LDMO Pig Farm Development Plan

The following template is for Low Density Mobile Outdoor Pig Farms in Victoria to use in collating the information to accompany a planning permit application. The template has been developed in accordance with the requirements of Section 7 of the Low Density Mobile Outdoor Pig Farm Planning Permit Guidelines.

The template includes guidance notes/examples to assist applicants in identifying the information to include in each section. This information is presented in a box as shown here.

Example of a guidance note box.

These boxes must be deleted prior to submission.

The inclusion of photographs is encouraged to assist in describing the site, infrastructure or management.

Checklists have been provided at the start of the report to ensure that all information required by the Low Density Mobile Outdoor Pig Farm Planning Permit Guidelines has been prepared prior to submitting a planning permit application.

Note: This template is suitable for Victorian pig farms only that met the criteria to be classified as a Low Density Mobile Outdoor Pig Farm. For information on preparing planning proposals in other jurisdictions please refer to the National Environmental Guidelines for Rotational Outdoor Piggeries, APL, or local council or responsible authority or planning consultants in your State.

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# Pig farm planning provisions

**Pig farm:** Land used to keep or breed pigs. Included in: Animal production

**Animal Production:** Land used to keep or breed farm animals for the production of livestock, eggs, fibre, meat, milk or other animal products. Included in: Animal husbandry

[53.16 11/04/2019 VC156 PIG FARM](https://planning-schemes.api.delwp.vic.gov.au/schemes/vpps/53_16.pdf?_ga=2.179285476.1508399032.1609361653-1889765150.1561338401)

VPP 53.16 Pig farm outlines requirements for pig farms. It includes exemption from notice and review (53.16-2) for applications that meet specified criteria relating to low risk systems. These criteria are outlined in 53.16-2 and expanded upon in the [Victorian Low Density Mobile Outdoor Pig Farm Planning Permit Guidelines](https://agriculture.vic.gov.au/__data/assets/pdf_file/0008/537776/PSAI-pig-farm-planning-permit-guidelines-2018.pdf)

## Rural Zones Allowed Uses

**Rural living zone:** Pig farm allowed: section 2 as fits under agriculture and is not otherwise mentioned in section 3.

**Green Wedge Zone:** Pig farm allowed: section 2 as fits under Animal Production and is not otherwise mentioned in section 3.

**Green Wedge A Zone:** Pig farm allowed: section 2 as fits under Animal Production and is not otherwise mentioned in section 3.

**Rural Conservation Zone:** Pig farm allowed: section 2 as fits under agriculture and is not otherwise mentioned in section 3. Farming Zone: Pig farm allowed: section 2 as fits under Animal Production and is not otherwise mentioned in section 3.

**Rural Activity Zone:** Pig farm allowed: section 2 as fits under Animal Production and is not otherwise mentioned in section 3.

**Farming Zone:** Pig farm allowed: section 2 as fits under Animal Production and is not otherwise mentioned in section 3.

# Checklists from the Victorian Low Density Mobile Outdoor Pig Planning Permit Guidelines

Complete checklists when main body of report is written to ensure you have covered all required information

## LDMO Guidelines Section 5. Threshold requirements for the application

|  |  |  |
| --- | --- | --- |
| **Requirement** | **Requirement met?** | **Refer to report section** |
| **1. Production system:** The farm must be a low density mobile outdoor production system. |  |  |
| **2. Farm capacity:** A maximum farm capacity of 150 sows or 1,000 Standard Pig Units (SPU). The capacity of a pig farm is described either in terms of sow numbers or the SPU as a measure of the total number of pigs that will be held on the farm. |  |  |
| **3.Stocking density:** A maximum stocking density of 12 SPU/hectare of range available to the pigs over each 3-month period. |  |  |

## LDMO Guidelines Section 8. Assessment criteria for a low density mobile outdoor pig farm

|  |  |  |
| --- | --- | --- |
| **Requirement** | **Requirement met?** | **Refer to report section** |
| **Objective 1: Low Risk site**  **The risk of adverse environmental impacts on soils, waterways, soils and surrounds is minimised by appropriate site selection and through a farm layout that avoids areas of risk.** |  |  |
| **Standard 1.1 Land**  The land used for pig ranging areas are suitable for growing pastures, hay or crops and maintaining ground cover. |  |  |
| **Standard 1.2 Protection of native trees and native remnant vegetation**  Native trees and other native vegetation are protected from the pigs through fencing or other barriers. |  |  |
| **Standard 1.2 Surface waters** |  |  |
| The pig paddocks and other farm infrastructure are:   * located above the 1 in 100-year flood level, or * not located in areas impacted by a flood zone, flooding overlay or land subject to inundation overlay. |  |  |
| * The pig farm is not located within a Special Water Supply Catchment Area (refer to Standard 1.2 note and Section 10 of the Guidelines for further information). |  |  |
| * The boundaries of the pig paddocks are at least 30 m from a waterway declared under the *Water Act 1989*. |  |  |
| **Objective 2 – Environmental protection management**  **Adverse impacts on soils, waterways and surrounds are avoided through good management** |  |  |
| **Standard 2.1 Ground cover**   * A minimum 50% ground cover is maintained over the pig paddock areas at all times (see Appendix A of the Guidelines for consideration of seasonal conditions). |  |  |
| **Standard 2.2 Mobile infrastructure**   * Housing and feeding infrastructure are relocated at least every three months to: * promote distribution of manure nutrients over the paddock areas, and * ensure nutrients are managed and bare ground is rehabilitated. |  |  |
| **Standard 2.3 Nutrient Management Plan**   * A nutrient management plan is developed that includes strategies and measures to ensure nutrient risks are adequately managed and monitored by: * effectively balancing nutrients (for applications involving > 20 sows) * maintaining adequate ground cover * moving housing and feeding infrastructure around the pig paddocks * paddock rotations that include pig and crop/forage/pasture phases * soil testing, monitoring and farm management. |  |  |
| **Objective 3 – Community amenity**  **The site location, design and farm management of the low density mobile outdoor pig farm protects the community from odour, dust and other amenity impacts** |  |  |
| **Standard 3.1 Separation Distances**   * Pig paddock boundaries meet the following setback requirements: |  |  |
| * a minimum distance of 100 metres from a building used for a sensitive use |  |  |
| * a minimum distance of 400 metres from land in a residential zone. |  |  |

## LDMO Guidelines Section 7. What information should be submitted with a permit application?

|  |  |  |
| --- | --- | --- |
| **Requirement** | **Included?** | **Refer to report section** |
| **A. Property Identification Code** |  |  |
| **B. Property and locality plan** |  |  |
| A property plan showing: |  | Appendix C |
| • property boundaries and dimensions of the site |  |  |
| • paddocks where pigs will be kept |  |  |
| • farm bores, dams and other water supply sources and waterways |  |  |
| • location of any farm infrastructure such as sheds, pig handling yards and feed storage areas |  |  |
| • mortality management area |  |  |
| • significant slope and other topographic features, remnant vegetation and areas prone to erosion |  |  |
| • areas prone to flooding |  |  |
| • internal and external roads. |  |  |
| A locality plan showing: |  | Appendix B |
| • distances to dwellings in a separate ownership and other sensitive uses (including dwellings under construction or approved by a planning or building permit to be constructed) |  |  |
| • distances to waterways from pig paddock boundaries |  |  |
| • suitable scale and dimensions |  |  |
| **C. Description of the proposal** |  |  |
| • proposed number of pigs to be kept and herd composition (including anticipated offspring and the number of pigs to be kept across various production stages) |  |  |
| • the production system including   * area and number of pig paddocks * pig movements. |  |  |
| • pig housing, fencing, feeding and water infrastructure |  |  |
| • the type and amount of feed that will be used and where it will be stored |  |  |
| • mortalities management, including a contingency plan for a mass mortalities event |  |  |
| • a nutrient management plan (NMP) that demonstrates how nutrients will be managed and ground cover maintained |  |  |
| • strategies to manage rodents and feral animals |  |  |
| • measures to protect native trees and other native vegetation |  |  |
| • planning zone and any overlays applying to the land, including flooding overlays and land subject to inundation |  |  |

# Description of Proposal

This is a brief description of the proposal like an executive summary. It may be the same as what is entered into the description of proposal box in the planning permit application form. One or two short paragraphs is the aim.

Example: Low density mobile outdoor pig farm – 50 SPU farrow to finish, at 333 Piggy Lane, Piggyville

# Name and Contact Details

|  |  |
| --- | --- |
| Title |  |
| Full name |  |
| Trading name |  |
| Phone number |  |
| Postal address |  |
| Mobile |  |
| Town |  |
| Postcode |  |
| Email address |  |

# Property Details

The property details (except PIC and land area) are available at the top of your property planning report or from your council rates notice <https://mapshare.vic.gov.au/vicplan/>

|  |  |
| --- | --- |
| Property Identification Code (PIC) |  |
| Property Address |  |
| Lot and Plan number (s) |  |
| Local government area |  |
| Council property number |  |
| Total area of property (ha) |  |

# Planning Implications

## Planning Zone

Identify your planning zone and confirm that a pig farm is a permitted use in the zone.

Eg. The property is located in the farm zone. A pig farm is a section 2 use (permit required) in the farming zone

**Table 1: Planning Zone Requirements**

|  |  |
| --- | --- |
| **Zone** | **Pig Farm** |
| Farming Zone | Permit |
| Rural Activity Zone | Permit |
| Green Wedge Zone | Permit |
| Green Wedge A Zone | Permit |
| Rural Conservation Zone | Permit |
| Rural Living Zone | Permit |
| Urban Floodway Zone | Prohibited |
| Urban Growth Zone | Permit |
| Industrial Zones | Prohibited |
| Commercial Zones | Prohibited |
| Residential Zones | Prohibited |

## Overlay (s) that Apply to the Property

List the overlay (s) that apply to your land:

## Overlays Impacting Pig Areas

If any of these overlays cover (fully or partly) the areas being used for pigs, describe how the overlay(s) will affect the proposal. Read the schedule of each overlay, if applicable, to determine the extent of any controls applying to the land.

## Distance to receptors

Refer to your locality plan in the appendices. State the distance to the nearest neighbour or sensitive use and the distance to the nearest residential zone

Example:

A locality plan showing the property location and distance to receptors is available in appendix 1. It shows the nearest sensitive receptor is a neighbouring house to the North West that is 500 metres from the closest pig paddock, exceeding the required separation distance of 100 metres.

The closest residential zone is at Euroa in the South. It is 5,300 metres from the closest pig paddock, exceeding the required separation distance of 400 metres

## Setbacks from waterways

Refer to your property plan. State the distance from pig paddocks to waterways and action taken to ensure setbacks are maintained

Example.

Appendix C shows the property plan including paddock layout and setbacks from waterways. All waterways will be fenced to exclude pigs and maintain a minimum setback of 30 metres.

## Traffic volumes from proposal

Provide an estimate of any potential increase in traffic volumes even if it is nil. Councils are required to consider impact of increased traffic on local roads in and land use planning permit application

Example.

Traffic associated with the proposal are low. Feed supplies will be sourced from the nearest town and transported in our farm ute during weekly scheduled trips for groceries and supplies.

Import and export of pigs will be via the farm ute and estimated at one trip per month on average.

# Production System

## Production System

Describe the type of production system e.g.

* LDMO pig farm - farrow-to-finish
* LDMO pig farm - breeder with piglets up to 12 weeks
* LDMO pig farm - grower unit.

## Pig numbers and herd composition

Provide details of pig numbers and herd composition by completing Table 2. List the number of pigs in each class. Multiply the number of pigs in each class by the standard pig unit (SPU) multiplier to determine SPU’s per pig class. (An SPU is a unit for defining piggery capacity based on manure and waste feed output).

Sum the number of pigs and the number of SPU’s to get total pig and SPU numbers for the farm.

For example:

|  |  |  |  |
| --- | --- | --- | --- |
| Pig Class | Number of pigs | Standard Pig Unit (SPU) Multiplier | Number of SPU |
| Gilt (100-160 kg) | 1 | 1.8 | 1.8 |
| Boar (100-300 kg) | 1 | 1.6 | 1.6 |
| Dry sow (160-230 kg) | 11 | 1.6 | 17.6 |
| Lactating sow (160-230 kg) | 3 | 2.5 | 7.5 |
| Sucker (1.4-8 kg) | 21 | 0.1 | 2.1 |
| Weaner (8-25 kg) | 30 | 0.5 | 15 |
| Grower (25-55 kg) | 23 | 1.0 | 23 |
| TOTAL | 90 |  | 69 |

**Table 2: Pig Class**

|  |  |  |  |
| --- | --- | --- | --- |
| Pig Class | Number of Pigs | Standard Pig Unit (SPU) Multiplier | Number of SPU |
| Gilt (100-160 kg) |  | 1.8 |  |
| Boar (100-300 kg) |  | 1.6 |  |
| Dry Sow (160-230 kg) |  | 1.6 |  |
| Lactating Sow (160-230 kg) |  | 2.5 |  |
| Sucker (1.4-8 kg) |  | 0.1 |  |
| Weaner (8-25 kg) |  | 0.5 |  |
| Grower (25-55 kg) |  | 1.0 |  |
| Finisher (55-100 kg) |  | 1.6 |  |
| Heavy Finisher (>100 kg) |  | 1.8 |  |
|  |  |  |  |
| TOTAL |  |  |  |

## Area Available for Pigs

Provide the total area available for use by the pigs.

Provide the total number of paddocks available for use by the pigs.

Provide the total area in use by the pigs at any one time.

Refer to your property plan in appendix C.

Complete table with paddock ID and size

To determine stocking density, divide the number of pigs by the paddock area in ha.

1 ha = 10,000 m2

A zoom in of the property plan showing a close up of the range areas with paddock sizes can be added here if you wish. This may be particularly helpful if the range areas cover only part of the property

Example.

A property plan showing the layout of available pig range areas is available in appendix C. It shows the detail of the area and paddock numbers, which is summarized below;

Total area available for pigs: ha

Number of paddocks:

Area in use by the entire pig herd at any point in time: ha

Stocking Density: pigs per hectare

Completed paddock/hectares table

|  |  |
| --- | --- |
| Paddock # | Area (ha) |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Total: |  |

**Map showing paddock layout with paddock names and areas

**

## Pig Movements

Describe the rotation plan for the pig paddock areas. Include how long the pigs are on each paddock, length of time paddock is rested (the ‘resting’ period is the time before pigs are returned to the paddock) and any cropping /pasture phase.

Diagrams may be helpful here (conceptual rather than to scale) showing how pigs would be moved around the farm

# Pig Housing, Fencing, Feeding and Water

## Pig Housing

Describe the type of pig housing and how it will be managed / moved (including frequency of movement). These movements should include both within and between paddock(s). Housing and feeding infrastructure must be relocated at least every three months to promote distribution of manure nutrients over the paddock area and manage groundcover.

Photos of the proposed type of pig shelter are useful in this section

## Fencing

Describe the type of fencing e.g. wooden posts with chicken wire plus six strands of plain wire or electric fencing. If dividing paddocks into cells, describe how temporary fencing is moved.

The inclusion of photographs is recommended.

## Water and Feeding Infrastructure

Describe the type of waterers (e.g. bowls or troughs) and feeders (e.g. self- feeder with bin).

The inclusion of photographs is recommended.

# Feed – Type, Amount and Storage

## Type of Feed

List the type of feed used e.g. purchased pellets, mash, home-mix or alternative feed (please describe type).

Provide estimated amounts per month

|  |  |
| --- | --- |
| Type of feed | Amount kg/month or t/month |
| Purchased lactating sow pellets | 450 kg |
| Purchased dry sow pellets | 900 kg |
| Purchased grower pellets | 1750 kg |
| TOTAL | 3100 kg |

**Table 4: Type and Amount of Feed**

|  |  |
| --- | --- |
| Type of Feed | Amount kg/month or t/month |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Feed Storage

Describe where and how the feed will be stored and how this area will be managed. For example:

* stored in covered feed bins, hoppers on self-feeders, silos
* spilt feed cleaned up immediately
* storage is vermin and bird proof

The inclusion of photographs is recommended.

# Nutrient Management Plan

A nutrient management plan (NMP) demonstrates how nutrients will be managed and how groundcover will be maintained. The NMP must demonstrate:

1. effectively balancing nutrients (for applications involving >20 sows)
2. maintaining adequate ground cover
3. moving housing and feeding infrastructure around the pig paddocks
4. paddock rotations that include pig and crop/forage phases
5. soil testing, monitoring and farm management

Farms with over 20 sows or SPU equivalent need to complete points 1-5.

Farms with 20 sows or less (or SPU equivalent) should complete points 2-5.

Although it may be repetitive, you need to provide a summary and link back to previous information to demonstrate how you will maintain 50% ground cover etc. Think of the NMP part of the document as a stand-alone document that could be pulled out of the overall document to provide all the information required for the planner to understand how the management practices fit together to demonstrate low risk and sustainable nutrient management on farm in compliance with Standard 2.3 of the Guidelines. Refer to Appendix A, Part 4 of the Guidelines for further information.

## Nutrient Balance Plan - for Farms Over 20 Sows

### Estimate Nutrients Added by Pigs

Provide an estimate of the nutrients added to each paddock by the pigs. Use the Australian Pork Ltd (APL) nutrient balance calculator for rotational outdoor piggeries (on [www.australianpork.com.au](http://www.australianpork.com.au)), or section 10 of the National Environment Guidelines for Rotational Outdoor Piggeries, APL which includes table 5 below. Use table 5 to estimate the manure addition rate for each paddock by multiplying the number of pigs in each class by the nutrient addition rate per pig. Use this data to complete Table 6.

**Table 5: Nutrient Addition Rate (kg/hd/yr) by Pig Class from National Environmental Guidelines for Rotational Outdoor Piggeries**

|  |  |  |  |
| --- | --- | --- | --- |
| Pig Class | Nutrient Addition Rate (kg/pig/yr) | Nutrient Addition Rate (kg/pig/yr) | Nutrient Addition Rate (kg/pig/yr) |
|  | Nitrogen | Phosphorus | Potassium |
| Gilt | 12 | 4.6 | 4.0 |
| Boar | 15 | 5.3 | 3.8 |
| Dry sow | 13.9 | 5.2 | 3.7 |
| Lactating sow | 27.1 | 8.8 | 9.8 |
| Sucker | 2.3 | 0.4 | 0.1 |
| Weaner | 3.9 | 1.1 | 1.1 |
| Grower | 9.2 | 3.0 | 2.4 |
| Finisher | 15.8 | 5.1 | 4.1 |

Calculate the nutrient addition rate per year by paddock type. For example, if there are separate paddocks for dry sows, gilts and boars; lactating sows and suckers; and weaners and growers, calculate the nutrient masses for each of the three paddock types.

For example, for the dry sow, gilt and boar area:

**Nitrogen** **(N)**

11 dry sows x 13.9 kg N = 153 kg/yr

1 gilts x 12 kg N = 12 kg/yr

1 boar x 15 kg N = 15 kg/yr

Total N = 153 + 12 + 15 = **180 kg N/yr**

**Phosphorus** (P)

11 dry sows x 5.2 kg P = 57 kg/yr

1 gilt x 4.6 kg P = 4.6 kg/yr

1 boar x 5.3 kg P = 5.3 kg

Total P = 57 + 4.6 kg + 5.3 kg = **67 kg P/yr**

**Potassium (K)**

11 dry sows x 3.7 kg K = 41 kg/yr

1 gilt x 4.0 kg K = 4.0 kg/yr

1 boar x 3.8 kg K = 3.8 kg/yr

Total K = 41 kg + 4.0 kg + 3.8 kg = **49 kg K/yr**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pigs kept in each paddock type | Pig numbers | Total nutrients added (kg/yr) | Total nutrients added (kg/yr) | Total nutrients added (kg/yr) |
|  |  | Nitrogen | Phosphorus | Potassium |
| Dry sows, gilt, boar | 11 dry sows  1 gilt  1 boar | 180 | 67 | 49 |
| Lactating sows & suckers | 3 lactating sows  21 suckers | 130 | 35 | 32 |
| Weaners & growers | 30 weaners  23 growers | 329 | 102 | 88 |

**Table 6: Total Nutrients Added per Paddock (kg)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pigs Kept in each Paddock Type | Pig numbers | Total Nutrients Added (kg) | Total Nutrients Added (kg) | Total Nutrients Added (kg) |
|  |  | Nitrogen | Phosphorus | Potassium |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
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|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Calculate the total mass of nitrogen, phosphorus and potassium added to each paddock for the length of time the pigs are on the paddocks e.g. if the pigs are on the paddock for 3 months of the year multiply the numbers in table 6 by 3/12 or 0.25. For example, for nitrogen on the dry sow, gilt and boar area 180 kg \* (3/12 months) = 45 kg N/yr. Repeat for phosphorus and potassium.

|  |  |  |  |
| --- | --- | --- | --- |
| Pigs kept in each paddock type | Nutrients added (kg/yr) | Nutrients added (kg/yr) | Nutrients added (kg/yr) |
|  | Nitrogen | Phosphorus | Potassium |
| Dry sows, gilt, boar | 45 | 17 | 12 |
| Lactating sows & suckers | 33 | 9 | 8 |
| Weaners & growers | 82 | 26 | 22 |

**Table 7: Total Nutrients Added per Paddock (kg/yr)**

**This based on time (e.g. weeks or months) the pigs spent in each paddock**

|  |  |  |  |
| --- | --- | --- | --- |
| Pigs Kept in Each Paddock | Nutrients Added Each Year (kg/yr) | Nutrients Added Each Year (kg/yr) | Nutrients Added Each Year (kg/yr) |
|  | Nitrogen | Phosphorus | Potassium |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

For each paddock, calculate the nutrient addition rate (kg/ha/yr) by dividing total nutrients in table 7 by the area of the paddock (ha) from table 3. For example, using the example data for paddock 1A (from table 3) for nitrogen (data from table 7), divide 45 kg N/yr by 3.14 ha = 14 kg N/ha/yr. Repeat for phosphorus and potassium.

For example:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Paddock name | Area (ha) | Nutrients added each year (kg/ha/yr) | Nutrients added each year (kg/ha/yr) | Nutrients added each year (kg/ha/yr) |
|  |  | Nitrogen | Phosphorus | Potassium |
| 1A | 3.14 | 14 | 5 | 4 |
| 1B | 1.43 | 23 | 6 | 6 |
| 1C | 5.43 | 15 | 5 | 4 |

**Table 8: Nutrient Addition Rate per Paddock (kg/ha/yr)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Paddock name | Area (ha) | Nutrients added each year (kg/ha/yr) | Nutrients added each year (kg/ha/yr) | Nutrients added each year (kg/ha/yr) |
|  |  | Nitrogen | Phosphorus | Potassium |
| 1A | 3.14 | 14 | 5 | 4 |
| 1B | 1.43 | 23 | 6 | 6 |
| 1C | 5.43 | 15 | 5 | 4 |

### Nutrients Removed by Harvesting Pasture or Crops

Provide an explanation of how nutrients will be removed by harvesting pasture or crops.

Use the APL nutrient balance calculator for rotational outdoor piggeries (on APL website) or Table 10.3 of the National Environment Guidelines for Rotational Outdoor Piggeries, APL (reproduced as Appendix A) to estimate nutrient removal rates. Multiply average district yield estimates by published nutrient removal rates. Insert the results into table 9.

|  |  |  |  |
| --- | --- | --- | --- |
| Crop or Pasture Type | Nutrient removal rate (kg/ha/yr) | Nutrient removal rate (kg/ha/yr) | Nutrient removal rate (kg/ha/yr) |
|  | Nitrogen | Phosphorus | Potassium |
| Dryland pasture | 140 | 12 | 160 |

**Table 9: Nutrient Removal by Crop or Pasture Type (kg/ha/yr)**

|  |  |  |  |
| --- | --- | --- | --- |
| Crop or Pasture Type | Nutrient removal rate (kg/ha/yr) | Nutrient removal rate (kg/ha/yr) | Nutrient removal rate (kg/ha/yr) |
|  | Nitrogen | Phosphorus | Potassium |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

For each paddock, subtract the nutrients removed (kg/ha/yr) from the nutrient addition rate (kg/ha/yr) to estimate net nutrient position for each paddock.

For example, for nitrogen in the dry sow, boar & gilt areas (paddock 1A from table 8) 14 kg N/ha/yr is added. From table 9, dryland pasture removes 140 kg N/ha/yr. Hence, the net nutrient position is 126 kg N/ha/yr (i.e. 14 kg/ha/yr - 140 kg/ha/yr). Repeat for phosphorus and potassium.

|  |  |  |  |
| --- | --- | --- | --- |
| Paddock name | Nutrients added each year (kg/ha/yr) | Nutrients added each year (kg/ha/yr) | Nutrients added each year (kg/ha/yr) |
|  | Nitrogen | Phosphorus | Potassium |
| 1A | -126 | -7 | -156 |
| 1B | -117 | -6 | -154 |
| 1C | -125 | -7 | -156 |

**Table 10: Net Nutrient Position**

|  |  |  |  |
| --- | --- | --- | --- |
| Paddock name | Nutrients added each year (kg/ha/yr) | Nutrients added each year (kg/ha/yr) | Nutrients added each year (kg/ha/yr) |
|  | Nitrogen | Phosphorus | Potassium |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Maintenance of Groundcover

Describe how groundcover will be managed to maintain 50% cover. Also describe how issues with maintaining groundcover will be addressed if they arise e.g. during extended periods of low rainfall.

50% groundcover is estimated as an average cover across a paddock that the pigs are kept in. Management practices that support maintaining 50% groundcover could include:

* Choosing suitable sites
* Careful selection of grass
* Light stocking densities
* Frequent paddock rotation
* Mobile infrastructure that is frequently relocated – at least every 3 months
* Appropriate size paddocks based on stocking density and rotation frequency

Consider setting up photograph monitoring points to document paddock groundcover management. Photographing the monitoring points every 2-4 weeks will provide evidence of groundcover management. This will help if there are future complaints or compliance issues relating to dust, runoff, rotation frequency etc.

## Mobile Infrastructure Relocation and Management of Excess Manure under Housing

Describe how the pig housing/shelters and feeders will be moved around and between paddocks including frequency.

For LDMO pig farms, the feeding and housing/shelters must be mobile. These must be moved at least every 3 months to help disperse manure nutrients over the paddock area and to assist in actively managing groundcover.

Pigs kept in paddocks deposit manure in close proximity to housing or on the floor of open shelters. As a result, the soil in these areas of the paddock have higher nutrient levels than other parts of the paddock.

Regularly moving the infrastructure helps to disperse the manure over the paddock area, reducing environmental risk.

Bedding and manure from sheds can be removed and used on other areas.

## Paddock Rotation Program

Describe your overall farm paddock rotation plan. Describe how long the paddocks will be used by pigs (pig phase) and the length of time paddocks will be rested between pigs (crop or pasture phase). Describe crops or pastures grown during this crop or pasture phase.

## Soil Testing Program

Describe the soil monitoring program on the pig paddocks. This includes a description of the areas to be tested. If there are different soil types, pig classes or different management (for example different stocking rates), these areas should be tested separately.

Describe how the soil test results will be used to monitor and adjust farm practice.

Soil testing of representative pig management areas must occur every 2 years. Records of the soil test results must be kept to confirm that soil nutrients are being maintained at suitable levels.

# Mortalities Management

## Mortalities Management

Describe how you will manage dead stock. Suitable disposal methods include: composting, rendering or burial. Burning in open fires is not a suitable option. Practices must prevent groundwater and surface water contamination, odour, spread of disease and vermin breeding. See section 13 of the National Environmental Guidelines for Rotational Outdoor Piggeries, APL.

## Mass Mortalities Contingency Plan

Provide details of what you would do in the case of an unexplained mortality and/or mass mortalities event. For mass mortality events (disease or other event such as heat stress) follow any veterinary advice, council and EPA instruction and AUSVETPLAN Operational Manual: Disposal for managing the mortalities.

In the event of a disease outbreak, follow any veterinary instruction and the AUSVETPLAN Enterprise Manual Pig Industry for guidance on managing a disease outbreak. Contact the emergency disease watch hotline.

Record below the contact details of your vet, the emergency disease watch hotline (1800 675 888.), the council (including afterhours where applicable) and EPA 1300 372 842. Have contact details readily available on site.

# Pest Management - Rodents and Feral Animals

Describe how pests such as rodents and feral animals will be managed.

Pests can include dogs and other animals that can kill or injure pigs, and rodents, birds and flies that can eat and contaminate feed and cause nuisance. All of these pests pose a biosecurity risk.

Care must be taken if using baits/chemicals for pest control, particularly rodenticides which can contaminate product.

# Protection of Native Trees and Vegetation

Describe how you will protect native trees and vegetation on site. This must include the areas where pigs are kept.

Damage to native trees and vegetation can occur from chewing and rooting by pigs. For example, use tree guards or fencing (can be non-permanent) within pig paddocks. Riparian zones and areas of remnant vegetation should be permanently fenced. Pigs must be excluded from these areas.

# Attachments:

## Appendix A: Pasture & Crop Nutrient Removal Rates from National Environmental Guidelines for Rotational Outdoor Piggeries

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Crop | Dry Matter Nutrient Content (kg/t)a  Accepted mid-range values in brackets | Dry Matter Nutrient Content (kg/t)a | Dry Matter Nutrient Content (kg/t)a | Typical Yield  Rangeb  dry matter  t/ha) | Indicative Nutrient Removal Range  (kg/ha) | Indicative Nutrient Removal Range  (kg/ha) | Indicative Nutrient Removal Range  (kg/ha) |
|  | Nitrogen | Phosphorus | Potassium |  | Nitrogen | Phosphorus | Potassium |
| Grazed Pasturec |  |  |  |  | 7–19 | 1–2 | 0.1–0.6 |
| Dry Land Pasture (cut) | 25–40 (35) | 2–5 (3) | 20–60 (40) | 1–4 | 35–140 | 3–12 | 40–160 |
| Irrigated Pasture (cut) | 25–40 (35) | 2–5 (3) | 20–60 (40) | 8–20 | 280–700 | 24–60 | 320–800 |
| **Lucerne Hay Early**  Bloom (cut) | 28–35 (31) | 2.5–5 (4) | 15–18 (17) | 5–15 | 155–465 | 20–60 | 85–255 |
| Perennial Ryegrass (cut) | 35–45 (40) | 2.6–5 (4) | 13.3 (13) | 5–16 | 200–640 | 20–64 | 65–210 |
| Maize Silage | 10–14 (12) | 1.3–2.4 (2) | 5.6–18.2 (12) | 10–25 | 120–300 | 20–50 | 120–300 |
| Forage Sorghum (cut) | 18–22 (20) | 2–3 (2.5) | 19–28 (24) | 10–20 | 200–440 | 25–50 | 240–480 |
| Winter Cereal Hay | 16–20 (18) | 2.1–3 (3) | 12–16 (14) | 10–20 | 160–400 | 30–60 | 140–280 |
| Barley | 18–20 (19) | 1.9–3.2 (3) | 4–5 (5) | 2–5 | 38–95 | 6–15 | 10–25 |
| Wheat | 18–23 (21) | 2–5.3 (4) | 3.6–5.3 (5) | 2–5 | 42–105 | 8–20 | 10–25 |
| Oats Grain | 15–17 (16) | 2.5–3 (3) | 4–5 (5) | 1–5 | 16–80 | 3–15 | 5–25 |
| Sorghum | 15–23 (19) | 2–3 (3) | 3–3.3 (3) | 2–8 | 38–152 | 6–24 | 6–24 |
| Maize | 12.5–15.3 (14) | 2.3–3 (3) | 2.7–3.6 (3) | 2–8 | 34–144 | 6–24 | 8–32 |

a 1 kg/t is equivalent to 1 g/kg, 1000 mg/kg or 1000 ppm. Data in the dry matter nutrient content column (kg/ha) can be used to calculate approximate nutrient removal rates by multiplying by an

appropriate dry matter yield (t/ha) for a given location.

b Yields may vary from these ranges (refer to historical data for the region for more accurate estimates).

c The grazed pasture example assumes a liveweight gain of 75 – 200 kg/ha/yr, with no ammonia volatilisation losses from the grazed animal’s manure.

Sources: Bach (2010), DAFF (2012), Birchall et al (2008), DPI Victoria (2007), Falconer and Bowden (2005), GRDC (2008), Kaiser et al (2004), National Research Council (2000), Reuter and Robinson

(1997).

***To gain accurate removal rates, site specific yields and plant tissue testing would be required.***

## Appendix B: Locality Plan



## Appendix C: Property Plan

