ORC Omnibus Plan Change - Plan Change 8

Submission Reference no: 15

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Source: Email

Overall Notes:

Clause
Are you a trade competitor?
Position
I am a person who would not gain an advantage in trade competition through this submission
Notes

Clause
What are you submitting on? You can submit on specific parts of Plan Change 8 or the whole plan change.
Position
I am submitting on the whole plan change.
Notes

Clause
What is your view on the Plan Change 8 or the specific parts listed above? Please select one, if you have multiple views state clearly in the notes box below.
Position
Multiple views
Notes

Clause
What decision would you like the Environment Court to make?
Position
Approve the plan change with amendments
Notes

Clause
Do you wish to be heard in support of your submission? All submissions will be considered by the Environment Court. Please indicate if you wish to be heard in support of your submission.
Position
I wish to be heard in support of my submission
Notes

Clause
Please indicate your choice(s) below. If you do not indicate your intention to call experts, you can change your mind later and decide to call experts to give evidence in relation to your submission, provided you do so in time to meet any procedural direction the Environment Court might make.
Position
If others make a similar submission I/we would consider presenting a joint case with them at a hearing
Notes

Clause
Authority to act:

Position
I confirm I have the authority to sign this submission on behalf of the submitter
Notes

SUBMISSION:

Proposed Plan Change 8 to the Otago Water Plan

TO:

Environmental Protection Authority

DATE:

14th August 2020

FROM:

New Zealand Pork Industry Board

Submission prepared by:

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1 About the New Zealand Pork Industry

The New Zealand Pork Industry Board (NZPork) is a statutory board funded by producer levies. 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 Board employs a Senior Environmental Advisor to assist farmers with implementation of environmental good practice and to represent their interests in planning regulations.

The pig farming industry in New Zealand is small by international standards, with less than 100 registered commercial pork producers nationally. Of these, approximately 10% are based in, Otago making this region nationally significant in terms of its contribution to pork production. Although it is a small industry, pork producers have an important flow-on effect to their communities, forming an integral part of the rural economy as they utilise other farming resources such as grains for feed production as well as providing employment. In 2016, the value of pig production in New Zealand was around $430 million at retail.

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 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.

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

NZPork is part of the Good Farming Practice Action Plan for Water Quality Governance Group and actively support and promote agreed national good farming practice principals within the commercial

pig farming industry, which includes practices for farm effluent and wastewater management[1]. NZPork provides guidance to farmers on environmental management and nutrient management and has developed pork specific templates and guidance for effluent management plans and farm environment plans. The effluent management plan template is included for reference in Appendix A.

[1] Industry-agreed Good Management Practices relating to Water Quality were developed by Environment Canterbury and industry partners including NZPork as part of the Matrix of Good Management Project.

2 Animal Waste Systems in the New Zealand pork industry

Proposed Plan Change 8 to the Otago Water Plan introduces policies and rules to manage the environmental effects of animal waste systems. However, as covered in detail in our submission, **the Plan Change is dairy-centric and does not account for other industries using animal waste systems, or systems other than liquid effluent ponds. The result is a plan change that proposes provisions that are not efficient or effective in achieving the objectives of the proposal.** Information is provided here on animal waste management systems used in the pork industry to give context to our submission.

2.1 Types of effluent management processes used on commercial pig farms

There are different housing systems used on pig farms in New Zealand, with different systems used for manure collection, storage and treatment. These systems range from solid floored pens which are hosed out, to varying proportions of slats where manure, urine, waste feed and water, falls or is washed into a channel which can be hosed or flushed on a regular basis. Other fully slatted systems operate a 'pull plug' system where the manure, urine, waste feed and water falls into a pit under the slats and is stored and is flushed out when the pigs are moved from the pen. Dry scraper systems can also be used to limit the amount of liquid that has to be handled and transported. Scrapers remove manure and wastewater from channels under slats. In all cases, the manure handling systems are incorporated into the design of the building and are constructed from impervious materials such as concrete and steel.

Most pig manure is handled as a liquid (slurry). The consistency of manure is usually classified as solid, semisolid, slurry or liquid, depending on its fluidity.

Classes of manure:

- Liquid effluent is defined as material containing less than 10% solids.
- Slurry has between 10 and 20% total solids and will flow.
- Sludge has more than 20% total solids will not flow.
- Solid manure is deep litter and usually includes other bedding materials.

With slatted or partially slatted floors, the manure and spilt water can drop through the slats either into a manure tank or concrete storage pit or into drains where it can be scraped and washed away.

The slurry can be flushed from the drains into a sump or tank for storage or into a pond. The water used for flushing is either clean water or treated effluent recycled from the pond.

Liquid manure is stored in many different types of facilities. Storage under the shed in a 'pull plug' system is of concrete construction and follows the pen dimensions and can flush to the exterior directly or into a central collection pipe leading to a sump. The manure is typically stored under the pens for one throughput cycle of pigs. Storage sumps and pits outside the sheds can be rectangular, square or round and constructed of earth, concrete, steel or a combination of these materials. They can be above, below or partly below ground with a varying storage depth and may incorporate anaerobic and aerobic ponds.

A different housing system called deep litter incorporates a 'bed' of straw or sawdust on which pigs live. The bedding material absorbs the manure and is usually cleaned out between batches of pigs, when the spent bedding is spread to land or accumulated for composting. Bedding can be removed if soiled and/or more added to keep the pens clean. These systems operate on a larger space allowance per pig. Spent bedding can be applied to the paddock directly or after it has been composted. Solid manure, such as deep litter bedding and compost, supplies valuable organic matter to soils. This can improve soil structure, increase the water-holding capacity of coarse-textured sandy soils, improve drainage in fine-textured clay soils, provide a source of slow release nutrients, reduce wind and water erosion, and promote growth of earthworms and other beneficial soil organisms

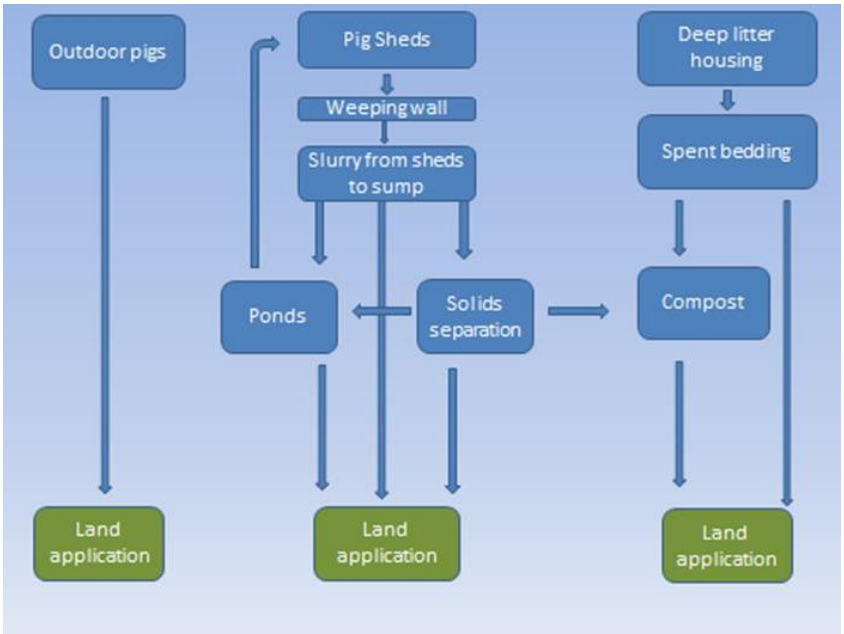

Figure 1: Schematic of effluent management processes used on commercial pig farms

Pig farmers in Otago are using a variety of these manure management processes. Most are indoor farms using liquid effluent systems, with effluent contained in buildings and short-term holding tanks before being applied to their own or other properties via irrigators or effluent tankers.

2.2 Composition of piggery effluent

Pig effluent can include faeces, urine, cleaning water, rainwater, soil, bedding, waste feed and spilt drinking water. Like dairy effluent, pig effluent typically contains concentrations of organic matter and macro- nutrients such as nitrogen (N), potassium (K), phosphorus (P), salts, microorganisms, and various trace elements.

However, the composition and volume of effluent will vary from farm to farm and from day to day on any particular farm. The volumes produced are dependent on age and structure of the herd, diets,

and production practices. Nutrient losses also occur with handling and several other processes that the material undergoes before final discharge, usually to land.

The impact of an individual farm on the environment depends on pig numbers and concentration, weather, soil type, and waste management strategies. Pig effluent is a valuable source of nutrients, and when managed well can improve pasture and crop production at the same time reducing fertiliser costs.

2.3 Application of piggery effluent to land

Liquid effluent can be applied to land using effluent tankers or irrigation equipment. Soil has the ability to utilise irrigated manure by filtering out the suspended solids and micro-organisms, the nutrients such as nitrogen are chemically processed (denitrification) and released or used by the soil, and organic matter is broken down by soil micro-organisms which along with plants utilise the nutrients released.

Effluent tankers, which range in size, are pulled behind a tractor or mounted on a truck (which make over the road travel quicker and safer). The tankers discharge manure from the rear of the tank on the soil surface by sprinkler. Various types sprayers or soil incorporation tools can be used (drag-hose system, dribble bar, direct injection) and are generally mounted directly to the tanker. Effluent distributes through hoses and discharges through a soil incorporation tool. These fittings reduce the risk of spray drift and potential odour issues as well as ensuring the nutrients in manure are place where plants can use them.

Environmentally sustainable land application of piggery effluent is dependent on three performance characteristics:

Performance characteristics	Determined by
Sprinkler application rate	Soil infiltration rate or soil permeability
Depth of application per irrigation event	Soil water-holding capacity (depends on soil type and moisture content at time or irrigation)
Total depth of effluent applied annually	Amount of nitrogen or other limiting nutrient allowed annually (under nutrient management plan)

NZPork has produced a Good Practice Guide: Nutrient Management in Pork Production, which provides guidance on environmentally sustainable land application of effluent. This guidance includes:

- Planning irrigation in advance using weather forecasts and soil moisture measurements to avoid application during wet weather or to saturated soil.
- Use of deferred irrigation for soils with impeded drainage or low infiltration rate

- Applying an appropriate depth of liquid effluent uniformly to the paddock, at a rate that allows all the liquid to soak into the soil and not flow away from the point of application.

NZPork also provides an effluent management plan template to guide good effluent management practices. The plan includes a map of the property and areas of effluent application, records of all applications, and contingency plans for equipment failure or deferred irrigation. A copy of this is provided for reference in Appendix A

3 Submission

3.1 Summary

Part B of Proposed Plan Change 8 to the Otago Water Plan introduces policies and rules to manage the environmental effects of animal waste management systems. **However, the Plan Change is dairy-centric and does not account for other industries using animal waste management systems, or systems other than liquid effluent ponds**. The section 32 report is deficient in its analysis of the identification of issues and appropriate responses for activities and industries other than dairy. The lack of consultation with any industry other than dairy during the development of this plan change has resulted in a largely unreasonable, unworkable and unjustifiable rule framework for pork producers.

NZPork supports the introduction of policies and rules to assist farmers in implementing good environmental practice in the application of effluent to land in the region. Dairy effluent and piggery effluent are similar in their composition, and similar practices are employed for application of effluent to land across both sectors. Therefore, it is reasonable that some degree of control be applied to the application of piggery effluent to land if poor effluent application practices have been identified as a cause of degraded water quality in the region. However, there is no justification provided as to why pork producers have more stringent consenting requirements imposed on them than dairy producers for effluent application to land. The proposed rules require amendments to make them fair and reasonable for pork producers.

NZPork does not support the proposed rule framework for managing animal waste systems. **Otago Regional Council has provided no evidence or justification for the need to introduce a rule framework which targets <u>all</u> animal waste systems when the S32 report only identifies poorly designed dairy effluent ponds as a likely cause of declining freshwater quality**. In addition, ORC has created a framework which penalises pork production activities by applying discretionary activity status to any animal waste management system that cannot comply with dairy industry effluent pond standards. Standards that pork producers simply cannot meet.

3.2 Deficiencies in the Section 32 Evaluation Report and Consultation Process

Section 32 of the RMA sets out the requirements for preparing and publishing evaluation reports. An evaluation must examine whether the objectives of the proposal are the most appropriate way to achieve the purpose of the Act, and whether the provisions (that is the policies, rules and other methods) are the most appropriate way of achieving the objectives. It is the opinion of the submitter that the section 32 evaluation prepare for Plan Change 8 does not display good practice and is deficient as set out in the submission below.

<u>2.1.1 Consultation: Animal Waste Storage and Application</u>

The S32 report identifies limited stakeholder consultation was undertaken owing to the short timeframe requirements of the development and notification of the plan change. Consultation participants on this topic were limited to the dairy industry (DairyNZ, Fonterra, Otago Dairy working group).

However, the scope of the plan change as written, affects all rural production activities that use animal waste management systems, which extends beyond the dairy sector, and includes all commercial pig farmers.

Part 1, Clause 3 of the First Schedule of the RMA set out the consultation requirements for the preparation and change of plans by local authorities. Clause 3(2) states that unlike the mandatory requirements set out in Clause 3(1) a local authority *may* consult anyone else during the preparation of a proposed policy statement or plan. In this circumstance, the lack of any consultation with NZPork or affected pig farmers on this topic prior to notification was inappropriate given the impact the plan change will have on the pork sector. The lack of understanding and consideration of other sectors using animal waste systems has led to significant deficiencies in the assessment of the efficiency and effectiveness of the proposed plan change, and the proposed rule framework. These are identified further throughout this submission.

3.3.2 Scope of PC8

The scope of PC8 was originally approved by ORC in August 2019 and included 'stock effluent management' as an issue to be addressed in this plan change. The paper presented to ORC Policy Committee (report no. PPRM1899) cited 'farm effluent' as a significant source of contamination in some of Otago's catchments, with reference to a 2011 report prepared by R.W. McDowell, R. Monaghan, R.W. Muirhead and N. Cox. The subject of this report was land use change and the expansion of dairying as perceived causes of poor water quality in the Pomahaka catchment, and included the monitoring and reporting of contaminant losses via drainage on dairy farms and potential causes for and solutions to this issue[2].

No other farming systems using animal waste systems were identified in the reports referenced in the scope of this plan change.

However, by relying on the existing definition of animal waste system in the operative Water Plan, the scope of the rule framework in PC8 goes significantly beyond farm dairy effluent, by incorporating by definition "collection, storage, treatment, disposal or application to land of liquid or solid animal waste", with animal waste defined as "urine or faeces from any animal".

3.4.2.2 Objectives

3.4.2.2 Objectives of the S32 Evaluation Report in regard to animal waste storage and application are stated as follows:

[2] R.W. McDowell, R.M. Monaghan, R.W. Muirhead, 2011, Water quality of the Pomahaka River catchment: scope for improvement

> "*the objective of this proposal is to improve the management and operation of animal waste systems (including both storage and application to land) so that they are consistent with* ***good practice***."

Good practice for the management and operation of animal waste systems for pork production (including both storage and application to land) is not achieved by the provisions proposed in Plan Change 8.

3.4.2.3 Current Issues

The S32 report identifies that 'dairy sheds and some other intensive farming operations remove liquid animal waste from stock holding areas and wash down these facilities to meet health and hygiene requirements for the animals and animal products".

Despite the acknowledgement that other intensive farming systems use animal waste systems, there is no identification of any issues associated with animal waste systems used by sectors other than dairy. The S32 report references high *E.coli* levels in the Pomahaka catchment likely to be caused, at least in part, by animal waste management issues, including inappropriate effluent storage/application, and a high prevalence of sub-surface drainage. This information was drawn from a report which studied dairy and sheep farms and drew the conclusion that "dairy farmers need to continue the improvements the industry has made in managing dairy shed effluent"[3]. There is no mention in this report of any adverse environmental effects arising from animal waste systems used in pork production activities.

Of the described enforcement actions noted in the S32 in response to discharges of animal waste, given as justification for the necessity of controls on this issue, there is no identification of how many of these relate to activities other than dairy.

The issues identified with animal waste systems in this report are entirely dairy-centric. There is a major failing to identify or address any issues associated with other animal waste management systems, including those in use on commercial piggeries.

As stated previously in this submission, there are ten commercial pig farms operating in the Otago region, all of which use animal waste management systems. However, only one of these uses a pond-based system. Most farms in the region are using systems in which effluent is held in short-term holding tanks or underfloor pits, then transferred to slurry tankers for spreading onto their own land or transported offsite for land application elsewhere. Some farmers are also using solid waste systems, in which pigs are housed in deep-litter sheds with sawdust or straw bedding used to capture effluent. The spent bedding which is then stockpiled and/or composted before being applied to their own land or transported off site. These systems are also captured by this plan change, with no justification or consideration of impacts.

The issued description in 3.4.2.3 states as follows:

[3] Otago Regional Council (2011): Effects of land use on water quality in the Pomahaka catchment

> *"in other regions, such as neighbouring Canterbury and Southland, the construction and use of animal waste systems is managed through regional rules for land use. Uses of land are permitted under section 9(b) of the RMA, unless there is a relevant regional rule. In Otago, there are no land use rules managing the construction or use of animal waste systems, meaning they are permitted activities."*

This may be the case at a regional plan level, but **at a District plan level, land use controls for Intensive Farming Activities are in place for Intensive Farming Activities. These controls have not been considered relative to the need for increased regulation at a regional plan level** or any duplication or conflict between the proposed provisions and those in the relevant district plans.

For example:

Clutha District Plan,

> Pursuant RULE RRA.4(III) of the Clutha District Plan, an intensive farming activity is a Discretionary Activity with the plan stating that in assessing any application under this rule Council in addition to those matters set out in Section 104 of the Act will also consider the following matters;
>
> - the ability of the site to dispose of waste safely and adequately;
> - the effects on any waterbody, heritage site, or area of indigenous vegetation or habitat;
> - the effect on more sensitive activities in the receiving environment.

Waitaki District Plan

> Pursuant RULE 4.3.1 of the Waitaki District Plan a scale of Intensive Farming Activity is a Permitted Activity or Discretionary where those thresholds are breached.
>
> Pursuant to RULE 4.4.6 No disposal of piggery or poultry effluent forming part of an intensive farming activity shall be undertaken on land closer than 500m to an existing dwelling on an adjoining Certificate of Title or in the vicinity of the subject site.

Dunedin City District Plan (Second Generation)

> Pursuant to RULE 16.3, Intensive Farming is a Restricted Discretionary Activity

Otago District Plan

> RULE 4.7.6 sets out standards for permitted activities which for Intensive Farming includes Separation Distances from Water Races and Irrigation Pipelines.

<u>3.4.2.4 Reasonably practicable option</u>

The S32 report describes the status quo as ineffective at meeting the objectives of the water plan. The objectives of the water plan in relation to water quality are:

> 7.A.1 To maintain water quality in Otago lakes, rivers, wetlands, and groundwater, but enhance water quality where it is degraded.

7.A.2 To enable the discharge of water or contaminants to water or land, in a way that maintains water quality and supports natural and human use values, including Kāi Tahu values.

7.A.3 To have individuals and communities manage their discharges to reduce adverse effects, including cumulative effects, on water quality.

There is no justification or evidence provided as to why animal waste systems used in pig production are currently preventing these objectives from being met and no analysis provided as to why one dairy-centric approach is the most reasonably practicable option for all farming systems using animal waste systems

Notwithstanding the differing functions and responsibilities of regional vs district councils, as set out above, land use controls for Intensive Farming Activities are in place for Intensive Farming Activities. These controls have not been considered relative to the need for increased regulation at a regional plan level or any duplication or conflict between the proposed provisions and those in the relevant district plans. No assessment is provided as to whether the proposed provision promote or constrain integrated resource management for pork production.

3.4.2.5 Efficiency and Effectiveness evaluation

There is no analysis provided as to the efficiency or effectiveness of imposing a one size fits all dairy centric response across all activities using animal waste systems. The report states that evidence available suggests that a large number of farms across Otago are likely to be some way below the minimum standards proposed.

However, the minimums standards proposed are entirely based on dairy effluent ponds and are not relevant for any farms using other systems. Most pig farmers in Otago are using systems in which the capture and storage of effluent is incorporated into the design of the pig sheds and constructed of impervious material such as steel or concrete which will have little or no effluent seepage.

3.4.2.6 Risk of acting or not acting

No analysis is provided on the risk of acting or not acting for pork production activities that clearly have different operational requirements and responses to effluent management.

As set out above, land use controls for Intensive Farming Activities are in place for Intensive Farming Activities. These controls have not been considered relative to the need for increased regulation at a regional plan level or any duplication or conflict between the proposed provisions and those in the relevant district plans. The analysis of risk of acting or not is therefore deficient.

3.4.2.7 Conclusion

The conclusions drawn are flawed as they are based on an inadequate and deficient s32 assessment.

3.3 Addressing the Deficiencies in PC8

The operative Regional Plan (Water) has three key definitions:

> *Animal Waste: Faeces or urine from any animal.*
>
> *Animal Waste System: Includes collection, storage, treatment, disposal or application of liquid or solid animal waste.*
>
> *Effluent Liquid waste: including liquid leaching from solid waste.*

PC8 proposes no changes to these definitions which are the primary definitions around which the provisions of PC8 are constructed. PC8 appears to focus on issues of effluent ponds but in doing so relies on the definition of Animal Waste System which captures all systems not just those that use ponds designed to a dairy standard to manage waste from animals. As set out in this submission, pork production uses a variety of animal waste systems to collect, store, treat, dispose or apply liquid or solid animal waste. The one size fits all approach proposed in PC8 simply does not work for pork production.

If the intended target of the Animal Waste System provisions in Part B of PC8 is the collection, storage, treatment disposal or application of effluent using effluent ponds (and associated infrastructure), then the definition of Animal Waste Systems should be replaced throughout the plan change with a new definition for Effluent Ponds for those activities that rely on effluent ponds to manage Animal Waste. Changes are also required to include relevant pond design and sizing standards for piggery effluent ponds. The s32 evaluation report would need to consider the alternatives, benefits and costs of doing this.

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3.4 Specific Submissions

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	PC8 Part A: Discharge Policies			
1.	New Policy 7.D.6	Oppose in Part	New policy 7.D.C provides matters to consider for applications for resource consent for discharges of nitrogen as Discretionary Activities under Rule 12.C.3.2. We understand this is response to ORC Consents staff receiving applications for long-term discharge permits and a request that additional policy guidance would assist in making decisions on these consent applications, including on duration. The submitter has concerns that catch all Rule 12.C.3.2 may become increasingly relevant as the date threshold triggers near the Overseer version 6 becomes more irrelevant. That being the case the policy should note the need to have regard to other matters.	Expand the matters to have regard to, to include matters such as the value of investment (including mitigations), the gains achieved through good management practice and the positive effects of an activity.
	PC8 Part B: Animal Waste Storage and Application			

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
2.	New Definitions – Dairy Effluent Storage Calculator, Suitably Qualified Person	Support	Support the use of the term 'Suitably Qualified Person' to ensure this is not dairy centric	Retain as proposed
3.	Amended Definition – Animal Waste System	Oppose	NZPork opposes the use of this definition throughout Part B. The S32 report references only issues associated with dairy effluent storage ponds. The rule framework that has been created to address the issues identified are entirely dairy centric and unworkable for commercial pig farmers or any other farming activity using an animal waste management method other than effluent ponds. If it is the intent of PC8 to address effluent ponds, a new definition is needed that reflects this intent. Defining Effluent Ponds ensures a clearer framework around the discharge of concern which can then be managed by the plan.	Add a new definition for Effluent Ponds as follows; Effluent Ponds: Means a pond and ancillary structures that are used for the collection, storage, treatment, disposal or application of animal waste as part of an Animal Waste System.
4.	Policy 7.D.7. Ensure the appropriate management and operation of animal waste systems by:	Support in part	Support the intent of the policy, but it should be redefined to capture only effluent ponds and effluent application, rather than all animal waste systems.	Change wording to reflect focus on effluent ponds and application systems.

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(a) Requiring animal waste systems to be designed, constructed and located appropriately and in accordance with best practice; and (b) Ensuring that all animal waste systems: (i) Have sufficient storage capacity to avoid the need to dispose of effluent when soil moisture or weather conditions may result in run-off entering water; and (ii) Include contingency measures to prevent discharges to water in the case of equipment or system failure; and (ii) Are operated in accordance with an operational management plan for the system that is based on best practice guidelines and inspected regularly; and (c) Avoiding the discharge of animal waste to water bodies, artificial watercourses, the coastal marine area and to saturated land; and			

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(d) Requiring low-rate effluent application for any new discharge of animal waste to land and encouraging the transition to low-rate effluent application for existing discharges of animal waste to land			
5.	Policy 7.D.8 Provide for the upgrading of existing animal waste systems that do not meet the standards of Rule 14.7.1.1 by: (a) Granting resource consents only where consent applications contain a timebound action plan for upgrading the existing animal waste system so that it meets the standards of Rule 14.7.1.1 as soon as possible; and (b) Staging implementation of performance standards based on risk	Support with amendments	Standard (a) of rule 14.7.1.1 is dairy-specific and based on effluent ponds, meaning this rule cannot be applied to any animal waste systems used in pig farming operations. There is currently no alternative consenting pathway prescribed for non-dairy activities or animal waste systems other than effluent ponds. NZPork supports the intent of this policy, on the basis that amendments are required to the rule framework for animal waste systems to account for for non-dairy effluent pond operations.	Support a staged, risk-based approach to system upgrades. Amend rule framework and definitions for animal waste systems as described below to account for an alternative standard for non-dairy operations.
6.	New Rule 12.C.0.4 The discharge of animal waste from an animal waste system:	Support	NZPork supports this rule as aligning with generally considered good practice for effluent discharge to land.	Retain rule as notified.

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(i) To any lake, river or Regionally Significant Wetland; or (ii) To any drain or water race that goes to a lake, river, Regionally Significant Wetland or coastal marine area; or (iii) To the bed of any lake, river or Regionally Significant Wetland; or (iv) To any bore or soak hole; or (v) To land within 50 metres of: (a) Any lake, river or Regionally Significant Wetland; or (b) Any bore or soak hole; or (vi) To land in a manner that results in ponding or overland flow to water, including to frozen land; or (vii) That results in any of the following effects in receiving waters, after reasonable mixing: (a) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or (b) any conspicuous change in the colour or visual clarity; or			

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(c) any emission of objectionable odour; or (d) the rendering of fresh water unsuitable for consumption by farm animals; or (e) any significant adverse effects on aquatic life; is a prohibited activity.			
7.	Rule 12.C.1.4 12.C.1.4 Notwithstanding any other rule in this Plan, the discharge of animal waste, or water containing animal waste, from an animal waste system onto or into land is a permitted activity providing: (a) The animal waste system is permitted under Rule 14.7.1.2; and (b) The discharge is not prohibited under Rule 12.C.0.4; and (c) The discharge does not occur within 50 metres of the boundary of the property on	Oppose	Rule 14.7.1.2 contains standards that are dairy-specific and therefore cannot be applied to animal waste systems used in pig farming operations. There is no alternative pathway provided for non-dairy operations, meaning that a pork producer would require consent immediately under rule 12.C.2.5, whereas a dairy farmer would be given a transitional period to apply for consent. As identified in section 2.2 of this submission, piggery effluent is similar in composition to dairy effluent. The application of piggery effluent to land uses the same methods and controls as dairy effluent. No explanation has been given as to why only discharges from dairy animal waste systems are permitted under this rule.	**Amend Rule 14.7.12** as per submission point 10, and amendments to rule 12.C.1.4 as follows: 12.C.1.4 Notwithstanding any other rule in this Plan, the discharge of animal waste or <u>effluent within a site</u>, from an ~~animal waste system~~ <u>effluent pond within the same site</u>, onto or into land is a permitted activity providing:

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	which the animal waste is generated, or beyond that boundary.		Limiting the permitted activity status to discharges of effluent to within 50 metres of the originating property boundary is unwarranted – there is no evidence to suggest that animal waste applied closer than 50m to property boundaries, or beyond the originating property boundary, results in adverse water quality outcomes. The standard appears more to address amenity or reverse sensitivity concerns but there is no s32 evaluation of the need for this method in a water quality regional plan or the relationship of the standard with existing District Plan controls or why the proposal is the most efficient or effective means of achieving the plan change objectives. This rule does not take account of situations in which animal waste generation and application occur on different sites. It is common practice in NZ for piggery animal waste to be applied to land on properties outside of the piggery boundary (often to neighbouring dairy farms) as a fertiliser. In these situations, the origin of	(a) The ~~animal waste system~~ effluent pond is permitted under Rule 14.7.1.2; and (b) The discharge is not prohibited under Rule 12.C.0.4; and ~~(c) The discharge does not occur within 50 metres of the boundary of the property on which the animal waste is generated, or beyond that boundary.~~

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
			the effluent has no bearing on the ability to manage land application to meet water quality objectives. The proposed rule structure and the exclusion of effluent in the definition of fertiliser in the Water Plan are a constraint to this activity and may limit the ability of pig farmers to export effluent to neighbouring land. The rule would be improved to clarify that the intent is to manage the discharge of animal waste or effluent from an animal waste system within the site of the activity. I.e. that the rule is not intended to address the discharge of animal waste or effluent on another site.	
8.	12.C.2.5 The discharge of animal waste, or water containing animal waste, from an animal waste system onto or into land is a restricted discretionary activity provided:	Support with amendments.	NZPork supports a restricted discretionary activity status for the discharge of animal waste, however does not support this rule as the default for all pork production activities. As identified previously, piggery effluent is similar in composition to dairy effluent. The	Create a permitted activity pathway for animal waste systems for pork production through amendments to rule framework.

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(a) The discharge is not prohibited under Rule 12.C.0.2A; and (b) The discharge is not permitted under Rule 12.C.1.4; In considering any resource consent under this rule, the Otago Regional Council will restrict the exercise of its discretion to the following: (i) The application depth and rate; (ii) Size and location of the disposal area, including separation distances from lakes, rivers, Regionally Significant Wetlands, bores, soak holes, water supply for human consumption and dwellings; (iii) Measures to avoid, remedy or mitigate adverse effects on water quality, taking into account the nature and sensitivity of the receiving environment;		application of piggery effluent to land uses the same methods and controls as dairy effluent. No evidence has been provided as to why pork production activities should require immediate resource consent, where dairy farmers will be given a transition period under rule 12.C.1.4. NZPork supports the intent of this rule but amendments are necessary to the rule framework to include a permitted activity pathway for pork production.	

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(iv) Measures to avoid, remedy or mitigate adverse effects on Kāi Tahu cultural and spiritual beliefs, values and uses; (v) Duration of consent and any review conditions; (vi) Quality of, and compliance with, a management plan for the animal waste system; and (vii) Any information and monitoring requirements.			
9.	14.7.1 Permitted activities: No resource consent required 14.7.1.1 The use of land for the use and maintenance of an animal waste system (including storage pond(s) and ancillary structures) that was constructed prior to 25 March 2020 is a permitted activity providing:	Support in part	NZPork supports a permitted activity status for animal waste systems constructed prior to 25 March 2020 provided they meet prescribed standards. However, standard (a) precludes any effluent pond on a piggery operation from meeting the permitted activity status. The Dairy Effluent Storage Calculator is dairy specific and based on the number of cows being milked per day. It cannot be used to appropriate size piggery effluent ponds. The sizing of piggery effluent ponds uses different	**Replace definition** for Animal Waste System with new definition for Effluent Ponds **And** **Amend rule as follows:** 4.7.1.1 The use of land for the use and maintenance of an animal waste system (including ~~storage~~

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(a) The storage pond is sized in accordance with the Dairy Effluent Storage Calculator; and (b) The storage pond is either: (i) Fully lined with an impermeable synthetic liner and has a leak detection system underlying the storage pond which is inspected not less than monthly, there is no evidence of any leakage, and a written record is kept recording the results of each inspection; or (ii) Of impervious concrete construction; or (iii) An above-ground tank; or (iv) Certified by a Suitably Qualified Person within the last five years as: (1) Structurally sound and without any visual defects; and		parameters, based on the number of standard pig units in each stock class on the farm, and average daily quantities of effluent produced per stock class. Under the proposed framework, all piggery effluent ponds would require consent as a discretionary activity under rule 14.7.3.1, regardless of whether the pond is sized appropriately and according to industry standards. There is no evaluation as to why all piggery effluent ponds should require consent as a discretionary activity, yet dairy effluent ponds have a permitted activity pathway. Condition (c)(i) mandating pond drop tests every 3 years is impractical for piggery effluent ponds, as liquid is coming in and going out almost daily, with no 'off season'. The Council needs to with the pork industry to determine appropriate activity conditions for piggery effluent ponds The use of the definition animal waste system will capture all animal waste systems used in	effluent pond(s) and ancillary structures) that was constructed prior to 25 March 2020 is a permitted activity providing: For effluent disposal ponds: (a) The ~~storage~~ effluent pond is sized in accordance with the Dairy Effluent Storage Calculator or equivalent industry guidelines; and (b) The ~~storage~~ effluent pond is either: (i) Fully lined with an impermeable synthetic liner and has a leak detection system underlying the ~~storage~~ effluent pond which is inspected not less than monthly, there is no evidence of any leakage, and a written record is kept recording the results of each inspection; or

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(2) Meeting the relevant pond drop test criteria in Schedule 18; and (c) A management plan for the animal waste system is prepared and implemented that requires: (i) Pond drop tests of the storage pond(s) every three years; and (ii) Implementation of contingency measures to prevent the discharge of animal waste to a surface water body, an artificial watercourse, or the coastal marine area, either directly or indirectly, in the event of power outage or the failure of equipment; and (d) Upon written request by the Regional Council a written statement or certificate from a Suitably Qualified Person is provided to show compliance with Conditions (a) to (c).		pork production (refer to section 2.1 of this submission) however the standards in this rule have been written for effluent ponds, making them irrelevant and of questionable benefit for other animal waste systems. The definition should be changed to effluent ponds to reflect the intent of the rule. The introduction of the term 'storage pond' adds further confusion to the plan. In an animal waste system, effluent ponds collect, store and treat animal waste before disposal or application to land.	(ii) Of impervious concrete construction; or (iii) An above-ground tank; or (iv) Certified by a Suitably Qualified Person within the last five years as: (1) Structurally sound and without any visual defects; and (2) Meeting the relevant pond drop test criteria in Schedule 18; and (c) A management plan for the animal waste system is prepared and implemented that requires: ~~(i) Pond drop tests of the storage pond(s) every three years; and~~ (ii) Implementation of contingency measures to prevent the discharge of animal waste to a surface water

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
				body, an artificial watercourse, or the coastal marine area, either directly or indirectly, in the event of power outage or the failure of equipment; and (d) Upon written request by the Regional Council a written statement or certificate from a Suitably Qualified Person is provided to show compliance with Conditions (a) to (c).
10.	Rule 14.7.1.2 14.7.1.2 The use of land for the use and maintenance of an animal waste system (including storage pond(s) and ancillary structures) that was constructed prior to 25 March 2020 and does not comply with the conditions of Rule 14.7.1.1 is a permitted	Support in part	As per the previous submission point, amendments are needed to the definition to capture only effluent ponds. NZPork supports the intent of this rule to provide a transitionary period for upgrading ponds, however amendments are required to rule 14.7.1.1, as noted above, to ensure that piggery effluent ponds are not captured by this	**Replace definition** for Animal Waste System with new definition for Effluent Ponds **Amendments to rule 14.7.1.1**, as noted in previous submission point.

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	activity until the application date specified in Schedule 19.		rule on account of not being sized in accordance with the dairy effluent calculator. The introduction of the term 'storage pond' adds further confusion to the plan. In an animal waste system, effluent ponds collect, store and treat animal waste before disposal or application to land.	
11.	14.7.2.1 14.7.2.1 The use of land for the construction, use and maintenance of an animal waste system (including storage pond(s) and ancillary structures) constructed after 25 March 2020 is a controlled activity provided the following conditions are met: (a) The storage pond is sized in accordance with the Dairy Effluent Storage Calculator; and (b) The storage pond is either:	Oppose	NZPork opposes the controlled activity status for all animal waste systems constructed after 25 March 2020. This would capture all systems used to collect, store, treat or dispose of animal waste. For piggeries, this would include collection and storage of liquid effluent in buildings under pig pens, in holding tanks, and collection and storage of spent deep litter. There is no explanation or justification provided as to why resource consents are required for these systems. Condition (c) requires the design of the animal waste system to be certified as being in accordance with IPENZ practice notes 21 (farm	**Replace definition** for Animal Waste System with new definition for Effluent Ponds **Amend rule as follows:** 14.7.2.1 The use of land for the construction, use and maintenance of an ~~animal waste system (including storage~~ effluent pond(~~s) and ancillary structures)~~ constructed after 25 March 2020 is a controlled activity provided the following conditions are met:

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(i) Fully lined with an impermeable synthetic liner and has an effective leak detection system that underlies the storage pond; or (ii) Of concrete construction; or (iii) Is an above-ground tank; and (c) The design of the animal waste system has been certified as being in accordance with IPENZ Practice Note 211 and IPENZ Practice Note 27;2 and (d) The animal waste system is not located: (i) Within 50 metres of any lake, river or regionally significant wetland; or (ii) Within 90 metres of any water supply used for human consumption; or (iii) Within 50 metres of any bore or soak hole; or		dairy effluent ponds) and 27 (farm dairy infrastructure). It would not be possible for any animal waste system other than dairy effluent ponds to be compliant with this condition, so all other animal waste systems would require discretionary consent under rule 14.7.3. Condition (d)(iv) does not relate to a water quality effect. The standard appears more to address amenity or reverse sensitivity concerns but there is no s32 evaluation of the need for this method in a water quality regional plan or the relationship of the standard with existing District Plan controls or why the proposal is the most efficient or effective means of achieving the plan change objectives. Condition (e)(ii) mandating pond drop tests every 3 years is impractical for piggery effluent ponds, as liquid is coming in and going out almost daily, with no 'off season'. The Council needs to with the pork industry to determine	(a) The ~~storage~~ effluent pond is sized in accordance with the Dairy Effluent Storage Calculator or equivalent industry guidelines; and (b) The ~~storage~~ effluent pond is either: (i) Fully lined with an impermeable synthetic liner and has an effective leak detection system that underlies the ~~storage~~ effluent pond; or (ii) Of concrete construction; or (iii) Is an above-ground tank; and (c) The design of the ~~animal waste system~~ effluent pond has been certified as being in accordance with IPENZ Practice Note 21 and IPENZ Practice Note 27 or equivalent industry guidelines

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(iv) Within 50 metres of the property boundary; or (v) Above subsurface drainage (other than a leak detection system); and (e) A management plan for the animal waste system is prepared and implemented that requires: (i) For ponds that are fully lined with an impermeable synthetic liner and has an effective leak detection system that underlies the storage pond, inspections not less than monthly with a requirement to keep a written record of the results of each inspection; and (ii) Pond drop tests of the storage pond(s) every three years; and (iii) Implementation of contingency measures to prevent the discharge of animal waste to a surface water body, an artificial watercourse, or the coastal marine area, either directly to		appropriate activity conditions for piggery effluent ponds. The introduction of the term 'storage pond' adds further confusion to the plan. In an animal waste system, effluent ponds collect, store and treat animal waste before disposal or application to land.	(d) The ~~animal waste system~~ effluent pond is not located: (i) Within 50 metres of any lake, river or regionally significant wetland; or (ii) Within 90 metres of any water supply used for human consumption; or (iii) Within 50 metres of any bore or soak hole; or (~~iv) Within 50 metres of the property boundary; or~~ (v) Above subsurface drainage (other than a leak detection system); and (e) A management plan for the ~~animal waste system~~ effluent pond

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	water or onto or into land in circumstances which may result in these contaminants entering water, in the event of power outage or the failure of equipment; and (iv) If a leak is detected by the leak detection system, an assessment is undertaken by a Suitably Qualified Person within two months of the detection to determine whether the leak is within the normal operating parameters of the pond.			is prepared and implemented that requires: (i) For ponds that are fully lined with an impermeable synthetic liner and has an effective leak detection system that underlies the storage pond, inspections not less than monthly with a requirement to keep a written record of the results of each inspection; and (~~ii) Pond drop tests of the storage pond(s) every three years; and~~ (iii) Implementation of contingency measures to prevent the discharge of animal waste to a surface water body, an artificial watercourse, or the coastal marine area, either directly to water or onto or into land in circumstances which may result in these contaminants entering water, in the event of

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
				power outage or the failure of equipment; and (iv) If a leak is detected by the leak detection system, an assessment is undertaken by a Suitably Qualified Person within two months of the detection to determine whether the leak is within the normal operating parameters of the pond. And Develop standards in consultation with farmers and industry representatives for non-dairy effluent pond based systems.
12.	14.7.3.1 The use of land for the construction, upgrade, use or maintenance of an animal waste system (including storage pond(s) and	Oppose	NZPork opposes this rule as the default activity status for all animal waste management systems used in piggery production.	Replace definition for Animal Waste System with new definition for Effluent Ponds

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	ancillary structures) is a discretionary activity provided it is not: (a) Permitted under Rules 14.7.1.1 or 14.7.1.2; or (b) Provided for by Rule 14.7.2.1.		No evidence or analysis has been provided as to the environmental effects of piggery animal waste systems in the Otago region, and yet pork production animal waste systems have been given a more stringent activity status than dairying systems, which are clearly identified as the source of deteriorating water quality in the region. This rule is an ineffective and inefficient method to address any potential environmental effects of pork production animal waste systems. The introduction of the term 'storage pond' adds further confusion to the plan. In an animal waste system, effluent ponds collect, store and treat animal waste before disposal or application to land.	And; Create a permitted activity pathway for non-dairy effluent ponds.
13.	Schedule 18 Schedule of storage pond drop test requirement and criteria	Oppose	Pond drop tests are impractical for piggery effluent ponds, as liquid is coming in and going out almost daily, with no off season. The conditions are too restrictive to enable testing to take place. Prevailing winds with	Work with the pork industry to identify suitable criteria or standards for piggery effluent ponds.

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
			resulting wave action makes a windless 48 hour test unlikely to eventuate.	
14.	Schedule 19 19A Storage Calculation Step One: Daily waste volume To calculate the daily waste volume per farm, use the following formula: Daily waste volume (m3) = Maximum number of cows milked per day x 0.05^ x	Oppose	19A: The storage calculation provided is only applicable to farm dairy effluent ponds and cannot be used to establish storage capacity for piggery effluent ponds or any other animal waste system. The use of this formula to determine progressive implementation of animal waste storage requirements therefore creates an unworkable rule framework for any system other than dairy effluent ponds. 19B: The 0.5 year timeframe given for the lodgement of resource consent applications under Rule 14.7.3.1 for farmers with less than 10 days storage is unrealistic, considering it can take up to a year to engage professional services, and the Council have identified in the S32 report that there are a shortage of suitable qualified people to undertake such work in the Otago region.	Include relevant calculations for sizing piggery effluent ponds. Extend timeframes for lodgement of resource consent applications for effluent ponds with 0-10 days of storage.

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	Maximum number of times per day that cows are milked during milking season 19B Application Dates			
	Part E: Stock Access to Water			
15.	13.5.1.8A The disturbance of the bed of any lake or river, or any Regionally Significant Wetland by livestock, excluding intentional driving of livestock, and any resulting discharge or deposition of bed material, is a permitted activity, providing it does not: (a) It does not	Support in part	NZPork supports the intent of the rule but does not support the requirement under (b)(ii) for a 5-metre setback from the beds of lakes, continually flowing rivers wider than 1 metre and Regionally Significant Wetlands. This is at odds with decisions on stock exclusion regulations under S360 on the RMA, which concluded following consultation on stock exclusion proposals that "existing permanent fences when the regulation comes into force will not need to move to comply with riparian setback requirements, and the riparian setback has been reduced from an	Amend rule as follows: The disturbance of the bed of any lake or river, or any Regionally Significant Wetland by livestock, excluding intentional driving of livestock, and any resulting discharge or deposition of bed material, is a permitted activity, providing it does not: (a) It does not

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	(i) Involve feeding out on that bed or wetland; or (bii) Cause or induce noticeable slumping, pugging or erosion; or (ciii) Result in a visual change in colour or clarity of water; or (div) Damage fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and (b) From 2022: (i) All dairy cattle and pigs are excluded from the beds of lakes, continually flowing rivers wider than 1 metre and Regionally Significant Wetlands; and (ii) where stock are excluded under (i), a setback of five metres from the beds of lakes, continually flowing rivers wider than 1 metre		average of five metres to a minimum of three metres". The proposed rule should be updated to align with the s360 regulations for stock exclusion.	(i) Involve feeding out on that bed or wetland; or (bii) Cause or induce noticeable slumping, pugging or erosion; or (ciii) Result in a visual change in colour or clarity of water; or (div) Damage fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and (b) From 2022: (i) All dairy cattle and pigs are excluded from the beds of lakes, continually flowing rivers wider than 1 metre and Regionally Significant Wetlands; and (ii) where stock are excluded under (i), a setback of ~~five~~ three metres from the beds of lakes, continually flowing rivers wider than 1 metre

Sub missi on Point	Specific provision of the Proposed Plan that my submission relates to	I support or oppose the above provision	Submission	Decision Sought
	and Regionally Significant Wetlands is implemented			and Regionally Significant Wetlands is implemented for new fences.

Appendix A: NZPork Effluent Management Plan Template

NZPork
Effluent Management Plan Template

This document has been prepared by New Zealand Pork to assist farmers in developing an Effluent Management Plan. Effluent is rich in nutrients, and as such is a valuable resource for your farm when managed well. An Effluent Management Plan will assist you in maximising the benefits of your effluent through land application and minimising the potential for nutrient loss to the environment.

This template covers both liquid effluent and solid manure/spent bedding/compost. **This is a generic template and it is important that the requirements of the regional and district council in which the farm operates are incorporated into the plan**. You should also consider the New Zealand Pork Good Management Guide for Outdoor Pigs which is available at www.nzpork.co.nz.

Your Effluent Management Plan should be regularly reviewed and updated as needed.

The text in the template shaded grey is for your information and can be deleted from your plan as you replace it with farm specific text.

Farm Details:

Farm Name: Person(s) in Charge:

Farm Address

This effluent management plan has been prepared/reviewed by:

Name:

Position:

Date:

Key information for effluent application

This information may be detailed on your consent, or on permitted activity status rules if you do not require a consent. Check with your regional council for more information.

Consent number:	
Consent expiry date:	
Maximum application rate liquid effluent (mm/hr):	
Maximum application depth liquid effluent (mm):	
Maximum nitrogen loading rate from effluent (kgN/ha/yr):	
Nitrogen loading rate per application solid manure (kgN/ha):	

Minimum Irrigation Buffer Distances *(Check these with your regional and district council).*	
Property boundary (m):	
Property boundary adjoining a road (m):	
Significant indigenous biodiversity or mahinga kai areas (m):	
Neighbouring houses (m):	
Schools, halls, marae and community buildings (m):	
Water bores and soak holes (m):	
Community drinking water supply bore sourcing water (m):	
Wetland, surface water body, artificial water course (m):	
Piggery activities and buildings (m):	
Outdoor pigs* (m):	
Others (state):	

** The Good Management Practices for Outdoor Pigs stipulate no effluent is to be spread on the outdoor unit.*

Farm Map

Include a farm map here. You may already have a suitable map in your Farm Environment Plan to use. This map should include:

- *Boundaries*
- *Location of residential houses including neighbouring properties*
- *Compass orientation and prevailing wind direction*
- *Predominant soil types*
- *Layout of sheds, sumps, handling systems (solids separation, composting areas), anaerobic/ aerobic ponds.*
- *High risk soil areas, topography and slope*
- *Areas where effluent should not be applied*
- *Hydrants*
- *Streams, waterways and water courses*
- *Buffer zones*
- *Water bores or springs*
- *Carcass disposal areas- offal holes*
- *Community drinking water zones*

Effluent Application Plan

Use this page to describe the effluent and/or manufacture handling and application processes in place on your farm. Take into consideration the following:

Handling Processes
• *Treated or not* • *Screened – liquid fraction* • *Screened –solid fraction* • *Travel via an anaerobic pond* • *Travel via an aerobic pond* • *Travel via an anaerobic/aerobic pond* • *Application of spent bedding – straw/sawdust* • *Composted solids* • *Pond sludge*
Timing of Application
• *Frequency of application (daily/weekly/ prior to crops being planted etc)* • *Subject to suitable weather and soil conditions*
Method of Application
• *Stationary sprayer* • *Pods or sprinklers* • *Travelling irrigator* • *Solids spreader* • *'Honey' wagon* • *Dribblers* • *Soil injection*

Effluent Application Checklist

Daily Checks:	
Check weather and soil conditions are appropriate for irrigation or application of solids	
Do not irrigate liquid effluent if the soil is waterlogged, flooded or snow covered	
Check storm water and wash water diversion is in correct position	
Ensure irrigator is in correct place for its application	
Check for signs of ponding or overland flow	
Weekly Checks:	
Check irrigator operation and solids spreader and maintain as recommended	
Check effluent lines and hydrants for leaks	
Ensure irrigator is in correct place for its application	
Check for signs of ponding or overland flow	
Check pond level	
Check pumps are running correctly	
Empty effluent stone trap	
Annual Checks:	
Train staff in operation and maintenance of system	
Depth and rate test and calibrate irrigators	
Maintain irrigators, pump, and effluent equipment	
Clean solids out of storage if required	
Soil test for nutrients in effluent block	
Check nutrient make up of applied liquid or solids	

Contingency Plans

Use this section to document your agreed approach to the following situations:

Raining or soils are saturated:
Irrigator stalls, breaks down or blocks:
Pump fails or breaks down:
No storage/storage getting full:
Hydrant/pipe leaking:
Complaint from neighbour/community member:

Appendix B: Reference Material

The following documents contain information on Australian and New Zealand standards and guidelines for the storage, treatment and re-use of piggery effluent.

AUSTRALIAN PORK LIMITED Piggery Manure and Effluent Management and Reuse Guidelines: http://australianpork.com.au/wp-content/uploads/2013/10/PMEG_2014_14_lr.pdf

AUSTRALIAN PORK LIMITED Piggery Manure and Effluent Reuse Glovebox Guide:

http://australianpork.com.au/wp-content/uploads/2013/10/pocket-guide_08.pdf

NEW ZEALAND PORK Pork Industry Guide: Environmental Management

https://www.nzpork.co.nz/assets/pdfs/NZPork_Pork_Industry_Guide_Environmental_Management_March_2017.pdf

NEW ZEALAND PORK Pork Industry Guide: Sustainable Nutrient Management:

https://www.nzpork.co.nz/assets/pdfs/NZPork_GPG_Nutrient_Management_Nov2017.pdf

INDUSTRY AGREED GOOD MANAGEMENT PRACTICES Canterbury Matrix of Good Management Project

https://www.ecan.govt.nz/document/download?uri=2378592