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	Name	
	Organisation	New Zealand Pork Industry Board
	Email	vance@hpcplanning.co.nz
	Response Date	Aug 08 22
	Notes	
Q1	Select the chapter you want to provide feedback on	
Q2	In general, to what extent do you support the contents of this chapter?	
Q3	Objective/Policy/Rule/Standard reference:	
Q4	Feedback/Comments	
Q5	Objective/Policy/Rule/Standard reference:	
Q6	Feedback/Comments	
Q7	Objective/Policy/Rule/Standard reference:	
Q8	Feedback/Comments	
Q9	Objective/Policy/Rule/Standard reference:	
Q10	Feedback/Comments	
Q11	supporting documents?	
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Q12	If you need more space, or have any other general comments, please leave them here	

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NZ PORK

SUBMISSION ON

Draft Waitaki District Plan (August 2022)

22 August 2022

To: Waitaki District Council

SUBMITTER: New Zealand Pork Industry Board

Introduction

The New Zealand Pork Industry Board (NZPork) welcomes the opportunity to submit on the Draft Waitaki District Plan (June 2022).

NZPork had previously provided feedback on the Waitaki 2030: District Plan Review and the feedback provided here is a reiteration and extension of that earlier feedback.

NZPork welcomes any opportunity for further engagement with Waitaki District Council as the development of the proposed plan changes progress. If that extends to a focused session with other rural stakeholders as is happening in other districts reviewing or developing plans, then we would be happy to be involved.

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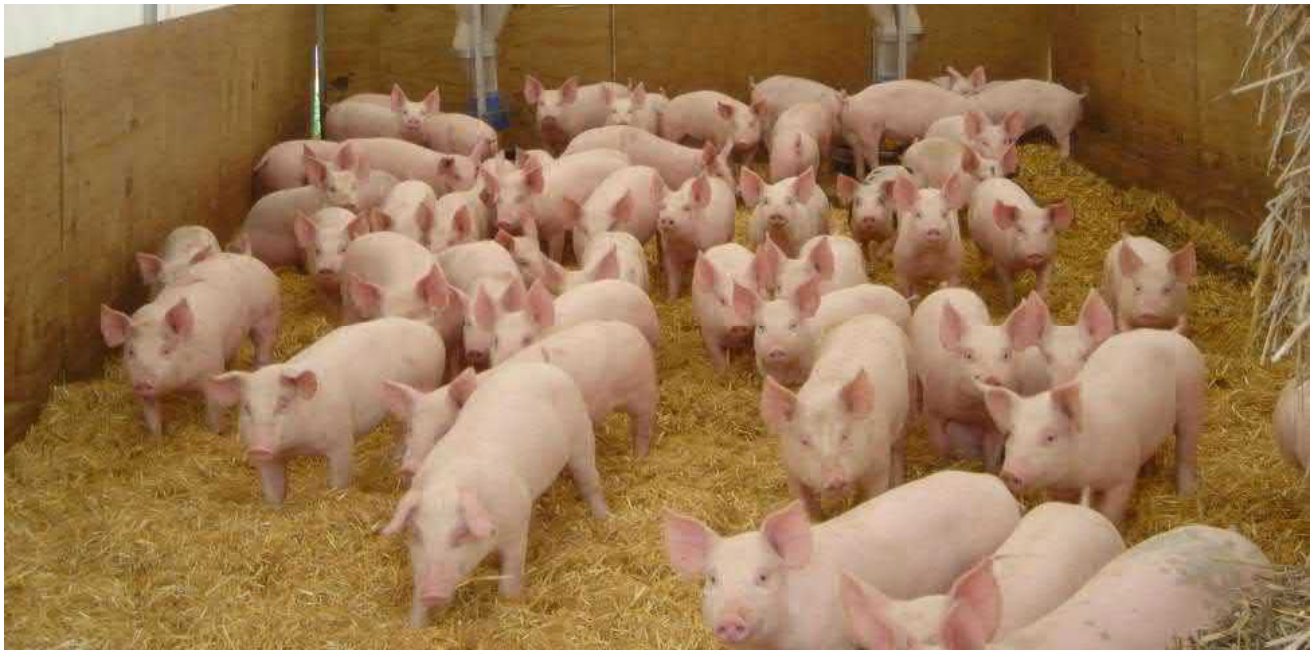
NZ PORK



1. The New Zealand Pork Industry

NZ Pork 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 on-going returns while farming sustainably into the future.

The New Zealand pig industry is a highly productive specialized livestock sector, well integrated within New Zealand's primary production economic base. It draws on both downstream and upstream inputs and economic activity from New Zealand's rural sector including feed inputs, equipment and animal health supply, transport, slaughterhouse facilities plus further processing. Currently New Zealand's pig farmers produce around 45,350 tonnes of pig meat per year for New Zealand consumers. This represents around 38% of pig meat consumed by the domestic market, with the other 62% provided by imported pig meat from a range of countries. Nationally there are less than 100 commercial pork producers, comprising a relatively small but significantly integrated sector of the New Zealand agricultural economy. In 2007 it was estimated by the NZ Institute of Economic Research that the total economic activity associated with domestically farmed pigs was approximately $750 million per annum.

Pigs' needs are unique compared to other farmed animals. They need constant access to shelter, a balanced diet and regular care and supervision. To meet these needs, New Zealand's commercial pig farmers have adopted a range of farming methods. Many farmers prefer indoor farming because they believe it allows them to provide the best care for the modern animal by allowing them to carefully manage their environment. Approximately 55% of New Zealand's pigs are farmed in this way.

The other 45% of New Zealand's commercial breeding herd is farmed outdoors. Outdoor breeding (also called free-farmed pork) can only occur in a moderate climate with low rainfall and free-draining soil conditions. In New Zealand, these conditions are mostly found in Canterbury. In most free-farmed systems, sows are farmed in groups in paddocks during gestation with huts for shelter and shade. When sows farrow, they are provided with individual, dry and draught-free huts with straw for warmth. A variety of housing systems are then used to house pigs after weaning, including indoor barns or open-air sheds.

New Zealand pork producers are facing several economic, social and environmental challenges in order 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. Currently, nearly all pork produced in New Zealand is consumed locally and makes up less than 40% of the domestic market supply. The Waitaki District is an important district for pig farming, using a mixture of both indoor and outdoor farming systems that support New Zealand's food production system.

The New Zealand pork industry is dedicated to producing environmentally sustainable pork. NZPork is proactive in supporting farmers to reduce environmental impacts through investing producer funds into research, innovation and technologies in a range of environmental areas including nutrient management, greenhouse gas emission reductions and by-product reuse. 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 resource to Sustainable Farming Fund projects centred on environmental initiatives, including development and implementation of Environmental Guidelines (attached) and Nutrient Management Guidelines. However, profit margins for the industry remain tight and dialogue with farmers has indicated that compliance costs and uncertainty into the future are key issues.

2. Summary of feedback

An overview of key points of feedback to the draft plan is provided below. Specific feedback points are detailed in Section 3.

2.1 Strategic Directions

The plan should provide a clear Strategic Direction and inclusion of Strategic Objectives, Policies and Methods that recognise and respond to the resource management issues associated with the rural environment and primary production – that includes intensive farming.

> Intensive Primary Production (indoor and outdoor) is a Primary Production activity.
>
> Section 8 (5), Zone Framework Standard of the National Panning Standards, states as follows:
>
> > *Except for zones that are renamed through mandatory direction 2, a local authority must choose at least one of the zones in table 13 to use in its plan.*

Table 13: Zone names and Descriptions:

> *General Rural Zone:*
> *Areas used predominantly for primary production activities, including intensive indoor primary production. The zone may also be used for a range of activities that support primary production activities, including associated rural industry, and other activities that require a rural location.*

The National Planning Standards define Intensive Indoor Primary Production as follows:

> *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.*

The district plan is required by the Otago Regional Policy Statement and the Canterbury Regional Policy Statement (CRPS) to provide for primary production within the rural zone, and to ensure that this land use is not compromised by reverse sensitivity. There is some useful assistance in the methods for Territorial Authorities under CRPS Policy 5.3.12 Rural Production on how to do this in a district plan:

> *Territorial authorities:*
> *Will:*
> *2. Set out objectives and policies, and may include methods in district plans which:*
> *a. identify areas to be used for primary production, taking into account natural resources through appropriate provisions in district plans.*
> *b. control the adverse effects of subdivision and land-use in rural areas, including by:*
> *i. ensuring subdivision and development does not foreclose the ability to utilise natural resources such as soil which is, or foreseeably could be, valued for rural productive purposes.*
> *ii. ensuring appropriate separation between consented and permitted rural productive activities and those land-uses which may result in reverse sensitivity effects on rural productive activities.*
> *iii. managing the interface between the edge of environments sensitive to the effects of rural production activities and areas in productive use to reduce.*

The PWDP provides a General Rural Zone within which the predominant land use character should comprise primary production activities. The General Rural Zones should thereby provide for intensive primary production.

2.2 Intensive Primary Production

NZPork is broadly supportive of the provisions for intensive farming in the GRUZ, while seeking some particular changes to definitions and rules to assist with plan interpretation and administration. There has been a need for change, as plans have moved past unrepresentative and emotive definitions like factory farming for various intensive primary production activities. There is a difference in activity and effect from intensive indoor and outdoor pig farming activity and it is helpful in plans to define and provide provisions for both.

The developing approach has largely been driven out of Canterbury and Otago which are the key pork production regions of New Zealand; where a variety of intensive primary production activity occurs, along with extensive pig farming. Reflective of New Zealand pig farming practice, the structure developing in planning frameworks nests as follows:

Primary Production	**Intensive Primary Production**	**Intensive Indoor Primary Production**
		Intensive Outdoor Primary Production (Pig Farming)
	Extensive Pig Farming	

Primary Production

Primary Production is defined in the National Planning Standards 2019.

> *Primary Production means:*
>
> > *(a) any aquaculture, agricultural, pastoral, horticultural, mining, quarrying or forestry activities; and*
> > *(b) includes initial processing, as an ancillary activity, of commodities that result from the listed activities in a);*
> > *(c) includes any land and buildings used for the production of the commodities from a) and used for the initial processing of the commodities in b); but*
> > *(d) excludes further processing of those commodities into a different product.*

Intensive Primary Production

Intensive Primary Production is then a subset of Primary Production to provide a nesting pathway to Intensive Indoor and Intensive Outdoor activity.

> *Intensive Primary Production means*:
>
> > *any activity defined as intensive indoor primary production or intensive outdoor primary production (pig farming)*

Intensive Indoor Primary Production

Intensive Indoor Primary Production is defined in the National Planning Standards 2019.

> *Intensive Indoor Primary Production means*:
>
> > *primary production activities that principally occur within buildings and involve growing fungi or keeping or rearing livestock (excluding calf-rearing for three months in any calendar year) or poultry.*

Intensive Outdoor Primary Production (Pig Farming)

Intensive Outdoor Primary Production is not defined in the National Planning Standards 2019 and for pig farming it is important to do so.

Intensive Outdoor Primary Production (Pig Farming) relies on the outdoor environment to assist with the growth and husbandry of animals along with buildings and enclosures to contain and house animals. However, this Primary Production activity does not *principally occur within buildings* and falls outside of the definition of Intensive Indoor Primary Production.

Intensive Outdoor Primary Production (Pig Farming) is an intensive activity. It would typically rely on regular feed source for the livestock substantially provided from off-site sources rather than the productive capacity of the land to produce grass and animal food crops. Another characteristic of Intensive Outdoor Primary Production, largely resulting from the import of feed and stock density, can be difficulty in maintaining pasture and groundcover.

Where pasture and groundcover can be maintained the pig farming activity effects of dust and odour are not an issue.

Extensive Pig Farming

Extensive Pig Farming is livestock farming as it is traditionally recognised, outdoors, grass and feed crop fed animals, some imported feed, animal shelters and stocking rates that maintain ground cover.

In pig farming, the shelters are often mobile to assist with maintaining pasture and groundcover, and as part of rotational grazing.

From a land use perspective, the effects are the same as that of other extensive livestock farming (sheep, beef, lamb, dairy, deer). The activity is appropriately provided for as a Permitted Activity in the General Rural Zone.

Providing a definition around this activity can assist plan interpretation and administration:

> *Extensive Pig Farming means:*
>
> *the keeping or rearing of pigs outdoors on land at a stock density which ensures vegetation cover is maintained and in accordance with any relevant industry codes of practice, and where no fixed buildings are used for the continuous housing of animals.*

The suggested definition is taken from the Canterbury Air Regional Plan 2017 **(Appendix A)** and the definition was also recently included in the Hurunui District Plan via a plan change in 2021 (Plan Change 4) for Intensive Primary Production. **(Appendix B).**

The definition of Extensive Pig Farming provides for no fixed buildings. This Permitted Activity would be subject the PDP Effects Standards including GRUZ-S3 Building coverage and GRUZ-S5 Setback from Internal Boundaries.

The definition of Extensive Pig Farming also references to "*stock density which ensures vegetation cover is maintained and in accordance with any relevant industry codes of practice*". The vegetation cover qualifier is consistent with a number of district and regional plans around New Zealand and a standard recognised and adopted by the pork industry into good management practice for outdoor pigs **(Appendix C)**. The maintenance of permanent pasture or ground cover is a critical qualifier that supports the broader sustainability outcomes the industry seeks and directly responds to the actual or potential effects of intensive and extensive pig farming.

2.3 Intensive Primary Production Setbacks

The reason for the proposed pig number thresholds, the setback distances, a determination of setback from the boundary (rather than actual area of activity and sensitive elements) and application of a setback from all urban boundaries (rather than those sensitive to primary production e.g. residential and open space) is not known.

Physical separation is supported and an appropriate method to distance incompatible or sensitive activities from primary production however a more refined approach is required that supports the outcomes sought in the GRUZ. This requires a setback regime for new Intensive Primary Production and a specific response for pig farming. Notably this should not be based on a pig number threshold where the relationship to effects is not clear. Furthermore, the area of concern should relate to a notional boundary rather than property boundaries to avoid unnecessarily sterilizing large areas of primary production land.

2.4 Sensitive Activity Setbacks

NZPork is concerned that the activity status of sensitive activities in the GRUZ could lead to adverse outcomes for primary production activities, including intensive operations. In the draft plan several sensitive activities are permitted or discretionary activities e.g. visitor accommodation, recreational activity. However, the nature of these as sensitive activities, means conflict with primary production activities are likely, and their status is not supported by an objective and policy structure that leads to a permitted activity rule as being an appropriate resource management response.

While new or expansion to Intensive Primary Production activity has a setback approach to ensure physical separation from sensitive activities, there is no corresponding setback for new sensitive activities in the GRUZ. This is inequitable and does not support the primary production outcomes sought for the GRUZ.

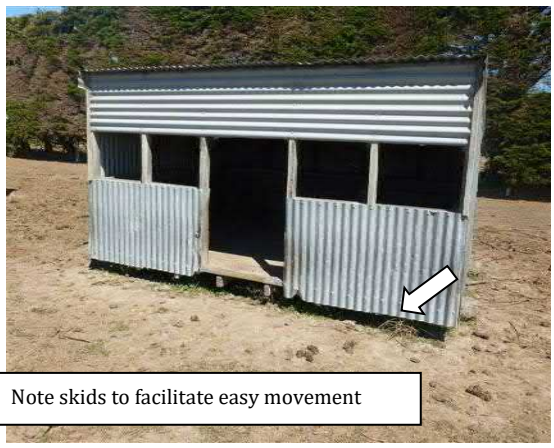
2.5 Mobile Pig Shelters

NZ Pork is concerned that Mobile Pig Shelters (being partially or fully-roofed) would fall within the definition of building and structure. The plan should provide relief from the rules for buildings and

Structures as they might apply to mobile pig shelters. These shelters are a critical part of the pig farming system and can be of a variety of forms as shown below.

Dry Sow Group Accommodation Recommended Practice

Dry sow housing is generally designed to accommodate groups of breeding animals. These come in a variety of forms as shown in the illustrations below. Note trees for shelter and the huts are facing away from the predominant wind direction.



Note skids to facilitate easy movement

Photo 1-6: Variations in dry sow housing designs

Photo 7: Interior of a dry sow house with wooden floor

Weaner Accommodation

The younger the pig, the more vulnerable they are and the more critical are their accommodation needs. They must be kept in a clean, warm, dry, draught free environment subject to minimal variations in temperature. Straw based systems work well.

Photos 8 and 9: Weaner Accommodation

Photos 8 and 9 demonstrate an example of suitable weaner accommodation: Photo 8 (left) shows separate straw bale draught free sleeping area, under a 'kennel' roof for newly weaned pigs. Also note ventilation flap at back and drinkers in left foreground. Photo 9 (right) shows weaner pigs a few weeks later with the straw bale sleeping area broken down but the 'kennel' roof retained in the sleeping area.

Other considerations:

- Where possible pigs should be kept in stable groups of familiar animals though out the growing period.

- The use of moveable weaner 'boxes' constructed of plywood is one approach to provide quality accommodation. Weaner boxes are generally constructed with a low roof and are well insulated.
- Ensure water supply is sited outside of the sleeping area to prevent flooding of the bedding.

Photo 10: An example of a low roofed box type accommodation suitable for weaners

Grower accommodation

As pigs grow, they become more tolerant of changes in the environment and accommodation requirements are less rigorous. However, it is essential they have a warm dry, draught-free sleeping area large enough to accommodate all the pigs in a paddock together.

Photo 10: Accommodation suitable for free range growers
Photo 11: Example of access for free range growing pigs to fodder beet crops from a shelter

A popular design is a 'kennel' area constructed in a general-purpose building. A false roof or lid is positioned over the pigs sleeping area to create a warm, dry and draught free environment.

2.6 Earthworks and Biosecurity-related activity

The viability of the New Zealand pork industry is dependent on the benefits conveyed upon it from the absence of many viral pathogens which are common in much of the rest of the world. Any biosecurity incursions within the industry must be able to be managed quickly and efficiently to contain spread. Not all biosecurity incursions would constitute a biosecurity emergency that would trigger provisions in the RMA or the Biosecurity Act to override consenting requirements. The intersect with the District Plan may well be in a response that requires burial of animal carcasses. The Regional Plan is in place to manage discharges from such activities but constraints on earthwork activity (volume and area) may inhibit a timely, efficient, and effective response.

NZPork seeks a definition of Ancillary Rural Earthworks to include the burying of material infected by unwanted organisms as declared by the Ministry for Primary Industries Chief Technical Officer or an emergency declared by the Minister under the Biosecurity Act 1993'. This would allow farmers to undertake earthworks related to burying material in the event of a biosecurity incident as a permitted activity.

2.7 Workers accommodation.

Farming pigs is very different from farming other livestock. Stockpersons are far more intimately involved with the care of pigs than other livestock. Pigs have a greater need for shelter and their social and dietary requirements are more complex than sheep and cattle. Animal care is a daily responsibility, as pigs are not like ruminants which derive their nutrition from grass: pigs are monogastric like humans, and require a balanced diet fed daily. As such, providing accommodation on site for workers is an important component of many commercial pig farming operations, which often require the onsite provision of farm workers accommodation to provide onsite farm assistance, animal husbandry and security.

NZPork notes that there are no specific provisions for worker accommodation in the draft plan. The provision of a minor residential unit with 80m^2 limitation does not support a viable farm workers accommodation. NZPork seeks the inclusion of a rule structure for workers' accommodation.

2 Specific feedback on the PWDP

Provision to which our feedback relates:	The decision we are seeking from Council:	Reasons:
PART 1 – INTRODUCTION AND GENERAL PROVISIONS		
DEFINITIONS		
Ancillary Rural Earthworks (Primary Production)	Insert a definition of Ancillary Rural Earthworks to include provisions for biosecurity related activity as a permitted activity. *means:* a. *Normal agricultural and horticultural practices, such as cultivating and harvesting crops, ploughing, planting trees, root ripping, digging post holes, maintenance of drains, troughs and installation of their associated pipe networks, and realignment of fencelines, drilling bores and offal pits, burying of dead stock and plant waste;* b. *Land preparation and vegetation clearance undertaken as part of horticultural plantings; and* c. *Maintenance of existing walking tracks, farm and forestry tracks, driveways, roads and accessways within the same formation width.* d. *the burying of material infected by unwanted organisms as declared by the Ministry for Primary Industries Chief Technical Officer or an emergency declared by the Minister under the Biosecurity Act 1993*	NZPork seeks a definition that includes the burying of material infected by unwanted organisms as declared by the Ministry for Primary Industries Chief Technical Officer or an emergency declared by the Minister under the Biosecurity Act 1993'. This would allow farmers to undertake earthworks related to burying material in the event of a biosecurity incident as a permitted activity. Not all biosecurity incursions would constitute a biosecurity emergency that would trigger provisions in the RMA or the Biosecurity Act to override consenting requirements. The level of response required will depend entirely on the nature and scale of the incident. To date, the biosecurity emergency powers under the Biosecurity Act have never been used. In addition, any exemption granted under the Act will be short-term only in nature. After the exemption ends, the provisions of the RMA apply to the same extent as those provisions would have applied but for the exemption. This creates uncertainty as to whether resource consent would retrospectively be required for the activity, and as such may still limit the scope of the response for the landowner to what is provided for under the district plan. Biosecurity incidences which do not result in a declared emergency must therefore be managed to regional and district council plan requirements, including limitations on earthworks which may hinder any urgent response activity required to adequately address the incursion.

		This is not a new matter and other District Plans recognise the issue and provide an appropriate resource management response. The viability of the New Zealand pork industry is dependent on the benefits conveyed upon it from the absence of many viral pathogens which are common in much of the rest of the world (porcine reproductive and respiratory syndrome virus, transmissible gastroenteritis, classical swine fever, African swine fever, swine influenza). Any incursion of new pathogens into the industry potentially jeopardises pork export marketing opportunities as well as directly creating financial and welfare hardships on New Zealand farms from the production consequences of these diseases. In addition, pigs have been proven to be important 'amplifier' hosts for foot-and-mouth disease (FMD), which has never occurred in New Zealand. If FMD did occur, it would have very serious consequences for the country's major dairy and meat export industries. Any biosecurity incursions within the industry must be able to be managed quickly and efficiently to contain spread. The intersect with the District Plan may well be in a response that requires burial of animal carcasses. The Regional Plan is in place to manage discharges from such activities but constraints on earthwork activity (volume and area) may inhibit a timely, efficient, and effective response. As such, NZPork seeks that the definition of Ancillary Rural Earthworks include provisions for biosecurity related activity. This method has been included in a number of existing and proposed district plans: • Auckland Unitary Plan • Proposed Waikato District Plan – Decisions Version

		• Proposed Selwyn District Plan – s42A Recommendation
Farm Building	Replace the term 'Factory Farming' with 'Intensive Primary Production'.	The term 'Factory Farming' is outdated terminology that does not align with the National Planning Standards, more recent descriptions of 'Intensive Primary Production' and the progression of district plan reviews in other areas of New Zealand.
Farming Activity	Delete the definition or replace the term 'Factory Farming' with 'Intensive Primary Production'.	The term 'Factory Farming' is outdated terminology that does not align with the National Planning Standards, more recent descriptions of 'Intensive Primary Production' and the progression of district plan reviews in other areas of New Zealand. We have only been able to track the definition to one provision in the plan RLZ-R8 Visitor Accommodation and consideration should be given to the relevance of the definition.
Farm Workers Accommodation	Add new definition as follows: ***Farm Workers' accommodation*** *Means a minor residential unit for people whose duties require them to live on-site, and in the rural zones for people who work on the site or in the surrounding rural area. Includes farm managers, workers and staff.*	Support the provision of Minor Residential Units in the GRUZ which needs to be provided with a specific provision for farm workers accommodation.
Highly Productive Land	Ensure consistency between regional expressions and definition of HPL.	The definition of HPL is different to that in the Proposed Otago Regional Policy Statement 2021 which would create administration and interpretation difficulties.
Intensive Indoor Primary Production	Support the definition of Intensive Indoor Primary Production where this is supported by the addition of definitions to cover the typical range of primary production activities that can be deemed intensive or extensive. Amend and add definitions as follows:	Support the plans approach for defining Intensive Indoor Primary Production and Intensive Indoor Primary Production which cover the typical range of primary production activities that can be deemed intensive - this being both indoor and outdoor primary production activities.

	Intensive Primary Production *means any activity defined as intensive indoor primary production or intensive outdoor primary production.* ***Intensive Indoor Primary Production*** *(as per National Planning Standards) 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*** *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:* *1. ~~free-range pig farming;~~* *2. free-range poultry or game bird farming and* *3. aquaculture.* *It excludes the following:* *1. woolsheds;* *2. dairy sheds;* *3. calf pens or wintering accommodation for stock;* *4. pig production for domestic use which involves no more than 25 weaned pigs or six sows.* *5. Extensive pig farming.* ***Extensive pig farming*** *means the keeping of pigs outdoors on land at a stock density which ensures permanent vegetation cover is maintained and in accordance with any relevant*	For clarity and plan administration a definition of Extensive Pig Farming could be included and a reference to industry codes of practice for ground cover maintenance (refer attached Good Management Practices for Outdoor Pig Farming). Notably free-range pig farming is not defined. The definition is consistent with that of the Canterbury Regional Air Plan and is well understood regionally. This approach has also recently been adopted in the Hurunui District Plan.

	industry codes of practice, and where no fixed buildings are used for the continuous housing of animals.	
Intensive Outdoor Primary Production	Refer above.	Refer above.
Primary Production	Retain NPS definition as proposed.	Support clarity the inclusion of the national planning standard definition brings noting that this includes Intensive Primary Production.
Occupied buildings	Replace the term 'Factory Farming' with 'Intensive Primary Production'	The term 'Factory Farming' is outdated terminology that does not align with the National Planning Standards, more recent descriptions of 'Intensive Primary Production' and the progression of district plan reviews in other areas of New Zealand.
Sensitive Activity	Ensure definition of sensitive activity covers activities that are sensitive to the effects of primary production in the GRUZ. Eg: *a) residential activity (residential unit, minor residential unit);* *b) marae;* *c) hospital activity;* *d) healthcare activity;* *e) educational facility;* *f) retirement village;* *g) visitor accommodation activity; or* *h) place of worship.* *i) Home business* *j) Recreational activity* *k) Commercial activity* *l) Papakaika* *m) Community facility* *n) Service activity*	The plan and GRUZ rule structure would benefit from the inclusion of a definition of Sensitive Activity which covers activities (some of which are proposed to be permitted) sensitive to the effects of primary production.
Setback	Delete definition as follows:	Setback may for some activities be more appropriately measured from a notional boundary. A definition is therefore redundant.

	~~means the distance between any part of a building and the boundary of its site.~~	
PART 2 – DISTRICT-WIDE MATTERS		
STRATEGIC DIRECTIONS		
Strategic Objectives – Rural Area		
SD-RA-O1 Productive Rural Environments	Amend SD-RD-O1 as follows. *A range of ~~primarily~~ rural productive opportunities are enabled in the rural environment to recognise and sustain the significant contribution of primary production and rural industry activities to the social and economic well-being of the district.*	SD-O1 provides a robust and clear objective on what the district seeks to archive in regard to primary production and rural industries. The objective could be improved to remove the ambiguity of the word 'primarily'.
SD-RA-O2 Protecting Highly Productive Land	Retain SD-O2 as proposed. *Protect highly productive land from inappropriate subdivision, use or development.*	SD-O2 provides a robust and clear objective to *protect* highly productive land from the qualifier of *inappropriate* subdivision, use and development.
SD-RA-O3 Avoiding incompatible activities and reverse sensitivity	Amend SD-RA-O3 as follows: SD-RA-O3 *~~Avoiding~~ incompatible activities and reverse sensitivity* *Ensure ~~development~~ activities remain~~s~~ compatible with rural character and ~~avoids~~ reverse sensitivity impacts on primary production activities are avoided.*	Support an objective that provides a clear outcome in relation to effects of incompatible activities and reverse sensitivity. However, as proposed, the reference to 'development' is confusing and the objective could be explicit to activities.
Strategic Objectives – Urban Form and Development		
SD-UFD-O5 District-wide growth	Retain SD-UFD-O5 as proposed.	Support the SD-UFD-O5 objective seeking that Waitaki grows in a cohesive, compact, and structured way. This should ensure that there is a consideration of effects of growth on primary production and highly productive land.

SD-UFD-O6 Urban growth	Retain SD-UFD-O6 as proposed.	Support the SD-UFD-O6 objective seeking that future urban growth is appropriately located. This should ensure that there is a consideration of effects of growth on primary production and highly productive land.
NATURAL HAZARDS		
NH-R2 Buildings, structures and fences in the Otago Flood Assessment Overlay	Retain the Permitted Activity status for building and structures where: *PER-1* *The building or structure is:* *1. a below ground swimming pool; or* *2. a deck; or* *3. an unenclosed building without a floor; or* *4. a post and wire or post and rail fence; or* *5. a fence that is not covered by PER-(4) and is designed and located not to impede or displace the flow of water during a flood event; or* *6. a retaining wall designed and located not to impede or displace the flow of water during a flood event; or* *7. a farm building in a Rural Zone that has an unsealed or permeable floor; or* *PER-2* *The building work is for the maintenance, repair or alteration of an existing building and does not increase the building footprint; or* *PER-3* *Any building is not greater than 10m2 in area and the cumulative area of additions does not exceed 20m2 over a 10-year period; or* *PER-4*	Support a practical approach to buildings and structures that are themselves flood tolerant and/or of a scale and nature that natural hazards risk is acceptable. Notably the exclusion of any building is not greater than 10m^2 in area would generally accommodate mobile animal shelters.

	Maintenance and repair of structures for the purposes of flood and erosion protection undertaken by the Regional or District Council (refer INF-R2). *Note: An engineering assessment from a suitably qualified and experienced engineer must be provided to WDC to confirm compliance with PER-1 (5) and (6).* Retain the Restricted Discretionary Activity status when compliance not achieved with PER-1, 2, 3, 4.	
NH-R3 Buildings, structures and fences in the Canterbury Flood Assessment Overlay	Retain the Permitted Activity status for building and structures where: *PER-1* *The building or structure is:* *1. a below ground swimming pool; or* *2. a deck; or* *3. an unenclosed building without a floor; or* *4. a post and wire or post and rail fence; or* *5. a fence that is not covered by PER-(4) and is designed and located not to impede or displace the flow of water during a flood event; or* *6. a retaining wall designed and located not to impede or displace the flow of water during a flood event; or* *7. a farm building in a Rural Zone that has an unsealed or permeable floor; or* *PER-2* *The building work is for the maintenance, repair or alteration of an existing building and does not increase the building footprint; or* *PER-3*	Support a practical approach to buildings and structures that are themselves flood tolerant and/or of a scale and nature that natural hazards risk is acceptable. Notably the exclusion of any building is not greater than 10m^2 in area would generally accommodate mobile animal shelters.

	The building work is: *1. for the maintenance, repair or alteration of an existing building; and* *2. does not increase the building footprint; and* *3. not located in a High Hazard Area as determined in a flood assessment prepared in accordance with NH-S1; or* *PER-4* *1. any building is not greater than 10m2 in area and the cumulative area of additions does not exceed 20m2 over a 10-year period; and* *2. is not located in a High Hazard Area as determined in a flood assessment prepared in accordance with NH-S1.* *Note: An engineering assessment from either Canterbury Regional Council or a suitably qualified and experienced engineer must be provided to WDC to confirm compliance with PER-1 (5) and (6).* Retain the Restricted Discretionary Activity status when compliance not achieved with PER-1, 2, 3, 4.	
NH-R4 Buildings, structures and fences in the Waitaki River Floodplain Assessment Overlay	Retain the Permitted Activity status for building and structures where: *PER-1* *The building or structure is:* *1. a below ground swimming pool; or* *2. a deck; or* *3. an unenclosed building without a floor; or* *4. a post and wire or post and rail fence; or* *5. a fence that is not covered by PER-(4) and is designed and located not to impede or displace the flow of water during a flood event; or*	Support a practical approach to buildings and structures that are themselves flood tolerant and/or of a scale and nature that natural hazards risk is acceptable.

	6. a retaining wall designed and located not to impede or displace the flow of water during a flood event; or *7. a farm building in a Rural Zone that has an unsealed or permeable floor; or* *PER-2* *The building work is for the maintenance, repair or alteration of an existing building and does not increase the building footprint; or* *PER-3* *Maintenance and repair of structures for the purposes of flood and erosion protection undertaken by the Regional or District Council (refer INF-R2).* *Note: An engineering assessment from a suitably qualified and experienced engineer must be provided to WDC to confirm compliance with PER-1 (5), (6) and (7).*	
SUBDIVISION		
SUB-O1 Subdivision	Retain SUB-O1 as proposed. *Subdivision creates allotments and patterns of land development that are compatible with the purpose, character and qualities of each zone.*	SUB-O1 is a directive objective with a clear outcome to achieve.
SUB-O2 Subdivision design	Amend SUB-O1 as follows: *Subdivision occurs in a sequenced and coherent manner and is designed so that it:* *<u>Ensures that reverse sensitivity effects of subdivision on permitted and existing lawfully established activities are</u>*	SUB-O2 references to the need to maintain rural character but has no specific outcome that requires avoidance where practicable, or mitigation where avoidance is not practicable of reverse sensitivity effects of subdivision on existing lawfully established activities. This is necessary to support SUB-P12 (11) and applicable at all existing and future zone interfaces and between activities.

	avoided where practicable, or mitigated where avoidance is not practicable.	
SUB-P11 Subdivision Design	Retain SUB-P1 as proposed: *Ensure that subdivision is designed and located to:* *11. incorporate sufficient separation from zone boundaries, transport networks and any adjacent rural or industrial activities and rural or industrial industry, to minimise the potential for any reverse sensitivity effects and/or conflict with existing and permitted activities on adjacent sites.*	Separation is the key method to avoid conflict and reverse sensitivity between activities and SUB-P11 provides the policy support for this approach.
SUB-P16 Subdivision in Rural Zones	Retain SUB-P16 (6, 7 and 8) as follows: *Provide for subdivision in the Rural Zones where the design, size and shape of allotments:* *1. is consistent with and complement the role, function and anticipated scale, type and form of use and development for the relevant zone;* *2. maintain prominent ridgelines, natural features and landforms, and areas of indigenous vegetation;* *3. avoids buildings and access points being located in prominent locations, as viewed from public places;* *4. incorporates physical site characteristics, constraints and opportunities into the design;* *5. minimise earthworks and land disturbance by locating and designing building platforms to integrate into the natural landform;* *6. maintain rural character and amenity; and* *7. incorporates sufficient separation from zone boundaries, transport networks, rural activities and rural industry to minimise the potential for any reverse sensitivity effects and/or conflict with existing and permitted activities on adjacent sites;*	Support a subdivision approach that looks to maintain rural character and amenity, incorporate setbacks to address reverse sensitivity and manage the fragmentation of primary production land.

	8. protects the productivity of the land for primary production activities in the General Rural Zone by limiting fragmentation of land through avoiding new sites being created that are less than 20 hectares unless: *a) associated with a utility and any balance lot associated with the development of a utility; or* *b) there is a net gain to indigenous biodiversity through its protection; or* *c) the subdivision occurs on a Māori Reserve*	
GENERAL DISTRICT WIDE MATTERS		
Earthworks		
Introduction	Amend the introduction as follows: *Earthworks are often undertaken to create areas of level land to be used for living, business and recreation, and <u>are an integral part of the use and development of land for rural activities</u> for primary production activities.*	Earthworks to support primary production activity supports wider outcomes than just the levelling of land. Including recontouring, erosion and sediment control, tracking, drainage and other supporting primary production infrastructure. This could be better expressed in the introduction to link to EW-P4.
EW—P4	Amend EW-P4 as follows: *Enable earthworks that support the operational efficiency of primary production activities, including <u>ancillary rural earthworks</u>, the maintenance and repair of existing tracks, yards, irrigation infrastructure, fences and dams.*	Support policy that enables earthworks that support the operational efficiency of primary production which should extend to a defined range of ancillary rural earthworks.
EW-R1	Amend EW-R1 as proposed. *Activity status: Permitted* *Where:* *<u>PER-1</u>* *<u>Earthworks are Ancillary Rural Earthworks</u>*	Define a range of Ancillary Rural Earthworks. Support a permitted activity status for all other earthworks that comply with appropriate standards.

	PER-~~1~~ 2 *For all other earthworks* *EW-S1, EW-S2, EW-S3, EW-S4 and EWS5* *Are complied with.*	
EW-R3	Retain EW-R3 as proposed. *Activity status: Permitted* *Where:* *PER-1* *The track is associated with a permitted or lawfully established activity within the zone and does not exceed 3 metres in width with an additional allowance of 1 metre eitherside of the track for battering; and* *PER-2* *EW-S2, EW-S3, EW-S4 and EW-S5 are complied with.*	Support a permitted activity status for the construction of farm tracks which are better described as Ancillary Farming Earthworks.
EW-R5	Retain EW-R5 as proposed. *Activity status: Permitted* *Where:* PER-3 *1. the earthworks are for the maintenance or repair of existing and lawfully established:* *a) roads;* *b) farm tracks;* *c) yards;* *d) irrigation infrastructure;* *e) fences;* *f) dams;* *g) walking tracks;*	Support a permitted activity status for earthworks within a riparian yard noting many of the activities listed are best describes as Ancillary Farming Earthworks.

	h) cycling tracks; or *i) driveways and access; and* *2. the width, length and materials used are the same as that which existed prior to the maintenance or repair being required.*	
EW-S1	Amend EW-S1 as follows: *2. The quantity of earthworks must not exceed ~~500m2~~ 1000m2 in area in any 12 month period per site.*	A 500m^2 area threshold is an unnecessary limitation for the scale of activity and effects that can be effectively managed through erosion and sediment controls. Without a definition and permitted activity status for Ancillary Farming Earthworks an unnecessary number of resource consents may be generated.
Light		
Introduction	Amend the introduction as follows: *Artificial outdoor light provides safety and security to residential properties, businesses and open space. It also enables people and communities to undertake activities beyond normal daylight hours and can be required for primary production…*	The introduction would be improved by recognising the need for and enabling artificial outdoor lighting associated with primary production.
LIGHT-P1 The benefits of artificial outdoor lighting	Retain LIGHT-P1 as proposed.	Support policy recognition of the benefits of artificial outdoor lighting which can be an operational and functional need for primary production.
LIGHT-S2 (3) Light spill	Amend LIGHT-S2 so that it only applies in the case of existing activities.	The provision would only be reasonable in the case of existing sensitive activities noting that the proposed subdivision and landuse provisions could introduce sensitive activities adjacent existing primary production activity and constrain an existing lawfully established activity. It would be unreasonable to apply this standard to an existing primary production activity.

		Existing use rights would not be sufficient to avoid conflict and reverse sensitivity operational constraints. New sensitive activities should be designed and located to minimise conflict and reverse sensitivity effects on existing and authorised primary production activities.
LIGHT-S3 (2) Light Glare	Amend LIGHT-S2 so that it only applies in the case of existing activities.	The provision would only be reasonable in the case of existing sensitive activities noting that the proposed subdivision and landuse provisions could introduce sensitive activities adjacent existing primary production activity and constrain an existing lawfully established activity. It would be unreasonable to apply this standard to an existing primary production activity. Existing use rights would not be sufficient to avoid conflict and reverse sensitivity operational constraints. New sensitive activities should be designed and located to minimise conflict and reverse sensitivity effects on existing and authorised primary production activities.
Noise		
Introduction	Retain introduction as follows: *Most land use activities generate some degree of noise and can affect the health, safety and amenity of the District's residents and visitors. Excessive noise can detract from the character and amenity values associated with the local environment. Noise generating activities can also be restricted by noise sensitive activities located close by that seek a higher level of amenity (reverse sensitivity).*	The paragraph provides a useful introduction to the issues associated with noise. In the rural zones a range of animal and mechanical sounds often characterize the working nature of the rural environment.

NOISE-O1 Minimising the adverse effects of noise and vibration	Retain NOISE -O1 as proposed: *Activities generating noise and vibration are compatible with the role, function, character and amenity values of the zone and surrounding receiving environment, and do not compromise public health or safety, or well-being and amenity values.*	The objective appropriately recognizes the need to consider effects against the *role, function, character and amenity values of the zone.*
NOISE-O2 Reverse Sensitivity	Retain NOISE -O2 as proposed: New noise sensitive activities are designed and located to minimise conflict and reverse sensitivity effects on existing and authorised noise generating activities.	Support a clear objective that requires new noise sensitive activities to be designed and located to minimise conflict and reverse sensitivity effects.
Noise – P2 Recognising existing lawfully established noise emitting activities	Amend NOISE-P2 as follows: *Provide for adequate areas where activities generating higher levels of noise can operate, subject to appropriate controls and where the special characteristics of noise generating activities are accommodated, to reflect the function, character and amenity values of each zone.*	Support a clear policy requires areas to be provided for activities generating higher levels of noise. However, some activities may not generate high levels of noise but lowers levels of constant noise or different intermittent noise that can also cause conflict between sensitive activities and existing lawfully establish activity. For example, in the rural environment pumps, farm machinery, animal noises.
Noise – P3 Managing noise sensitive activities	Amend NOISE-P3 as follows: *Enable noise-sensitive activities ~~locating in higher noise environments where they are~~ to be designed, constructed and maintained to achieve indoor design noise levels and minimise the potential for reverse sensitivity effects from noise, having regard to:…*	Support a clear policy requires areas to be provided for activities generating higher levels of noise. However, some activities may not generate high levels of noise but lowers levels of constant noise or different intermittent noise that can also cause conflict between sensitive activities and existing lawfully establish activity. For example, in the rural environment pumps, farm machinery, animal noises.
Noise – E1 Exemptions to noise standards	Amend NOISE-E1 as follows: *The noise standards and rules in this Plan, unless specifically stated, will not apply to noise generated by the following:*	While the reference to 'agriculture' captures activity related to Intensive Indoor and Intensive Outdoor Primary Production the prefix of the words 'land based' primary production make this unclear and should be deleted.

	1. use of vehicles, machinery or equipment used on a seasonal or intermittent basis for agricultural, horticultural and forestry or ~~land based~~ primary production activities in the General Rural Zone, such as harvesting, and movement, handling and transport of livestock (but does not include the use of helicopters, bird-scaring devices, frost control fans or ~~irrigation pumps~~);	The provision would benefit by referencing to the *movement, handling and transport of livestock* as an example. Irrigation pumps are often temporary, mobile or intermittent and a necessary and anticipated part of the rural environment.
Noise – R2 Activities generating noise in General Rural Zone	Amend NOISE-R2 as follows: *Activity status: Permitted* *Where:* *PER-1* *The following noise limits shall not be exceeded at any point within the notional boundary of any existing noise sensitive activity on any other site within a General Rural Zone, or at any point within the boundary of any site, in any zone other than an Industrial Zone.*	The provision would only be reasonable in the case of existing sensitive activities noting that the proposed subdivision and landuse provisions could introduce sensitive activities adjacent existing primary production activity and constrain an existing lawfully established activity. It would be unreasonable to apply this standard to an existing primary production activity. Existing use rights would not be sufficient to avoid conflict and reverse sensitivity operational constraints.
PART 3 – AREA SPECIFIC MATTERS		
RESIDENTIAL ZONES		
RESZ - Policies		
RESZ-P2 Design of new development	Retain RESZ-P2(5) as proposed. *5. ensuring that internal building setbacks provide for the physical maintenance and upkeep of buildings within the site and on adjacent sites, and that impacts from reverse sensitivity on other zones, or from the keeping of domestic livestock, are minimised;*	Support a clear policy that directs a setback response for residential activity adjacent other zones and a consideration of reverse sensitivity.
GRZ - Policies		

GRZ-S6 Minimum building and structure setbacks	Amend GRZ-S6(6) as follows: *6. where an internal boundary adjoins ~~a~~ an existing Commercial, Industrial, Sport and Active Recreation, Rural or Special Purpose Zone boundary, all habitable buildings shall be setback from that boundary by a minimum of 4.0m.*	Acknowledging that the GRZ has been applied to existing residential zones where the standard is established a 4.0m setback is practical. In the situation of a new internal boundary as a result of urban expansion a different setback regime may be applicable.
RURAL ZONES		
RURZ - Introduction		
Introduction	Amend introduction as follows: *~~This chapter contains objectives, policies and rules for the General Rural Zone, the Rural Lifestyle Zone and the Settlement Zone.~~* *~~The purpose of the Rural Zones is to manage the effects of use and development and ensure that rural amenity values, rural production values, rural living and settlements, and conservation values are appropriately managed to enable their ongoing use for providing for agriculture, horticulture, conservation, tourism and other rural activities within the wider rural area.~~* *This chapter contains objectives, policies and rules for the General Rural Zone, the Rural Lifestyle Zone and the Settlement Zone.* *This framework seeks to ensure that rural amenity values, primary production values, rural living and settlements, and conservation values are recognized and provided for.* *The Rural Zones provide a structure to enable and manage the effects of land use and development associated with agriculture, horticulture, conservation, tourism and other rural activities within the wider rural area.*	The paragraph is somewhat confusing by referring to the zone purpose as: a) managing the *effects* of development. b) managing *values* for ongoing use. The purpose of the rural zones is broader than just management of the effects of development, and we suggest that values are not managed but are elements to be recognized and provided for in resource management.

RURZ – Objectives		
RURZ -O1 Providing for primary production activities	Amend RUZ-O1 as follows. *Primary production activities are provided for, or enabled while minimising, or where appropriate, avoiding, remedying or mitigating impacts on important ecological, cultural and landscape values for the District.*	The full suite of effects management should be recognized in the objective.
RURZ -O2 Highly Productive Land	Retain RUZ-O2 as proposed. *The benefits of highly productive land are recognised, and its availability for agricultural, horticultural and pastoral production is protected from inappropriate subdivision, use and development.*	The reference to *inappropriate subdivision, use and development* is important as intensive primary production activities (both indoor and outdoor) may, by locational necessity, be situated on highly productive land where there are economic and operational benefits associated with concentrating such enterprises in specific rural localities.
RURZ -O3 Sustainable growth in settlements	Amend RURZ-O3 as follows: *Sustainable growth of rural settlements that:* *1. provide for housing and/or commercial activities in appropriate locations, in a timely manner, according to growth needs; and* *2. maintain rural character through appropriate controls on built form; and* *3. is responsive to community and district needs; and* *4. enables new development as well as redevelopment of existing settlement areas.* *5. Responds to the rural/urban zone interface to avoid reverse sensitivity effect on primary production activity.*	Rural settlement adjoin and are often sensitive to the effects of primary production.
RURZ-O5 Business development in rural areas	Amend RURZ-O5 as follows: *Rural areas (excluding the settlements) are retained for primary production, conservation purposes or rural lifestyle purposes, and the establishment of commercial, industrial,*	While managed through an activity listing and standard, all visitor accommodation is sensitive to the effects of primary production and should be considered a sensitive activity.

	service, recreational and ~~large-scale~~ accommodation activities is limited only to those that have a reliance on and functional need, or operational need, for locating in the rural environment.	
RURZ – Policies		
RURZ -P1 Maintenance of Highly Productive Land	Amend RUZ-P1 as follows: *The benefits of highly productive land are recognised, and its availability for agricultural, horticultural and pastoral production is protected from inappropriate subdivision, use and development.* *Maintain highly productive land for agricultural, horticultural and primary production, by:* *1. seeking to avoid fragmentation of existing highly productive land; and* *2. avoiding urban expansion onto highly productive land, unless there is no feasible alternative; and* *3. directing new rural lifestyle development away from highly productive land; and* *4. avoiding subdivision and land use that could result in reverse sensitivity effects on the use of highly productive land.* *(4) Provide for non-soil dependent rural enterprises on land containing Highly Productive Land where there are economic and operational benefits associated with concentrating such enterprises in specific rural localities.*	The reference to *inappropriate subdivision, use and development* in RUZ-O2 is important as intensive primary production activities (both indoor and outdoor) may, by locational necessity, be situated on highly productive land where there are economic and operational benefits associated with concentrating such enterprises in specific rural localities.
RURZ-P2 Maintenance of clear urban, rural lifestyle and rural areas	Retain RUZ-P2 as proposed. *Maintain a clear distinction between urban, rural lifestyle and rural areas through the use of clear land use zones and avoid ad-hoc subdivision where growth to settlements or rural lifestyle areas has not been planned for.*	Support a clear policy that directs growth management outcomes in rural areas.

RURZ-P4 Design of development in rural areas and settlements	Amend RURZ-P4 as follows: *Ensure that new development in Rural Zones is well designed and laid out, including by:* *1. ensuring that the bulk, scale and location of buildings on sites is consistent with the environment anticipated for the zone, and that any dominance, privacy and shadowing effects are minimised; and* *2. within rural settlements, ensuring that residential activities are provided with sufficient on-site outdoor living space for residents through access to outdoor living space, or where not directly provided, take into account alternative arrangements for open space (either within the site or within close proximity to the site); and* *3. limiting the number and scale of buildings on sites in the rural environment unless they are of a type that is for a rural purpose; and* *4. providing greater building coverage for commercial activities within settlements while ensuring residential amenity is maintained where land within rural settlements is used for residential purposes; and* *5. maintaining streetscapes in residential areas in the Settlement Zone where garaging and buildings are setback from the road, and where these setbacks are reduced, that sufficient space is still available for vehicle manoeuvring and impacts of dominance on the streetscape are minimised; and* *6. facilitating passive surveillance and active frontages in the Settlement Zone through controls on glazing, avoidance of blank façades, provision of habitable rooms and fencing, and consider modification of those controls only where other active design features, such as verandas, are incorporated; and*	RURZ-P4(3) is supported as it relates to non-rural purpose buildings. RURZ-P4(7) would appear to be a constraint to all fences in the rural zones including stock fencing and does not support the variety of fencing responses required to support primary production activity.

	7. minimising the adverse impact of fences on streetscape character in settlements ~~and rural character in other Rural Zones~~; and *8. requiring sufficient water supply for firefighting to ensure personal safety; and* *9. avoiding adverse effects from higher density development in areas where no wastewater reticulation is available.*	
RURZ-P7 Minor residential units	Retain RUZ-P7 as proposed. *Provide for a single minor residential unit on sites to facilitate residential choice and flexibility while ensuring that the minor residential unit is subservient to the primary residential unit on the site.*	The provision of minor dwellings is supported in the context of supporting farm workers.
RURZ-P8 Outline Development Plans	Amend RUZ-P7 as follows: *Provide for the extension of existing settlements or rural residential areas where:* *1. development is in accordance with an Outline Development Plan, which is incorporated into the District Plan.* *2. any use and development of land subject to an Outline Development Plan:* *a) is in accordance with the development requirements and fixed and flexible elements in the relevant Outline Development Plan, or otherwise achieves similar or better outcomes; and* *b) contributes to a strong sense of place, and a coherent, functional and safe neighbourhood; and* *c) retains and supports the relationship to, and where possible enhances, recreational, heritage and ecological features and values; and* *d) is co-ordinated with the delivery of appropriate infrastructure; and*	At time of settlement extension an outline development plan should consider the rural-urban interface and incorporate sufficient separation from zone boundaries, to minimise the potential for any reverse sensitivity effects and/or conflict with existing and permitted activities on adjacent sites.

	e) achieves a high level of amenity. *f) incorporates sufficient separation from zone boundaries, to minimise the potential for any reverse sensitivity effects and/or conflict with existing and permitted activities on adjacent sites;*	
RURZ-P9 Intensive indoor primary production and intensive outdoor primary production	Retain RURZ-P9 as proposed. *Provide for intensive indoor primary production and intensive outdoor primary production where it can be demonstrated that:* *1. the site design, layout and scale of the activity is compatible with the character and amenity values of the zone; and* *2. there is adequate infrastructure available to service the activity, including on-site servicing where reticulated services are not available; and* *3. there are measures to internalise effects and avoid conflict with other established activities, including primary production and residential activity.*	Support policy that provides for intensive primary production.
RURZ -P# Reverse sensitivity	Add new RURZ-P# as follows: *Minimise the potential for reverse sensitivity effects by:* 1. *avoiding the establishment of any new sensitive activity near existing intensive indoor primary production activities, intensive outdoor primary production activities, where the new sensitive activity may compromise the operation of the existing activities;* 2. *managing the establishment of new sensitive activities near other primary production activities;*	A policy approach is required that seeks to avoid the establishment of any new sensitive activity near existing intensive primary production activities in circumstances where the new sensitive activity may compromise the operation of the existing activities. Also support policy that seeks to ensure adequate separation distances between existing sensitive activities and new intensive primary production activities as a reciprocal response. This is a reasonable resource management response NZPork has seen and supported in a number of plans recently including those being developed under the National Planning Standards:

	3. *ensuring adequate separation distances between existing sensitive activities and new intensive indoor primary production activities, intensive outdoor primary production activities.*	• Hurunui Pan change 4 – Intensive Primary Production and Effluent Disposal (2021) • Proposed Selwyn District Plan (2021) • Proposed New Plymouth District Plan (2021) • Proposed Central Hawkes Bay District Plan (2021)
GRUZ – General Rural Zone		
GRUZ – Introduction		
Introduction	Retain introduction as follows: *The General Rural Zone makes up the majority of the rural areas within the District. The focus of the zone is on retaining the productive potential of land to be able to be used for rural activities. Built character is focused on residential units supporting primary production activities and farming infrastructure, including sheds and farm tracks. The provisions seek to retain the focus of this Zone being for primary production activities and retaining the current open rural character.*	The introduction describes a number of focuses: 1. *The focus of the zone is on retaining the productive potential of land to be able to be used for rural activities.* 2. *Built character is focused on residential units supporting primary production activities and farming infrastructure, including sheds and farm tracks.* 3. *The provisions seek to retain the focus of this Zone being for primary production activities and retaining the current open rural character.* While supportive of the introduction, consideration should be given as to whether the introduction should describe the zone environment, issues and express the zone purpose. GRUZ-O1 could then express what is to be achieved or aimed for, for primary production activity and the management of subdivision, use and development in the GRUZ. This should not duplicate the objectives of RURZ but state what the community expresses as desirable through resolving the issues for the GRUZ specifically.
GRUZ – Objectives		
GRUZ -O1 Purpose of the General Rural Zone	Include a broader objective suite that sets out what is aimed for, for primary production activity and the management of subdivision, use and development in the GRUZ	As above, achieving the outcomes sought in the GRUZ may require a more directive objective suite than expressing a zone purpose through an objective.

		There are interpretation issues with the objective structure through reference to *providing* for natural and physical resources which is not an objective. There is also a policy gap between a suitable GRUZ objective with GRUZ-P1 (the only policy) which is limited to responding to rural character and not primary production issues. Suggest an objective suite that sets out what is aimed for, for primary production activity and the management of subdivision, use and development in the GRUZ. This is particularly important for then supporting activity management and managing conflicts between resource users.
GRUZ-O2 Character of the General Rural Zone	Amend GRUZ-O2 as follows: *The character of the General Rural Zone remains dominated by open space and vegetation, including paddocks, trees, natural features and primary production activities <u>and the buildings, sights, odours, sounds associated with those activities</u> ~~over buildings~~.*	If GRUZ-O2 is to remain, we suggest a qualifier is added as buildings are an integral part of primary production activity. Also suggest the typical effects of primary production are part of the character of the GURZ.
GRUZ – Policies		
GRUZ -P1 Development in the General Rural Zone	Include a larger policy suite to support more direct objectives.	While supportive of a clear description of the character of the General Rural Zone where primary production is the predominant landuse, the plans robustness may be improved with a larger policy suite to support more direct objectives. The policy heading refers to *Development* and responds only to rural character and not primary production in a manner that provides clear policy direction in the GRUZ for primary production activity.
GRUZ – Activity Rules		
GRUZ-R1 Primary production (excluding mining,	Retain GRUZ-R1 as proposed.	Support a permitted activity status for primary production activities.

quarrying activities, intensive indoor primary production, and intensive outdoor primary production)		
GRUZ-R2 Amenity tree planting and shelterbelts	Amend GRUZ-R1 as follows: PER-2 *The tree planting does not shade any <u>existing</u> adjacent residential unit between the hours of 9:00am and 4:00pm, or any formed public road between 10:00am and 2:00pm, on the shortest day of the year; and*	GRUZ-R1 highlights the needs for managing sensitive activities (including new residential dwellings) in the GRUZ given potential conflict in amenity expectations and reverse sensitivity.
GRUZ-R4 Residential unit	Amend GRUZ-R4 to include a permitted activity standard requiring a setback from existing Intensive Indoor Primary Production and Intensive Outdoor Primary Production.	Residential units can be sensitive the effects of primary production activities. A permitted activity standard is required to impose a setback from existing Intensive Indoor Primary Production and Intensive Outdoor Primary Production.
GRUZ-R7 Minor residential unit	Amend GRUZ-R7 as follows. *where:* • *<u>In the case of a minor residential unit used for farm workers accommodation:</u>* - *<u>limited to a maximum GFA of 120m^2 (exclusive of garages, and decks); and</u>* - *<u>must share vehicle access with the principal residential unit on the site.</u>*	Support the provision of a minor residential unit. The limitation of a minor residential unit for a farm worker to a GFA of 80m^2 is an impractical limitation on farming units particularly intensive primary production activities where farm workers (and families) are typically required to live onsite and not in a seasonal working arrangement. The restricted discretionary activity pathway for non-compliance is an appropriate resource management response for the scale and likely effect of this activity which should be accommodated in the permitted activity standards.
GRUZ-R8	Amend GRUZ-R8 as follows:	Visitor accommodation are sensitive activities likely to conflict with all primary production activities. The activities are not supported by

Visitor Accommodation	*Activity status: ~~Permitted~~ ~~Restricted Discretionary~~.*	an objective and policy structure that leads to a permitted activity rule as being an appropriate resource management response in this zone.
GRUZ-R10 Intensive indoor primary production and intensive outdoor primary production	Amend GRUZ-R10 as follows: ~~*Intensive indoor primary production and intensive outdoor primary production*~~ ~~*Activity status: Permitted*~~ ~~*Where:*~~ ~~*PER-1*~~ ~~*1. there is no more than 50 sows and no more than 500 pigs of mixed ages; and*~~ ~~*2. no more than 10 outdoor, freerange pigs per hectare and their progeny up to weaner stage; and*~~ ~~*PER-2*~~ ~~*1. housed pigs are located no closer than 500m to a property boundary; and*~~ ~~*2. no disposal or storage of effluent within 500m of a residential unit on any other site; and*~~ ~~*3. no intensive indoor or outdoor primary production of pigs occurs within 2 kilometres of an urban zone; or*~~ ~~*PER-3*~~ ~~*1. no intensive indoor or outdoor primary production of poultry takes place within 100m of a property boundary; and*~~ ~~*2. no disposal or storage of effluent within 500m of a residential unit on any other site; and*~~ ~~*3. no intensive indoor or outdoor primary production of poultry occurs within 2 kilometres of an urban zone; or*~~ ~~*PER-4*~~	The reason for the proposed pig number thresholds, the setback distances, a determination of setback from the boundary (rather than actual area of activity and sensitive elements) and application of a setback from all urban boundaries (rather than those sensitive to primary production e.g. residential and open space) is not known. A more refined approach is required that supports the outcomes sought in the GRUZ. This requires a setback regime for new Intensive Primary Production and a specific response for pig farming. For the pig farming sector an important control that determines intensity relates to ground cover maintenance (a requirement of good management practice for outdoor pig farming). This is a reasonable resource management response NZPork has seen and supported in a number of plans recently including those being developed under the National Planning Standards: Proposed Selwyn District Plan (2021) - 300m (PA notional boundary of sensitive activity) - 1km Residential Zone. Hurunui Pan change 4 – Intensive Primary Production and Effluent Disposal (2021) - 500m (PA notional boundary of sensitive activity), 100m from boundary - 1km (Residential or Open Space Zone. Both these Districts comfortable to rely on additional regulations in the Regional Plans to manage the effects of Intensive Primary Production, including the management of effluent disposal.

	~~*For intensive indoor or outdoor primary production of any other species, there is:*~~ ~~*1. no disposal or storage of effluent within 500m of a residential unit on any other site; and*~~ ~~*2. no intensive farming within 2 kilometres of an urban zone.*~~ *Per 1* *1. All paddocks, hard-stand areas, structures, buildings used to house stock, and wastewater treatment systems associated with intensive primary production, shall be located a minimum distance of 500m from the notional boundary of any lawfully established existing sensitive activity on another site, and 1km from any residential zone.* *Note 1: an "existing" sensitive activity includes a proposed sensitive activity for which a building consent and/or resource consent has been obtained and has not lapsed.* Retain Activity Status: Discretionary Activity status for non-compliance.	
GRUZ-R# Separation distances to for sensitive activities	Add new GRUZ-R# as follows: *GRUZ-R# Separation distances for sensitive activities.* *(a) No new sensitive activity may be established within 500m of the closest outer edge of any paddocks, hard-stand areas, structures or buildings used to house stock, or treatment systems used for an intensive primary production activity.* *Rule (a) does not apply to a new sensitive activity being established within the same property on which a lawfully established intensive primary production activity is located.*	Separation distances from intensive primary production activity is required for all sensitive activities, commensurate with the separation distance requirements imposed on an intensive primary production activity.

	Rule (a) does not include areas on the site which are not used for the intensive primary production activity.	
GRUZ-R11 Recreation activities	Delete GRUZ-R11 or change activity status.	Oppose the permitted activity status for recreation activities in the GRUZ. These are sensitive activities likely to conflict with all primary production activities. The activities are not supported by an objective and policy structure that leads to a permitted activity rule as being an appropriate resource management response in this zone.
GRUZ-R12 Commercial activity	Delete GRUZ-R12 or change activity status.	Oppose the permitted activity status for commercial activity in the GRUZ. These are sensitive activities likely to conflict with all primary production activities. The activities are not supported by an objective and policy structure that leads to a permitted activity rule as being an appropriate resource management response in this zone.
GRUZ- R17 Community facility	Retain GRUZ-R17 activity status as proposed.	Support the discretionary activity status for community facilities in the GRUZ. These are sensitive activities likely to conflict with all primary production activities. The activities are not supported by an objective and policy structure that leads to a permitted activity rule as being an appropriate resource management response.
GRUZ- R19 Service activity	Retain GRUZ-R19 activity status as proposed.	Support the discretionary activity status for broad activities int eh definition of service activity in the GRUZ. These may be sensitive activities likely to conflict with all primary production activities. The activities are not supported by an objective and policy structure that leads to a permitted activity rule as being an appropriate resource management response.
GRUZ- R22 Retirement village	Retain GRUZ-R22 activity status as proposed.	Support the non-complying activity status for retirement villages in the GRUZ. These are sensitive activities likely to conflict with all primary production activities.

GRUZ- R23 Educational facility	Retain GRUZ-R23 activity status as proposed.	Support the non-complying activity status for educational facilities in the GRUZ. These are sensitive activities likely to conflict with all primary production activities. A designation process is available to consider the merits of some educational facilities.
GRUZ –Standards		
GRUZ-S2 Building and structures height	Retain GRUZ-S2 as proposed. *Any building and structures must not exceed a maximum height of 15m measured from ground level.*	Support a practical maximum building and structure height in the GRUZ.
GRUZ-S3 Building coverage	Retain GRUZ-S3 as proposed. *1. The building coverage for any site shall not exceed 20%.*	Mobile Pig Shelters (being partially or fully roofed) would fall within the definition of building and structure. A practical building coverage standard provides for buildings and structures as they might apply to mobile pig shelters. These shelters are a critical part of the pig farming system and can be of a variety of forms.
GRUZ-S4 Maximum setback from a road boundary	Retain GRUZ-S4 as proposed. *1. A stock loading ramp or race with its entry/exit point located facing a road, including a State Highway, shall not be located within a 30m setback from the road boundary.* *2. A stock loading ramp or race with its entry/exit point running parallel to the road is exempt from this standard.* *3. Any other building with a gross floor area of more than 10m2 shall not be located within the following setbacks from the road boundary:* *a) State Highways - 20m; or* *b) any other formed road – 15m.*	Support a practical approach to road setbacks in the GRUZ.
GRUZ-S5 Setback from internal boundaries	Retain GRUZ-S5 as proposed.	Support a 20m setback for new residential units while noting that in the case of an existing intensive primary production activity these are

	The minimum setback from any internal boundary with another site shall be: *1. for residential units – 20m;* *2. for any other buildings for housing animals – 30m;* *3. for any other building greater than 10m2 – 6m.*	deemed sensitive activities and a more generous setback should apply. Support a practical approach to setbacks in the GRUZ for buildings housing animals noting the need for these to support primary production including mobile shelters for pastoral activities.
GRUZ-S6 Any fencing within a road boundary setback or internal boundary setback shall be post and netting, post and wire, or post and rail fencing.	Delete GRUZ-S6 as follows:	Oppose a control on fencing style in the GRUZ. Fencing form and position responds to the needs of a primary production activity. Closed board or other solid fencing can be required for security, animal husbandry/shelter, visual screening.
RLZ –Rural Lifestyle Zone		
RLZ – Policies		
RLZ-P1 Rural Lifestyle Zone character and amenity values	Amend RLZ-P1(8) as follows: 8. ensuring any activity: a) has a built form and scale of activity consistent with the rural lifestyle character and amenity values of the zone; and b) does not result in adverse effects which are incompatible with the character and amenity values of the Zone. c) *Responds to the General Rural Zone interface to avoid reverse sensitivity effect on primary production activity.*	The policy framework would be improved to address the sensitivity of the GRUZ interface.

NZ PORK

Good Management Practices for Outdoor Pigs

These good management practice guidelines have been developed in consultation with outdoor pig farmers as a guidance document to support good environmental management on farm. These guidelines do not override or replace regional or district council planning requirements. Farmers should check with their regional and district council on planning regulations for outdoor pig farming in their area before commencing or changing farming operations. These guidelines assume 'normal' or 'typical' climate and environmental conditions. In dealing with a biological production system, circumstances may differ when adverse weather conditions such heavy rainfall, snow, or drought events occur

Farm Planning and Records

A farm environment plan is developed and followed and includes a farm environment risk assessment

Land Management

Farm Location

The farm is in a lower rainfall area.

Outdoor production occurs on flat land to minimise runoff and allow huts/shelters to be effectively positioned.

Groundcover

Ground cover is maintained in accordance with the following guidelines:

For all dedicated outdoor pig units, or those in a pastoral rotation, the minimum ground cover is:

- For dry sows and free-range growers: 40% cover on 75% of land (< 40 % cover permissible of 25% land).
- Each paddock to have on average >10% cover
- At least 70% cover for farrowing sows.

For all outdoor pig units that form part of an arable operation, the minimum ground cover is:

- For dry sows and free-range growers: 25% cover on average (a gradual decline from 100% to 0% is permissible over the length of the pig phase)
- At least 70% for farrowing sows.

Waterway/runoff management

Stock are excluded from natural waterways, drains, wetlands and water races that flow through the property. Culverts or bridges are installed at stock crossings

If runoff from a paddock can get into a flowing waterway/drain, an effective planted riparian margin is required.

If runoff from tracks can get into a flowing waterway / drain, runoff management is in place to prevent runoff from entering waterway/s

Troughs, drinkers and gateways are located away from flow paths.

Runoff from wallows is prevented from entering a waterway.

Paddocks are grazed top to bottom (ground slope)

Stock are not left on a break-feeding paddock in wet weather, or concentrated on small areas of a paddock for extended periods.

Nutrient Management

Fallow is reduced during and immediately after the pig phase of rotation e.g. by planting a catch crop in the area previously occupied by pigs.

NPK fertiliser is not to be applied to paddocks running pigs.

Any other fertiliser is applied in accordance with the fertiliser code of practice.

No effluent is spread on paddocks running pigs.

Animal Management

Stocking rate

For breeding animals:

- For a dedicated pig farm with no rotation: Less than or equal to 17 total breeding animals/ha
- For a pig unit on a pastoral farm with rotation every 2 years (minimum of 2-year return period): Less than or equal to 21 total breeding animals/ha
- For a pig unit on a pastoral farm with rotation every year (minimum of 1-year return period): Less than or equal to 24 total breeding animals/ha
- For a pig unit on an arable farm with rotation at least every 2 years (minimum of 2-year return period): Less than or equal to 32 total breeding animals/ha

For free-range growing animals:

- Stocking rates should be managed to maintain a reasonable level of groundcover and to avoid extended periods of heavily degraded, muddy or barren ground.
- Appropriate stocking rates to achieve this will vary, and should be calculated based on a range of factors, including: size of pigs, duration of stay, rainfall, soil type, paddock layout, pasture species, climatic conditions, spelling of pasture, cropping practices and any nutrient management regulations of your local authority.

Diet

An appropriate diet is provided and is fed at the level required to support physiological function and health at different stages of production e.g. separate diets for gestating and lactating sows.

Disposal of dead stock

Dead stock is disposed of in a bio-secure manner. Offal pits are sited away from waterways and other sensitive areas such as bores (check in Council plan if there are guidelines). Site fallen stock compost facilities away from waterways and flow paths.

Animal Welfare

Stock have access to shelter and housing dimensions, area per sow and construction of housing/ shelters is compliant with including Regulation 24 (Pigs must have access to shelter and a dry lying area), and 25 (Minimum lying space for grower pigs) of the Animal Welfare (Pigs) Code of Welfare 2018

Farrowing huts are shifted after each lactation.

New Zealand PORK

PORK INDUSTRY GUIDE

Environmental Management

2nd Edition revised March 2017

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Acknowledgment

The New Zealand Pork Industry Board (NZPork) would like to thank the following people and groups for providing their knowledge and expertise during the development of the first edition of this guide:

- Environment Canterbury
- Federated Farmers of New Zealand
- Massey University
- Ministry for the Environment - Sustainable Industry Group
- NZPork Directors, Delegates, pork producers who were part of the Working Party, and a cross section of producers throughout the industry.

Important Note: This guide replaces EnviroPork™: pork industry guide to managing environmental effects (2005) which superseded New Zealand Pork Industry Board Code of Practice – Pig Farming (1997). Both of these documents may be referenced in regional council publications.

Edition 1: 2005
Edition 2: March 2017

Introduction

This guide provides pork producers, council officers, persons looking to enter into the pork industry, and other stakeholders a reference for acceptable practices to managing the environmental impacts of pork production. Specific information on nutrient management is covered in the Good Practice Guide – Nutrient Management in Pork Production which is available at www.nzpork.co.nz .

Pig farming (pork production) has long been an integral part of the rural scene in New Zealand. The pork industry supply chain contributes in excess of one billion dollars to the New Zealand economy.

Pig farms can be classified as being 'indoor', 'intensive', 'outdoor', 'extensive', 'dispersed' or 'hobby/lifestyle'. Over recent years the number of commercial farms has decreased, but the size of the sow herds are steadily increasing. This guide is applicable for all types of piggeries including smaller herds.

Environmental requirements should always be considered alongside the current Animal Welfare (Pigs) Code of Welfare and PigCare™ standards.

Site Selection

Many environmental issues can be avoided through good planning and site selection. Depending on your location the city or district council will define the areas (zones) for farming activities within the district plan. Each zone will have its own set of rules. The regional council also has regional rules that are documented within the relevant regional plans. Keep in mind that many councils will have an operative plan as well as a draft proposed plan. It is best to consider the proposed plan requirements to future proof your investment. Below is a list of items to consider during the environmental planning stages of a new venture:

- ✔ District plan zones
- ✔ Regional plan (air, land, water and coastal) rules including proposed rules
- ✔ Contaminated site status with the regional council
- ✔ Location of community drinking water supply
- ✔ Existing resource consent conditions and expiry dates
- ✔ Reliable water supply
- ✔ Access to electricity
- ✔ Weather
- ✔ Terrain
- ✔ Soil types
- ✔ Existing drainage systems
- ✔ Land area to meet the council buffer zones
- ✔ Sensitive neighbours or communities
- ✔ Cultural and spiritual considerations

Most New Zealand councils provide links to local online mapping tools. The property address can be searched on the map and 'overlays' added including existing consents, fish habitats, wells, rivers, streams, wetlands, nutrient allocation zones etc.

The New Zealand Historic Places Trust has published an extensive list of important cultural and historic sites and their location. The list is available online at: http://www.heritage.org.nz/the-list

Current and potential future reverse sensitivity issues should be considered when planning a new farm or expansion of an existing farm. Current concerns include nutrients, dust and odour.

Compliance Obligations

Pork production triggers a number of compliance obligations from both regulators and stakeholders. The section below outlines the main environmental compliance obligations for New Zealand pork producers. See Appendix A for a list of all the current legislation that is relevant to pork production in New Zealand.

The Resource Management Act

The Resource Management Act (RMA) is New Zealand's main piece of legislation that sets out how we should manage the environment. The RMA come into force in October 1991 and is currently being under review. This effects-based legislation focuses on the effects of any farming activities and requires any adverse effects to be avoided, remedied or mitigated.

The RMA provides regional and territorial authorities (district/city councils) with opportunities to manage the effects of activities such as pig farming to promote sustainable management. The types of rules councils may use in their plans and the types of resource consent a pork producer may require are summarised in the table below.

Table 1. Summary of activity and resource consent type requirements on local authorities under the RMA.

Local Authority	Types of Resource Consent	Type of Activity Rules in Council Plans
District/City Council	Land use consent - anything requiring consent under a district plan (most rural activities). Subdivision consent - includes leases, cross leases and unit titles.	Permitted activity allowed without a consent provided they comply with standards, terms and conditions in the plan. Controlled activity - will be granted a consent subject to conditions on the matters specified in the plan. Restricted discretionary activity – may be granted consent based on the authority's consideration of specified matters. Discretionary activity – may be granted a consent based on the authority's consideration of the application overall. Non-complying activity - contravenes the plan or is not specifically referred to, a consent may be granted if adverse effects on the environment
Regional Council	Land use consent – for activities on a lake or river bed, and also for certain activities requiring consent under a regional plan such as farming activities. Water consent - for taking, using, damming or diverting water. Discharge consent - for discharging water or contaminants into water, into or onto land or into air. Coastal consent - for any of the above activities other than subdividing land in a coastal marine area.	

		are minor and the activity is not contrary to the objectives and policies of the plan. Prohibited activity - cannot apply for a consent.

Pork producers and other persons having an interest in the establishment and/or expansion of a pig farm are strongly advised, at an early stage, to contact their local Regional and District Councils to seek compliance requirements with local rules relating to pig farms. The council maps and websites are available at: http://www.lgnz.co.nz/home/nzs-local-government/new-zealands-councils/

Under the Building Act a building consent will be required for all new buildings, additions to old buildings and, in some districts, effluent ponds.

What is an Effect?

The Resource Management Act requires all activities that have an effect on the environment need to be considered and planned for by district and regional councils. The RMA states that an 'effect' includes:

- Positive or adverse effects
- Temporary or permanent effects
- Past, present or future effects
- Cumulative effect which arises over time or in combination with other effects
- Any potential effect of high probability
- Any potential effect of low probability, which has a high potential impact.

Common Environmental Effects

This guide provides information so that pork producers' activities are aligned with the sustainable development goals of the RMA and Local Government Act.

This guide makes a distinction between 'effluent' and 'manure'. The term 'effluent' is defined as everything excreted by pigs (both solid and liquid). It also includes bedding, water used to hose, flush and clean piggery buildings. Manure is defined as being everything that is applied to land (once again including both solid and liquid parts). Once the effluent has been collected and/or processed, it then becomes manure if applied to land because of its benefits to soil structure and nutrient supply.

A major concern of the pork industry is the use of rural land for non-traditional purposes, such as rural subdivision. It is important to recognise that pig farming is a legitimate rural activity. Residential encroachment into the countryside can threaten this long-standing legitimacy. If residents' expectations mean a pig farm cannot operate within the rural area, this will threaten the sustainability of the pork industry. This concept is called Reverse Sensitivity and is now a recognised 'effect' (see Table 2), with many councils beginning to include controls for reverse sensitivity in their plans.

Table 2. Summary of potential effects of pig farming on the environment

Activity	Potential Effect	Potential Solution
Piggery Location	• Loss of productive soils • Odour, dust and noise emissions • Visual impact • Birds and rodents	• Appropriate design and landscaping • Appropriate zoning • Suitable climate, topography, soil type • Pest control
Piggery Design	• Odours • Pathogens • Nutrient leaching and runoff • Visual impact • Birds and rodents	• See solutions above • Drainage • Effluent processing systems • Nutrient management • Landscaping • Pest control
Piggery Operations	• All of the above	• Staff skill/ stockmanship • Hygiene • Maintenance
Public Relations	• Public perceptions of pork production	• Communication and cooperation* • Sensitivity to other activities

* Consultation with neighbours and/or Runanga may be required as part of a resource consent application.

Producers and other persons having an interest in the establishment and/or expansion of a pig farm are strongly advised, at an early stage, to contact their local Regional and City/District Councils to seek compliance requirements with local rules relating to pig farms.

Under the Building Act a building consent will be required for all new buildings, additions to old buildings and, in some districts, effluent ponds. See Appendix A for a list of all the legislation that is relevant to pig farming in New Zealand.

Treaty of Waitangi

The principles of the Treaty of Waitangi must be taken into consideration in decision making under the Resource Management Act.

Maori spiritual values are a primary concern of the Treaty of Waitangi. Maori consider that waste water is purified by being returned to the earth. Such a practice remains a very practical, environmentally sound option for disposing of manure. Maori concerns, ancient in origin and expressed in spiritual terms, are in many respects a forerunner of environmental law in New Zealand. Consultation with iwi in your area may be a part of obtaining a resource consent and the council will need to assess if your farming activities have taken into account the principles of the Treaty of Waitangi when making a decision on your resource consent application.

Regional Councils may also develop their own requirements for catchments that might be incorporated in a farm environmental plan such as mahinga kai management areas.

More information on the Treaty of Waitangi obligations can be found at the Quality Planning website:

http://www.qualityplanning.org.nz/index.php/plan-development-components/consultation-with-tangata-whenua/context-for-consultation-with-tangata-whenua

Stakeholder Requirements

There may be other compliance obligations that are not New Zealand legal requirements but are a condition of supply or trade or demonstrate commitment to the local community's values. These requirements are often documented in your contract with the stakeholder or may form part of a supply Code of Practice. Some communities may have developed a voluntary environmental accord such as those from a local stream care group. There may also be credence attributes that consumers expect from a product such as environmental stewardship even though they can't see them and could lead to participation of the farm in third-party certification.

Good Management Practices: Outdoor Pigs

Outdoor Piggeries

Farming of pig's outdoors is dependent on a range of environmental factors. Free-draining soil, low rainfall, ready access to straw for bedding and a temperate climate are all necessary for successful operation, which means that there are areas of New Zealand unsuitable for this system of production. Outdoor shelters can be purpose designed for a variety of functions including dry sow, farrowing, weaner and grower accommodation.

Factors to consider:

- ✔ Soil should be free draining.
- ✔ Pasture cover should be maintained throughout the year
- ✔ Recovery of pasture may require paddock rotation.
- ✔ Land area will depend on various factors including any nutrient management rules from the Council. In the absence of specific council requirements follow the GMP stocking rates.

NZPork was involved in the Matrix of Good Management project and the development of a set of *Industry-agreed Good Management Practices relating to water quality*. These Good Management Practices (GMPs) are applicable to all Canterbury farms and NZPork supports the adoption of the GMPs for all outdoor pig farms.

The current GMPs are listed in the table below located online at the Environment Canterbury farming website: http://www.canterburywater.farm/gmp/

Table 3. Good Management Practices for Outdoor Pigs (2015)

Good Management Practices (Outdoor Pigs)
Undertake a farm environment plan including a farm environment risk assessment
Maintain ground cover in accordance with GMP's below. Also farm on lower rainfall area. Outdoor pig production is on flat land (need flat land for huts) - therefore minimising the risk of runoff.
Exclude stock from natural waterways, drains, wetlands and water races that flow through the property. Install culverts or bridges at stock crossings.
If runoff from a paddock can get into a flowing waterway/drain an effective planted riparian margin is required
If runoff from tracks can get into a flowing waterway / drain, runoff management to prevent runoff from entering waterway. Place troughs, drinkers and gateways away from flow paths. Prevent runoff from wallows entering a waterway

Ground cover: For all dedicated outdoor pig units, or those in a pastoral rotation, the minimum ground cover is: • Dry and lactating sows (40% cover on 75% of land, < 40 % cover permissible of 25% land. • Each paddock to have on average >10% cover) and for farrowing sows (At least 70 %). • All outdoor pig units that form part of an arable operation the minimum ground cover is: for dry and lactating sows (25 % (100% to 0 % in 2 years)) and for farrowing sows (At least 70 %)
Reduce fallow, during and immediately after pig phase of rotation e.g. by planting catch crop
No NPK fertilizer to be applied to the pig breeding unit.
Apply any other fertilizer in accordance with the Fertiliser Association of New Zealand Code of Practice for Nutrient Management.
An appropriate diet and feed levels for physiological (reproductive) states of animal e.g. separate gestation diet and lactating diet (nutrition)
Dispose of dead stock in a biosecure manner. Site offal pits away from waterways and other sensitive areas such as bores (check in Council plan if there are guidelines.
Stocking rate: • Less than or equal to 17 total breeding animals/ha for a dedicated pig farm with no rotation. • Less than or equal to 21 total breeding animals/ha for a pig unit on a pastoral farm with rotation every 2 years (minimum of 2 year return period). • Less than or equal to 24 total breeding animals/ha for a pig unit on a pastoral farm with rotation every year (minimum of 1 year return period). • Less than or equal to 32 total breeding animals/ha for a pig unit on an arable farm with rotation at least every 2 years (minimum of 2 year return period)
No effluent to be spread on the breeder unit.
Housing dimension, area/sow and construction as per welfare standards under the Animal Welfare (Pigs) Code of Welfare (or equivalent legislation). Farrowing huts are shifted after each lactation.
Stock should have access to shelter in accordance with PigCare. Paddocks should be grazed top to bottom (ground slope). Stock should not be left on break feeding paddock when wet, or concentrated on small areas of paddock for long periods.

Source: Matrix of Good Management Project, 2015

Important Note: The GMPs will be reviewed periodically and it is expected that other councils may adopt them. This document will be updated accordingly. The latest list of GMPs will always be available on the NZPork corporate website (www.nzpork.co.nz).

There is currently no GMPs for indoor piggeries.

General Farm Management

There are a number of management techniques that can be used to minimise environmental effects. It is anticipated that a good producer will be able to achieve desired environmental outcomes through using a combination of management practices and systems, discussed below, that are best suited to their site.

Indoor Piggeries

Piggery location and building sites and manure application areas should be selected to minimise adverse effects.

Factors to consider:

- ✔ Compliance with council plans and application for a land use consent if required
- ✔ Surface run-off of manure should be controlled
- ✔ Proximity to sensitive activities
- ✔ Capacity of the area surrounding piggery to reduce potential nuisance
- ✔ Adequate land for buildings and effluent treatment with area available for expansion
- ✔ Land susceptible to flooding

Site layout/Building design

Building design can vary widely depending on the system for manure removal. This can be solid or liquid based. The most common types of housing systems for pigs are those with designed with deep litter bedding where the spent bedding is removed in a solid form or full/partially slatted floors based on a liquid manure system. Ventilation can range from a natural system to fully environmentally controlled ventilation.

Factors to consider:

- ✔ Flooring and other structure should be designed to be easily cleaned and to permit the efficient removal of all effluent.
- ✔ The specific regulatory requirements and standard should be adhered to, with regard to the general design and construction (Animal Welfare (Pigs) Code of Welfare.
- ✔ Permanent buildings on indoor piggeries should be constructed of materials having an expected service life of at least 10 years.
- ✔ Sheds should be sufficiently spaced from other buildings or trees for ventilation and dispersion of odour. For a new development, consideration of location and siting can be given more weight than when buildings are being added to an existing unit.
- ✔ Landscape design should result in the structures blending more readily into their surroundings.
- ✔ For a new development, consideration of location and siting can be given more weight than when buildings are being added to an existing unit.
- ✔ Landscape design should result in the structures blending more readily into their surroundings.

Drainage surrounding a piggery

It is important to divert storm water away from effluent streams.

Factors to consider:

- ✔ The effluent system should be designed to meet peak flow conditions.
- ✔ The effluent system should be maintained to ensure the integrity of the pipe work.
- ✔ Collected storm water can be stored for use for cleaning and/or as flushing water. Otherwise clean stormwater (i.e. rainwater) can be discharged by the most suitable means to a watercourse or ground soakage.
- ✔ Contaminated stormwater should be considered as forming a part of piggery effluent.
- ✔ Where ground cover is not maintained on outdoor pig farms there is a risk of erosion that can result in dust and runoff causing sedimentation in waterways.

Storage and disposal of containers and toxic substances

Producers will need to ensure they are compliant with the Hazardous Substances and New Organisms Act and associated regulations. Common hazardous substances used on the farm may include diesel, cleaning chemicals, rodent control, and herbicides/pesticides. If you import hazardous substances directly then there are requirement you must have provided your details to the Environment Protection Authority (EPA) (see http://www.epa.govt.nz/hazardous-substances/importing-manufacturing/Pages/default.aspx) and ensure that the substances have an EPA approval.

WorkSafe New Zealand are the regulator for the use and handling of hazardous substances in the workplace. Certain quantities of substances trigger regulations that may mean you need a location certificate, container certificate, approval handler, tracking, emergency plans, specific signage etc. You can check the requirements of common substances at: http://www.hazardoussubstances.govt.nz/

There are currently draft Health and Safety at Work (Hazardous Substances) Regulations 2016 which are due to come into effect in December 2017. These will replace a number of the Hazardous Substances and New Organisms Act regulations.

Small quantities of hazardous substances still require adequate secondary containment so they do not spill into waterways or onto land, a current Safety Data Sheet, appropriate personal protective equipment for substances that are corrosive, toxic or have the potential to have health impacts, and not be stored with incompatible substances and all flammables stored away from heat and ignition sources.

The Safety Data Sheet will state if there are any special disposal requirements for the substance. Many will just refer to the disposal being within the local council rules which means that there is no disposal to landfill or tradewaste system.

Factors to consider:

- ✔ Regional council requirements that go above the national legislation
- ✔ Obtain and read Safety Data Sheets (SDS) for all hazardous substances
- ✔ Inclusion of chemical use, storage and disposal in the farm health and safety systems
- ✔ Regular checks of personal protective equipment (PPE)
- ✔ Secure storage of all hazardous substances
- ✔ Secondary containment and bunding systems to catch any spills
- ✔ Flammables to be stored away from ignition sources
- ✔ Appropriate emergency procedures and emergency equipment e.g. fire extinguishers
- ✔ Clear labelling and signage

Managing the Effects of Discharging to Land and Water

Effluent Collection, Storage and Processing

There is a variation in the composition of raw pig manure across piggeries due to differences in pig diets, pig herd genetic makeup and 'on farm' conditions.

Given this variation, there are a number of systems used in New Zealand for effluent collection. Table 3 gives a description of these systems.

Table 4. Types of effluent collection systems

Collection system	Description of activity
Hydraulic	This system includes manual cleaning with hoses, flushing under slats, flushing open gutters (solid dunging channels) and under slat storage with periodic discharge (up to 3 weeks). The total volume of flush water required per day for adequate cleaning is dependent on many factors including: the availability and cost of water, building design, and effluent-handling system.
Mechanical	Scraper systems minimise the volume of effluent generated as they do not require water. These systems are used for off-site application of manure.
Solids Separation	Effluent can be separated into solid and liquid parts using sedimentation basins or screens. The most common system involves pumping the effluent over a wedge wire screen. The benefits of solid/ liquid separation of piggery effluent include: 10 - 30% reduction in Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) from the raw effluent, increased pump protection from large particles, allows liquid manure to infiltrate soil more quickly when irrigated, generates a solid by-product that can be composted. See table below.
Organic Bedding Matter	This is a housing system where the pigs are kept on a bedding or organic matter such as sawdust or straw. The effluent is slowly composted within the organic matter and is removed at regular intervals depending on the system used. This system has a number of benefits including: reduction in odour, little water required for cleaning/flushing, and the creation of a valuable compost product that can be applied to land or sold.

Factors to consider:

- ✔ Flushing, scraper blade and operating channel systems should be well designed and accurately dimensioned so minimal material is left in the drain.
- ✔ Routine management of the effluent collection system, including regular cleaning of screens, is essential for continued optimum effectiveness.
- ✔ Correct assessment of the flushing volume minimises the water use while ensuring adequate cleaning.

- ✔ Properly designed systems will minimise odour.
- ✔ In flushing systems, effluent should be removed, preferably at not greater than 24-hour intervals, from dung races and drains, including drains under slats.
- ✔ Collection/storage systems with effluent in pits under the shed will allow storage for a number of months before emptying (dependant on the design of the system).
- ✔ The use of pit fans to draw air down over the pits will minimise in shed odours.

Sumps/Storage Tanks

Sumps and storage tanks are used as temporary storage for effluent that has been collected from the piggery sheds. When applying for an effluent discharge consent the council may specify a particular standard that the tank needs to meet.

Factors to consider:

- ✔ Sumps and tanks should be made out of materials that are strong and corrosion resistant.
- ✔ When sizing sumps, consideration needs to be given to flushing frequency, volume, pumping frequency, pumping capacity and entry of storm water.

Pond systems and Biogas collection

Ponds are used for effluent processing on farm and may be anaerobic and/or aerobic. A pond treatment system comprising an anaerobic pond and aerobic pond in series can achieve up to 95% Biological Oxygen Demand (BOD) and up to 70% nitrogen reduction.

Pig effluent is a biomass feedstock and can be used to generate biogas which is converted to electricity. There are a number of successful examples of this on New Zealand pig farms. Australian Pork has developed a Code of Practice for On-farm Biogas Production and Use (Piggeries) which is available on their website at www.australianpork.com.au. There are also a number of publications available from Pork CRC as part of their Bioenergy Support Program (see http://porkcrc.com.au/research/program-4/bio-energy-support-program/).

The Energy Efficiency Conservation and Authority (EECA) have a funding programme which is updated annually. Further information is available on the EECA website www.eecabusiness.govt.nz.

Anaerobic (primary) ponds

Good pond design should reflect local climate, pig numbers (loading rate), piggery management systems and effluent pre-treatment systems. In areas where t

Factors to consider:

- ✔ At the time of construction, the anaerobic pond depth should be a minimum of 3-4 metres
- ✔ Ponds in permeable soils or high water table areas should be lined with a clay or synthetic liner to minimise the risk of leaching.
- ✔ Anaerobic ponds should be sited away from dwellings.
- ✔ Anaerobic ponds may need to be desludged depending on the loading rate, size/depth of pond, and if the effluent is screened.

Aerobic (secondary) pond

Aerobic ponds provide further breakdown of BOD, micro-organisms and nutrients in the presence of oxygen.

Factors to consider:

- ✔ Aerobic pond depth generally should not exceed 1.2 metres as a greater pond depth does not allow adequate sunlight for algal growth or sufficient surface area for oxygen diffusion.

Constructed wetlands

Constructed wetlands can be used as a polishing stage following aerobic pond treatment. The wetland allows for the uptake of further nutrients and organic matter. Well-designed and managed wetlands require low maintenance.

Organic bedding systems

These systems are a method of housing where the pigs are penned on a bed of sawdust, straw or other organic material. The bedding system contains all manure within the confines of the pen with material only being removed at intervals dependant on the management system.

Factors to consider:

- ✔ Water spillage into the bedding from drinkers should be avoided.
- ✔ Availability and cost of bedding material
- ✔ Greater space allowances per pig, compared to non-bedded systems.
- ✔ Utilisation of used bedding by spreading to land, composting, or sale off- farm.
- ✔ Well stockpiled used bedding is stable and will compost slowly.

Composting

Screened piggery effluent solids when combined with a carbon source such as sawdust or straw, or material from organic bedding systems can be successfully composted.

Factors to consider:

- ✔ Ensure the appropriate mix of water, carbon, nitrogen and oxygen is maintained.
- ✔ Aeration of the material will speed the composting process.
- ✔ Composting requires specific plant, machinery and adequate space.
- ✔ Composting operations must be located away from surface water or waterways. Regional councils often specify a separation distances in their regional rules.
- ✔ Composting operations should be located on impermeable surface so that nutrients do not leach to land.

Carcass disposal

If managed correctly, the disposal of carcasses will have a minimal effect on the environment. There are a range of disposal methods that can be used, such as composting, offal holes, or off farm rendering. It is important to check council plan rules as councils can vary in their approach to carcass disposal.

Treatment options	Advantages	Disadvantages
Offal pits	Simple Cost effective Easy to manage	May involve stricter condition from regional council Offal pit seepage can contaminate groundwater Predator and pest control is required
Composting	Useful product generated- added value. High composting temperature destroys pathogens and prevents fly incubation.	A reliable supply (cost) of carbon service, e.g. sawdust, shavings or straw is required Requires knowledge of composting. Predator and pest control is required (minimal)
Burial	Simple and cost effective	Predator and rat control required. Labour intensive. Can contaminate groundwater
Off-farm rendering	Unlikely to have significant adverse effects on the environment No further handling or labour input.	Only available in some areas Requires secure area to store carcasses before pickup Potentially expensive Strict rules regarding on-farm incineration (highly probable that these rules will be further tightened in the future).
Incineration	Carcass and pathogens are completely destroyed	Only applicable in some areas Potentially expensive Smoke can be an issue if using oil or diesel burners. Strict regional rules regarding on-farm incineration. May not be permitted in some areas except for Biosecurity Act purposes.

Source: adapted from the EMS for the New Zealand Pork Industry, 2005

A guide to carcass composting can be found on the New Zealand Pork corporate website: www.nzpork.co.nz

Application of Manure to Land

Most regional councils in New Zealand require producers to use systems that discharge pig manure to land. The nitrogen content of piggery manure is usually the major determinant of the land area required for application. In recent years, various councils have used 200kg N/hectare/year as a guide for applying effluent to land. However, using a nutrient budget may demonstrate that higher levels of nitrogen can be applied. As a general guide, the table below provides example nutrient content for fresh, untreated effluent from pigs.

Table 5. Predicted nutrient values of fresh, untreated effluent

Type of pig	No. for a typical 100-sow farrow-to-finish (26 weeks) piggery	Total solids (kg/hd/yr)	Total nutrient output (kg/yr)		
			N*	P	K
Gilt	5	197	12.0	4.6	4.0
Boar	5	186	15.0	5.3	3.8
Gestating sow	83	186	13.9	5.2	3.7
Lactating sow	17	310	27.1	8.8	9.8
Sucker	177	11.2	2.3	0.4	0.1
Weaner	253	422	3.9	1.1	1.1
Grower	249	54	9.2	3.0	2.4
Finisher	330	108	15.8	5.1	4.1
Total	**1,119**				

Source: adapted from Table 4.1 and 9.1, APL (2010)

*It is important to note that various systems for effluent collection, processing, and application to land can reduce the amount of nitrogen by as much as 90%. If using any form of effluent processing system, testing is recommended to determine specific NPK levels for the end product prior to application to land.

Land application of piggery manure can be used to:

- Apply nutrients to the soil and improve soil structure
- Reduce fertiliser costs
- Irrigate

Land suitability - Soil type and hydraulic loading

Factors to consider:

- ✔ Soil infiltration should be considered when determining application rate.
- ✔ Soil type and moisture holding capacity should be considered when determining application volume.
- ✔ Nutrient application should be balance with crop/pasture utilisation.
- ✔ Climatic factors
- ✔ High rainfall events will limit the amount of liquid manure that can be applied to land

Land application equipment

Manure can be applied to land using various types of equipment including: travelling irrigators, stationary irrigators, slurry tankers, and soil injectors.

Manure applied off farm

Where manure is applied to land off-farm this activity may be subject to the same resource consent controls as on-farm application (check with your regional council).

Managing Discharges to Air

Management practices should be adopted to minimise nuisance. Sections 2, 3 and 4 above also provide guidance in these management practices.

Odour

Odour can be an issue for pig farms and can cause adverse effects to neighbours. The Resource Management Act effectively requires that there should be no offensive or objectionable odour beyond the boundary of the farm. In recent years, case law has established that reverse sensitivity is a valid effect and should be considered by councils.

Some regional councils will require an intensive piggery to apply for an air discharge consent for odour originating from piggery buildings including effluent storage pits and food storage.

Determining the offensiveness of odour is complex and reliant on individual perception, council methods of measurement, and management practices of the pork producer. To determine whether an odour has an offensive or objectionable effect requires consideration of what is known as the FIDOL factors. Table 6 below described these factors.

Table 6. Description of the FIDOL factors

Frequency	How often an individual is exposed to the odour.
Intensity	The strength of the odour.
Duration	The length of exposure.
Offensive/character	The character relates to the 'hedonic tone' of the odour, which may be pleasant, neutral and unpleasant.
Location	The type of land use and nature of human activities in the vicinity of an odour source.

Source: Ministry for the Environment (MFE, 2016)

Australian Pork have produced guidelines for minimising odour from piggeries (APL, 2015a) which are relevant to the New Zealand situation. The guidelines go through a number of practical options for reducing odour the main areas that generate odour in indoor piggeries including:

- Indoor sheds
- Channel, drains and pipes
- Sumps
- Solids Separators
- Effluent Treatment ponds

Guidance is also provided by APL for rotational outdoor piggeries in the National Environmental Guidelines for Rotational Piggeries (APL, 2015b). Many of the anticipated effects can be mitigated through the site selection process. Details on methods for odour modelling and odour assessments sits within the Australian Pork National Environmental Guidelines for Piggeries (APL, 2010) available online at: http://australianpork.com.au/industry-focus/environment/national-environmental-guidelines-for-piggeries/

The Ministry for the Environment has produced the Good Practice Guide for Assessing and Managing Odour (MFE, 2016). While this is not specific to pig farming it is the official guide that is used by council staff, consultants and industry and is available online at: http://www.mfe.govt.nz/sites/default/files/media/Air/good-practice-guide-odour.pdf

Other Management Requirements

Monitoring of resource inputs

A Farm Environment Plan (FEP) and resource consent conditions will include monitoring requirements. There are also other items that can be monitored that have an environmental impact. Farmers may already be monitoring these from a cost perspective but it is a good idea to monitor quantities (units) with the aim of improving the efficiency of use of these inputs.

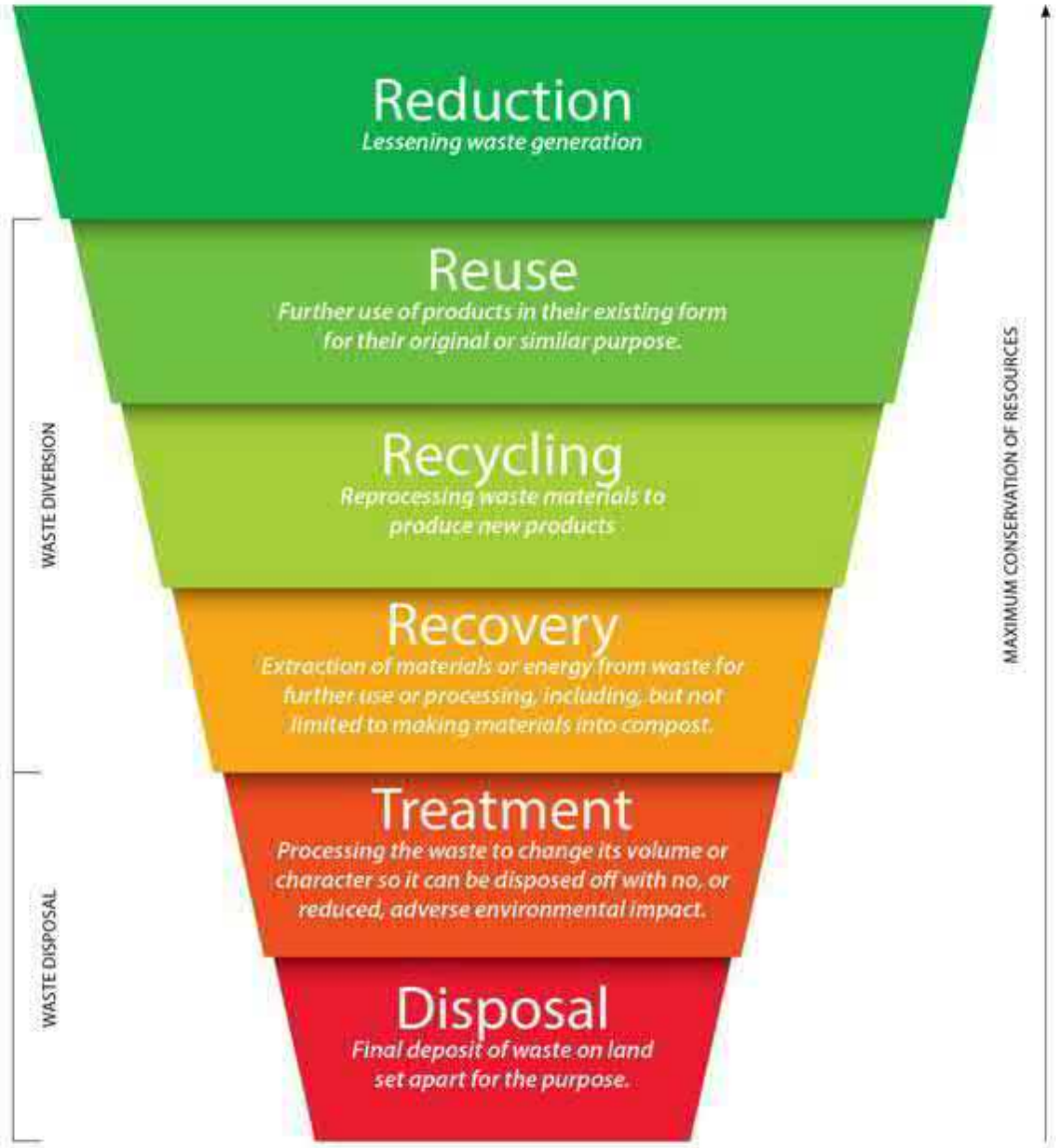
These may include but not limited to:

- Diesel consumed (litres)
- Natural gas consumed (kilograms or cubic metres)
- Electricity consumed (kilowatt hours)
- Water consumed (cubic metres or litres)
- Waste sent to landfill (cubic metres or kilograms)

It's a good idea to develop performance measures such as Key Performance Indicators (KPIs) that can be monitored and reported e.g. electricity (kwh) per kilogram of protein produced.

Waste Management

The generation of waste products not only causes environmental impacts but is a cost to the farm. While some regions allow for on farm landfills as a permitted activity it is expected that over time this will not be allowed or have tight controls. Organic waste buried in a basic 'pit' style landfill generates leachate that can contaminate groundwater and methane gas emissions. Non-organic wastes such as plastic, metal, treated timber, polystyrene etc. do not break down and can also cause contamination of land. The image below shows the waste management hierarchy with reduction at source being the most preferable option and disposal the less preferable.



Source: Kapiti Coast District Council (2016)

Greenhouse gas emissions

There are various methods of calculating emissions depending on what you are wanting to report. It is common calculate a 'carbon footprint' especially if you are reporting to consumers that are interested in issues such as 'food miles'. A carbon footprint often takes a Life Cycle Assessment (LCA) approach that looks at pre-farm emissions arising from the manufacture of inputs, on-farm emission during animal production and post-farm emissions arising from the processing and transportation of products to the retail point. A full LCA will also consider the post-retail emissions (e.g. refrigeration, cooking etc) and disposal (e.g. product packaging, meat leftovers etc).

If you are interested in a basic on-farm calculation then the current OVERSEER tool includes the ability to calculate on-farm emissions for methane, nitrous oxide and carbon dioxide. This requires

that you have data using for the same 12-month period as you are using for your nutrient budget for:

- Diesel
- Petrol
- Contractor fuel use (use can use the default values)
- Transport distances for animals (tonne/kilometre)
- Animal transport (brought in or sold stock) (tonne/kilometre)
- Waste sent to landfill (cubic metres or kilograms)
- Electricity (kilowatt hours)

There is also estimates made on the % of activity done using on-farm fuel for activities such as fertiliser spreading.

Nutrient Management and Nutrient Budgets

Nutrient management is becoming an important part of the regulatory landscape in New Zealand. This usually includes a nutrient budget being developed. There is the Good Practice Guide- Nutrient Management in Pork Production (NZPork, 2017) which is available at www.nzpork.co.nz . This guide is designed to assist pork producers in handling nutrients produced so that it does not pose an environmental risk to ground or surface water quality.

A commonly used nutrient budget tool is OVERSEER which is a software application. OVERSEER provides estimates of nutrient inputs and outputs on a per hectare basis. Nutrients from pig farms can be added as organic fertiliser. This will require the nutrient make-up of the material along with the application rate.

At present there has been a separate module for outdoor pigs developed and will be integrated with the main OVERSEER tool which is available at www.overseer.org.nz.

Note: indoor pig farms can use the main OVERSEER tool.

NZPork has developed guidance on how to use the outdoor pig module of OVERSEER and this is available at www.nzpork.co.nz

Farm Environment Plans

NZPork encourages all farmers to develop a Farm Environment Plan. The plan allows for a management system approach with a focus on continual improvement. The plan is a live document that is reviewed and updated regularly. There is information at www.nzpork.co.nz for those interested in developing a full Environmental Management System (EMS) such as ISO 14001 based on their existing Farm Environment Plan.

Outdoor farms

NZPork have developed a Farm Environment Plan (FEP) template for outdoor pig farms and guidance notes to meet the compliance requirements of Environment Canterbury. As more regional councils use FEPs as a regulatory tool then regional specific FEP templates will be developed. Download the latest FEP and guidance from www.nzpork.co.nz .

Indoor piggeries

NZPork is working to develop a Farm Environment Plan template and guidance for indoor pig farms. This will be announced to all farmers via our newsletter when available.

Emergency Management

There is a chance that an emergency may mean that the piggery may not be able to meet the above guidelines and legal obligations. For example,

- Industrial action/protesters, either on or off the farm
- Floods
- Other extreme weather events
- Earthquake
- Tsunami
- Fire

- Electric power failure

Despite the fact that these events are unavoidable, there should be a plan in place that ensures adverse effects on the environment are kept to a minimum. There are also animal welfare issues to consider.

WorkSafe New Zealand provides guidance for emergency planning for farms online at: http://www.saferfarms.org.nz/guides/a-guide-to-developing-safety-management-systems/#emergency-planning.

WorkSafe New Zealand in conjunction with the Environmental Protection Agency have developed a set of general emergency procedures that can be adapted to suit most situations. The template is available online at: http://www.worksafe.govt.nz/worksafe/information-guidance/all-guidance-items/emergency-procedures

Please note: that the WorkSafe guidance does not include farm protesters or animal welfare issues.

References

APL. (2010). *National Environmental Guidelines for Piggeries (2010)*, Australian Pork Ltd. Barton, ACT, Australia.

APL. (2015a). *Project 2013/031 Minimising Odour from Piggeries (2015)*, Australian Pork Ltd. Barton, ACT, Australia.

APL. (2015b). Project 2013/031 Rotational Outdoor piggeries and the Environment (2015), Australian Pork Ltd, Barton, ACT, Australia.

Kapiti Coast District Council (2016). https://greenerneighbourhoods.net/resources/waste/ downloaded on 14/12/2016.

Matrix of Good Management. 2015. *Industry-agreed Good Management Practices relating to water quality. The Canterbury Matrix of Good Management project, April 2015. New Zealand.*

Ministry for the Environment. 2016. *Good Practice Guide for Assessing and Managing Odour*. Wellington.

NZPork. 2017. *Good Practice Guide- Nutrient Management in Pork Production*. New Zealand Pork Industry Board, Christchurch, New Zealand.

Useful resources

- The Industry Agreed- Good Management Practices for outdoor pigs (www.canterburywater.farm/gmp/)
- Australian Pork Limited environmental resources (http://australianpork.com.au/industry-focus/environment/)
- Energy Efficiency Conservation Authority (www.eecabusiness.govt.nz)
- Water New Zealand Good Practice Guide- Beneficial Use of Organic Materials on Land (www.waternz.org.nz)

Glossary

Aerobic Bacteria	Bacteria that require free oxygen for growth.They are involved in effluent treatment in an aerobic pond.
Aerobic	In the presence of free oxygen.
Aerobic Pond	A pond where effluent is treated in the presence of aerobic bacteria. Usually preceded by an anaerobic pond.
Anaerobic Bacteria	Bacteria that do not require free oxygen for growth. They are involved in effluent treatment in an anaerobic pond.
Anaerobic	In the absence of free oxygen.
Anaerobic Pond	The pond where effluent is treated anaerobically by anaerobic bacteria.
BOD	Biological Oxygen Demand - the quantity of oxygen required for breakdown of organic compounds in water.
COD	Chemical Oxygen Demand - the measure of the oxygen consuming capacity of inorganic and organic matter in water.
Composting	The process in which organic material undergoes biological aerobic degradation of solids to a stable end product.
Constructed Wetland	Includes man-made permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.
Contaminant	Includes any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat – 1) when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; 2) when discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.

Controlled activity	An activity that complies with any standards, terms or conditions specified in the District or Regional Plan is assessed according to matters the Council has reserved control over, and is allowed only if a Resource Consent is obtained.
Organic bedding system	Housing system in which pigs are kept on a layer of organic bedding material, usually straw or sawdust.
Discharge Permit	A resource consent to do something (other than in a coastal marine area) that otherwise would contravene s15 of the Resource Management Act 1991.
Discharging	Includes 'emitting', 'depositing', or 'allowing to escape' any contaminant into the environment.
Discretionary Activity	An activity that requires a resource consent and is allowed at the discretion of the local authority.
District	An area in relation to, and under the management of, a District or City Council.
Effluent	Animal excreta and waste water containing animal excreta.
Effluent Treatment	Any treatment resulting in the alteration of the characteristics of effluent as it leaves the piggery, including anaerobic and aerobic lagoons, solids/liquids separators, bio-gas manufacture, chemical flocculation, composting, and package treatment systems.
Extensive Farming	Keeping, breeding or rearing for any purpose, of pigs on pasture (but including areas used for access to shelter) at a stocking density that sustains the maintenance of pasture or ground cover.
Farrowing	Giving birth to piglets.
Hydraulic Loading	Depth of water applied to an area of land (mm/ hectare).
Intensive Farming	The breeding or rearing of pigs where the predominant productive processes are carried out within buildings or closely fenced outdoor runs where the stocking density precludes the maintenance of pasture or ground cover.
Leaching	The removal of soluble constituents (e.g. salts, fertiliser nutrients) from the soil by water moving downward through the soil profile.

Lifestyle/Hobby farm	A farm where the *primary* motivation for farming is the enjoyment of the rural lifestyle and not financial gain.
Local Authority	A Regional Council or Territorial Authority(i.e. District Council, City Council or Unitary Authority).
Mahinga Kai	Traditional food or other natural resources (e.g. freshwater species) that have been traditionally used as food, tools, or other resources.
Manure	Any substance, e.g. dung, urine, compost (including 'fresh' effluent), or artificial material that is spread over, or mixed with soil, to fertilise it.
Mechanical Aeration	Mechanically mixing air and effluent together, using air pumps, agitators or liquid sprayers, in order to raise the concentration of dissolved oxygen within the effluent.
Micro-organisms	Microscopic organisms, such as bacteria, viruses, algae, protozoa and fungi that can live in water, soil, air, animals and plants.
Non-complying Activity	Contravenes a rule in a District or Regional plan and is allowed only if a resource consent is obtained from the relevant local authority
Permitted Activity	An activity that is allowed by a Regional Plan or District Plan without a resource consent if it complies in all respects with any standards, terms, or conditions.
Pig Farming	The keeping, raising or breeding of pigs for any purpose in numbers exceeding those defined as "Pig keeping".
Pig Keeping	The keeping, raising or breeding for any purpose, of not more that five pigs which have been weaned, or two sows, providing that any progeny are not retained beyond the weaner stage. See Pig Farming
Polishing	Where primary and secondary treated effluent undergoes a final treatment.
Pond system	A constructed ponding system. Usually comprises anaerobic pond followed by an aerobic pond.
Prohibited Activity	An activity that is expressly prohibited in a Regional or District plan.
Region	An area in relation to, and under the management of, the Regional Council.

Regional Plan	A plan prepared by the Regional Council for managing the use and protection of natural and physical resources (i.e. Land, river and lake beds, water, geothermal, air, and coast).
Resource Consents	refer to Resource Management Act 1991 (s87).
Reverse Sensitivity	The effects of the existence of a sensitive activity on a pre-existing activity in their vicinity leading to restraints in the carrying out of the pre-existing activity.
Sediment	Solid material (e.g. silt and sand) that is carried in water or effluent that will ultimately settle to the bottom of sumps, ponds, barrier ditches, constructed wetlands or waterways.
Silent Files	Sites that are of particular importance to local Maori these may be waahi tapu or other sacred sites. These sites are identified as a general location on a map without disclosing their precise location.
Sow	An adult female pig, which has had one or more litters.
Stocking Density	The number of pigs kept per square metre of pen area.
Stormwater	Rainwater that has drained from the farm buildings and yards and is collected in guttering/pipes, or has run off from the surrounding land.
Wahi Tapu	A sacred place to Maori in the traditional, spiritual, religious, ritual, or mythological sense.
Water	Means water in all its physical forms whether flowing or not and whether over or under the ground and includes fresh water, coastal water, and geothermal water and does not include water in any form while in any pipe, tank or cistern.
Water Table	The surface below which fissures or pores in the strata are saturated with water. It approximately conforms to the configuration of the ground. Where the water table rises above ground level a body of standing water exists.

Appendix A: New Zealand legislation

The table below lists the key legislation that include environmental provisions that may affect pork producers. Links to all of the Government Ministries mentioned below can be found at http://www.govt.nz.

Activity	Legislation	Regulator
Air Pollution Dust Odour Fumes	• Health and Safety at Work Act 2015 (incl. exposure standards) • Health Act 1956, section 29 (nuisance) • Resource Management Act 1991 (air discharge consent)	• WorkSafe New Zealand • Ministry of Health • Regional Council
Animal Welfare	• Animal Welfare Act 1999 • Animal Welfare (Pigs) Code of Welfare 2010	• Ministry for Primary Industries
Biogas	• Gas Act 1992 (gas manufacture on farm) • Energy Efficiency and Conservation Act 2000 • Resource Management Act 1991	• WorkSafe New Zealand • Energy Efficiency and Conservation Authority • Regional Council
Biosecurity	• Biosecurity Act 1993	• Ministry for Primary Industries • Regional Council (pest management)
Fire	• Fire Service Act 1975 • Fire Safety and Evacuation of Buildings Regulations 2006 • Forest and Rural Fires Act 1977	• New Zealand Fire Service • City or District Council • Department of Conservation
Land and Buildings	• Resource Management Act (Land Use) • Local Government Act 2002 (zoning, subdivision consent) • Building Act 2004	• Regional Council • City or District Council (consent, code of compliance, building warrant of fitness) • Ministry for Business, Innovation and Employment (Building code)

Noise	• Health and Safety at Work Act 2015 • Health Act 1956 (s29) • Resource Management Act 1991 • Local Government Act 2002 (zoning)	• WorkSafe New Zealand • Ministry of Health • Ministry for the Environment • Regional Council • City or District Council
Pork Industry	• Pork Industry Board Act 1997	• Ministry for Primary Industries
Waste disposal	• Health Act 1956. Nuisance, noise, water pollution • Hazardous Substances and New Organisms Act • Health and Safety at Work Act 201 • Local Government Act (waste bylaws) • Resource Management Act (pollution)	• Ministry of Health • Environmental Risk Management Authority • WorkSafe New Zealand • City or District Council • Regional Council
Water	• Health Act 1956 (se60, 62). Control of water pollution • Local Government Act 2002. Supply of water. • Resource Management Act 1991. Environmental protection	• Ministry of Health • Ministry for the Environment • City or District Council • Regional Council