% of the effects of intensive primary production 100% of the time, nor should that be necessary.
12. However, in my experience, visitors to the rural zone, and owners of visitor accommodation in the rural zone, can have a lower tolerance for the typical amenity effects of a working rural environment which can make complaints and reverse sensitivity issues more likely.

### **QUALIFICATIONS AND EXPERIENCE**

13. My name is Hannah Ritchie. I am currently employed as the Environment and Planning Manager at NZ Pork. Prior to this role, I held the position of Senior Environmental Advisor at NZ Pork from 2019 – 2023. Additionally, I have worked in various resource management roles at Canterbury Regional Council and as a policy advisor for the Foundation for Arable Research.

14. I have a Bachelor of Science in Environmental Science from the University of Southampton and a Postgraduate Certificate in Environmental Management from Lincoln University. I have also completed courses in Sustainable Nutrient Management in Agriculture and Agricultural Greenhouse Gases at Massey University.
15. While this is not a hearing under the Environment Court, I have read the Environment Court’s Code of Conduct for Expert Witnesses, and I agree to comply with it. My qualifications are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise, except where I state I am relying on what I have been told by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

### **INTRODUCTION**

16. NZPork is a statutory Board funded by producer levies. It actively promotes “100% New Zealand Pork” to support a sustainable and profitable future for New Zealand grown pork. The Board’s statutory function is to act in the interests of pig farmers to help attain the best possible net ongoing returns while farming sustainably into the future.
17. New Zealand pork producers are facing several economic, social and environmental challenges to remain viable. The contribution of imported pork to New Zealand’s total pork consumption has increased significantly in recent years, placing further demands on producers who have responded by developing increasingly efficient systems.
18. There is currently one commercial pig farm in the Far North District: a small, free-range operation.

### **TYPES OF PIG FARMING SYSTEMS IN NEW ZEALAND**

19. A wide range of farming and housing systems are used to raise pigs. Breeding units carry breeding sows, their replacements, and boars. The management of the breeding unit is on a regular weekly flow or batch system where at any time there will be gestating sows, sows about to be mated, boars, replacement gilts, and lactating sows and litters on hand.

20. Pigs weaned (known as weaners) from the breeder unit can move to a weaner/nursery facility on the same site or be sold or transferred to another farm. Newly weaned pigs remain in the nursery for up to 6 weeks and are then transferred to a grower/finisher facility where they are grown until point of sale at about 20 weeks of age. At each stage the housing, feed, environmental and husbandry needs are different, and this will determine the type of accommodation required to house pigs.

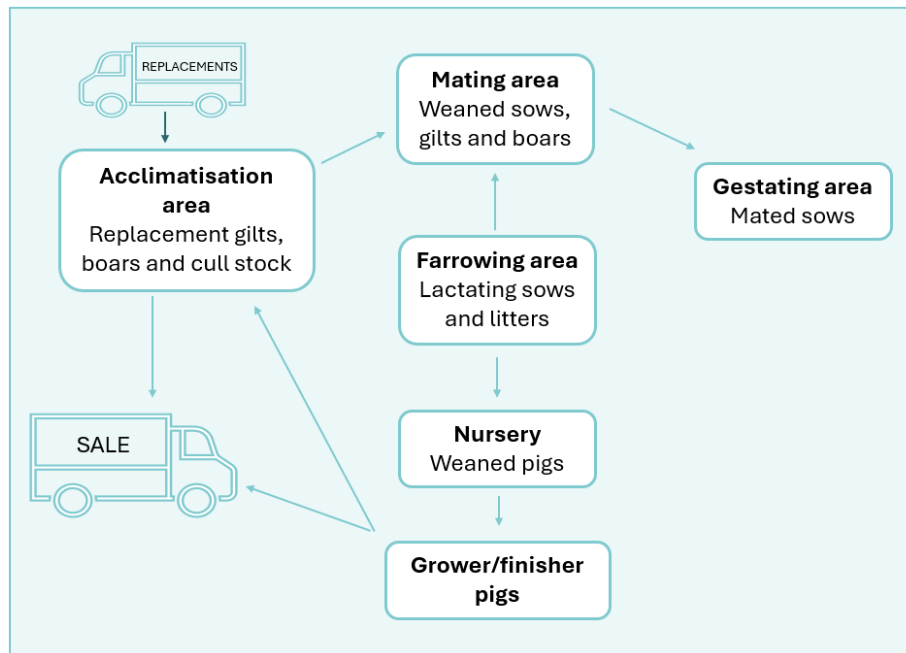


Figure 1: Schematic layout of a pig farm structure and flow

21. Pig farming systems can be broadly separated into two categories: Indoor pig farming and outdoor pig farming.
22. Approximately 55% of New Zealand's commercial pig herd are farmed indoors. Animal housing for indoor pig farms can consist of different styles of buildings, constructed from timber or steel framing with varying amounts of insulation. Ventilation systems include fully enclosed controlled environments to more reliance on natural ventilation using curtains and roof vents. Pole barns, utility implement sheds or hooped framed shelters covered with a waterproof fabric are often used in conjunction with straw or sawdust bedding as a deep litter system. The different housing systems, have different

systems used for manure collection, storage, and utilisation via application to land.

23. Images 1 – 4 show various types of indoor housing facilities.



*Image 1: Indoor group housed dry sows*



*Figure 2: Sow and litter in indoor farrowing facility*



*Image 3: Indoor group housing for growing pigs on a fully slatted floor*



*Image 4: Indoor group housing for weaned pigs on straw bedding*

24. Outdoor pig farms typically have outdoor-based breeding herds and an indoor-based housing system on straw or sawdust for bedding for growing pigs. Breeding pigs are housed in fenced paddocks with a weatherproof hut or shelter available to protect pigs and their young and provide access to shade from direct sunlight.
25. Dry sow huts/shelters are designed to accommodate groups of breeding animals. These come in a variety of forms, as shown in Images 4 and 5 below. At farrowing time, sows are moved to a separate area and give birth in individual huts, as shown in Image 6 below.





*Images 4 and 5: Examples of outdoor housing for dry sows.*



*Image 6: Sow and litter in an outdoor farrowing paddock, with movable farrowing huts visible in the background.*

26. Outdoor farm systems occur almost exclusively in the Canterbury region, due to the requirement for low rainfall, flat topography and light soils.

#### **ENVIRONMENTAL MANAGEMENT ON PIG FARMS**

27. Pig farmers in New Zealand have a firm grasp of environmental issues and demonstrate a high level of innovation and environmental stewardship. The New Zealand pork industry has committed significant time and resources to environmental initiatives, including the development of Environmental Guidelines and Nutrient Management Guidelines which provide a reference

for acceptable practices for managing the environmental impacts of pork production.

28. Good Management Practice (GMP) Guidelines for Outdoor Pigs have been developed by NZPork, conjunction with Landcare Research and Environment Canterbury, to manage nutrient, sediment and pathogen loss to waterways from farms. The guidelines include stocking rates for outdoor sows and grower pigs, and minimum acceptable levels of groundcover. The level of groundcover is a key determinant in managing contaminant losses from outdoor pig farming, with losses increasing as groundcover decreases. For this reason, the maintenance of groundcover is a foundation of good environmental management on outdoor pig farms.
29. The nature and size of our industry and our commitment to best practice, means we have a small environmental footprint relative to other parts of the primary production sector. We encourage our farmers to adopt good management practices, ensuring they are stewards of the environment, sustainably managing water, land and nutrients to preserve and enhance the environment for future generations.
30. The pork industry also has a favourable carbon footprint compared to the pastoral farming of ruminant animals such as cows and sheep. Pigs are monogastric animals and so produce significantly lower levels of enteric methane emissions compared to ruminant animals like cows or sheep. Greenhouse gas emissions from pig farming account for less than 0.2% of total agricultural emissions every year in New Zealand<sup>1</sup>.
31. Consequently, we see the potential for growth in pork production as consumers and regulators seek out strategies to reduce greenhouse gas emissions from agriculture and manage the environmental impact of livestock farming and meat production.
32. The potential growth prospects of the industry underscore the need for a practical and effective planning framework within the Far North District Plan for pig farming operations.

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<sup>1</sup> New Zealand's Greenhouse Gas Inventory 1990 – 2022. Ministry for the Environment. 2024.

## NZ PORK SUBMISSION

### Definitions for pig farming activities.

33. NZ Pork supports the definitions of Intensive Indoor Primary Production and Intensive Outdoor Primary Production in the proposed plan, as follows:

#### **Intensive indoor primary production<sup>2</sup>:**

*Means primary production activities that principally occur within buildings and involve growing fungi, or keeping or rearing livestock (excluding calf-rearing for a specified time period) or poultry.*

#### **Intensive outdoor primary production<sup>3</sup>:**

*means primary production activities involving the keeping or rearing of livestock, or commercial aquaculture, where the regular feed source for the production of goods is substantially provided other than from the site concerned. The activity may be undertaken entirely outdoors or in a combination of indoors and outdoors, including within an outdoor enclosure. It includes free-range poultry or game bird farming and aquaculture. It excludes the following:*

- a. woolsheds;*
- b. dairy sheds;*
- c. calf pens or wintering accommodation for stock;*
- d. pig production for domestic use which involves no more than 25 weaned pigs or six sows; and*
- e. extensive pig farming where permanent vegetation cover is maintained.”*

34. We specifically support the inclusion of a definition for Intensive Outdoor Primary Production to control outdoor pig farming operations that operate at stocking densities that would likely produce adverse effects over and above those expected for other outdoor farming operations (such as pastoral farms)

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<sup>2</sup> Far North Proposed District Plan

<sup>3</sup> Para 341 s42A Report Rural Production

35. We also support the differentiation between extensive and intensive pig farming in this definition, provided by clause (e), where extensive pig farming is defined as that where vegetation cover is maintained.
36. The presence or absence of groundcover is heavily influenced by the stocking rate in an outdoor piggery operation. In turn, the stocking rate is a heavy influence on the potential amenity effects, including dust and odour, produced by the activity.
37. Therefore, the extent of groundcover can be linked to the different amenity effects expected from high intensity or low intensity operations, and therefore, the level of control that the plan should exert on such activities.
38. However, the ability to maintain *permanent* groundcover, as currently written in the proposed definition, is unrealistic in many instances on any working farm and, depending on how this clause is interpreted, may mean that no farm can meet this definition.
39. The extent of groundcover on a pig farm is dependent on numerous factors, including:
- Weather events such as floods or droughts, which can temporarily reduce groundcover,
  - The presence of high-wear areas such as stock camps, fence lines and laneways, where compacted ground makes permanent groundcover more difficult to maintain
  - Cropping practices such as cultivation and harvesting which can temporarily reduce or remove groundcover.
40. The NZ Pork Good Management Practices for Outdoor Pigs defines levels of groundcover that are appropriate for different types of outdoor pig farming operations to minimise environmental effects and considers the above issues. A copy has been appended to this evidence for your information.
41. We recommend an amendment to clause (e) of the definition of Intensive Outdoor Primary Production as proposed to reference industry agreed standards for groundcover that will account for the issues identified above, as follows:
- e. extensive pig farming where ~~permanent vegetation~~ groundcover is*

*maintained in accordance with any relevant industry code of practice.”*

Activity status for pig farming in the RPZ

42. NZ Pork supports the proposed Restricted Discretionary activity status for Intensive Indoor Primary Production and Intensive Outdoor Primary Production under rule RPROZ-R24.
43. However, we do not support the proposed non-complying activity status where compliance is not achieved with the rule requirement of a 300m setback between the farm operation and existing sensitive activities.
44. My interpretation of the S42a report is that this activity status is proposed due to the potential impact of adverse effects of intensive primary production on sensitive activities.
45. In my opinion, a non-complying activity status for a primary production activity in the RPZ does reflect the objective and policy structure in the proposed plan that seeks to enable primary production activities and recognises that adverse effects produced from such activities should be anticipated and accepted. For example, RPROZ-P1:

*Enable primary production activities, provided they internalise adverse effects onsite where practicable, while recognising that typical adverse effects associated with primary production should be anticipated and accepted within the Rural Production zone.*

46. NZ Pork requested that the non-complying activity status be changed to a discretionary activity. This would allow for the effects of a new operation proposed within 300 metres of a sensitive activity to be assessed, and potential mitigation options explored, through a consenting process.
47. However, the s42A report rejected this submission point, on the basis that the non-complying activity status sends the correct message that failing to comply with a 300m is not an outcome that is desirable in the RPROZ, and that adverse odour and noise effects are more likely to impact sensitive activities if this distance is not complied with<sup>4</sup>.

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<sup>4</sup> Para 671 s42A Report Rural Production Zone

48. This interpretation essentially creates a ‘hard limit’ of 300m as a minimum appropriate setback distance between intensive primary production activities and sensitive activities in all instances.
49. There are two issues with this recommendation which I would like to bring to the attention of the hearings panel.
50. Firstly, setback distances are a useful and readily understood tool for mitigating the potential adverse effects of pig farming operations, particularly for odour. However, 300m may not be the most appropriate minimum setback distance in all instances. For example, the number of pigs, the type of housing and ventilation, and whether manure is stored or spread on site can have a large influence on potential odour effects.
51. Clause (d) of the proposed definition of Intensive Outdoor Primary Production excludes pig production for domestic use which involves no more than 25 weaned pigs or six sows. Therefore, an operation consisting of seven sows would meet the definition of Intensive Outdoor Primary Production. The difference in odour effects between a 7-sow operation and a 400-sow operation (the typical size of a commercial piggery in New Zealand) would likely be very different.
52. A discretionary activity status provides the opportunity for an assessment of all aspects of the proposed operation to determine what setback distance might be appropriate and what options are available to minimise or remedy adverse effects, without being overly restrictive on primary production operations in the RPZ.
53. In response to the s42A statement that noise effects from intensive primary production activities can be significant<sup>5</sup>, I have not found this to be the case with commercial pig farming. Throughout my experience with NZ Pork, I have neither encountered noise complaints related to commercial pig farms nor observed significant noise during farm visits. Modern animal husbandry practices in the industry help to keep animals calm and minimise competitive feeding behaviour. Any noise from machinery is comparable to that of other farming systems.

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<sup>5</sup> Para 671 s42A Report Rural Production Zone.

54. The second issue I wish to raise on this matter concerns the recommendation to introduce reciprocal setbacks for new sensitive activities establishing in proximity to existing intensive primary production activities<sup>6</sup>. While I support this introduction in principle, as explained in paragraph 58 of this statement, I note that the recommended activity status for new sensitive activities that do not comply with the 300m setback from existing intensive primary production activities is restricted discretionary.
55. This is at odds with the 'hard limit' interpretation of minimum distances between intensive primary production and sensitive activities previously cited in the recommendations report and creates a disparity in the rule framework that favours sensitive activities over intensive primary production activities in the RPZ.
56. If the hearings panel is minded to agree with the recommendation report that a 'hard limit' between these two activity types is necessary, then this should be reflected with a non-complying activity status for new sensitive activities seeking to locate within 300m of existing intensive primary production operations.

#### Reverse sensitivity and incompatible activities

57. In my experience with NZ Pork, I have found that reverse sensitivity issues arising from odour complaints are the biggest single environmental management issue facing commercial pig farmers.
58. Complaints seem to be more prevalent in areas where rural lifestyle developments have gradually encroached on existing pig farming operations. Subdividing land into smaller lots means pig farmers have more neighbours. Moreover, the nature of complaints received by both farmers and councils indicates that some rural lifestyle residents have expectations regarding amenities that don't align with the realities of a productive rural environment.
59. As such, NZ Pork supports methods to reduce potential incidences of reverse sensitivity in the RPZ.

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<sup>6</sup> Para 510 s42A Report Rural Production Zone.

60. We support the s42A Report recommendation to include Standard RPROZ-SX<sup>7</sup> – *Sensitive activities setback from intensive indoor and intensive outdoor primary production activities* - as a means of reducing the likelihood of reverse sensitive effects from a range of sensitive activities (noting my prior comments on the activity status related to this standard).
61. One particular activity of concern to the pork industry is visitor accommodation in the RPZ. Rule RPROZ-R4 provides for visitor accommodation for up to 10 visitors per night in a residential unit, accessory building or minor residential unit as a permitted activity. Rule RPROZ-R3 permits up to six residential units on a property (subject to area constraints). Therefore, there could potentially be up to 60 visitors per night on a property in the RPZ as a permitted activity.
62. While the recommended addition of sensitive activities setback Standard RPROZ-SX will go some way to alleviating potential complaints, setbacks will not always eliminate all odour. Depending on on-site activity and weather conditions, odour will be detectable from a pig farm to varying extents from time to time and should be anticipated and tolerated in a rural environment.
63. However, in my experience, visitors to or owners of rural visitor accommodation often have a high sensitivity and low tolerance for odour that increases the likelihood of reverse sensitivity effects.
64. One such example occurred on a pig farm in the Selwyn District in Canterbury. This farm housed growing pigs in an intensive indoor facility and had been in operation for over 40 years, with infrastructure largely unchanged since the 1990s.
65. The land surrounding the pig farm had seen a steady increase in rural-lifestyle developments, and the farm is now bordered mostly by 4-hectare blocks. Recently, a new owner bought a property approximately 300m from the farm boundary and created short-term visitor accommodation in a sleepout adjacent to the main residence. Within 18 months of moving in, this new owner lodged over 150 complaints with Environment Canterbury regarding odour from the farm.

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<sup>7</sup> Para 510 s42A Report Rural Production Zone



66. These complaints include reference to her belief that she should not be able to detect any odour from the farm at any time, and threats to sue the farm for loss of income relating to her visitor accommodation.
67. Of these 150+ complaints, only three were substantiated as odour that was deemed offensive or objectionable and thus in violation of regional rules.
68. Despite the low level of non-compliance, the constant scrutiny from both the neighbour and the regional council severely impacted the farmers' ability to operate and his long-standing sense of belonging within his community. Consequently, the farmer no longer believes the farm is viable in its current location.
69. While NZ Pork supports the inclusion of setback requirements for visitors' accommodation in relation to intensive primary production, we remain concerned that this type of activity in the RPZ presents a risk to primary production operations and would not support any relaxation of the rule requirements relating to this activity.

**Hannah Ritchie**

**November 2024.**