



Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: Westpork Pty Ltd

Works Approval Number: W5870/2015/1

Registered office: Unit 1
 7 Foundry Street
 MAYLANDS WA 6051

ACN: 009 148 789

Premises address: Westpork Serpentine
 567 Utley Road
 HOPELAND WA 6125
 Being Lot 366 on Plan 202654 as depicted in Schedule 1

Issue date: Thursday, 17 December 2015

Commencement date: Monday, 21 December 2015

Expiry date: Thursday, 20 December 2018

The following category/s from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
2	Intensive piggery: premises on which pigs are fed, watered and housed in pens	1,000 animals or more	8,800 animals

Conditions

This Works Approval is subject to the conditions set out in the attached pages.

Date signed: 17 December 2015

.....
 Jonathan Bailes
 Manager Licensing (Process Industries)
 Officer delegated under section 20
 of the *Environmental Protection Act 1986*



Works Approval Conditions

1 General

1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'annual period' means the inclusive period from 1 July to 30 June in the following year;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the *Environment Protection Act 1986*
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

'Schedule 1' means Schedule 1 of this Works Approval unless otherwise stated;

'Works Approval' means this Works Approval numbered W5870/2015/1 and issued under the Act;

'Works Approval Holder' means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval;

1.1.3 Any reference to an Australian or other standard in the Works Approval means the relevant parts of the standard in force from time to time during the term of this Works Approval.

1.1.4 Any reference to a guideline or code of practice in the Works Approval means the current version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guidelines or code of practice made during the term of this Works Approval.

1.2 General conditions

1.2.1 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.1:



Table 1.2.1: Construction Requirements¹		
Document	Parts	Date of Document
Works Approval Application Form	All	9 July 2015
Works Approval Application – Westpork Serpentine Piggery Development, 567 Utley Road, Hopelands, WA, Aurora Environmental, V2 Report number: AP2015-064	All, including Drawings and Appendices	9 July 2015
Email from Aurora Environmental Subject “Westpork proposal”	All including attachments	16 June 2015
Email from Aurora Environmental Subject “Westpork proposal”	All including attachments	25 June 2015
Email from Aurora Environmental Subject “Westpork WAA2/3”	All including attachments	9 July 2015
Letter from Aurora Environmental Subject “Westpork Pty Ltd Serpentine Works Approval Application – Response to Shire of Serpentine Jarrahdale letter”, reference WPK2015-002_002_CD	All including attachments	4 September 2015

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

2 Information

2.1 Reporting

2.1.1 The Works Approval Holder shall submit a compliance document to the CEO following the construction of the works and prior to commissioning of the same.

2.1.2 The compliance document shall:

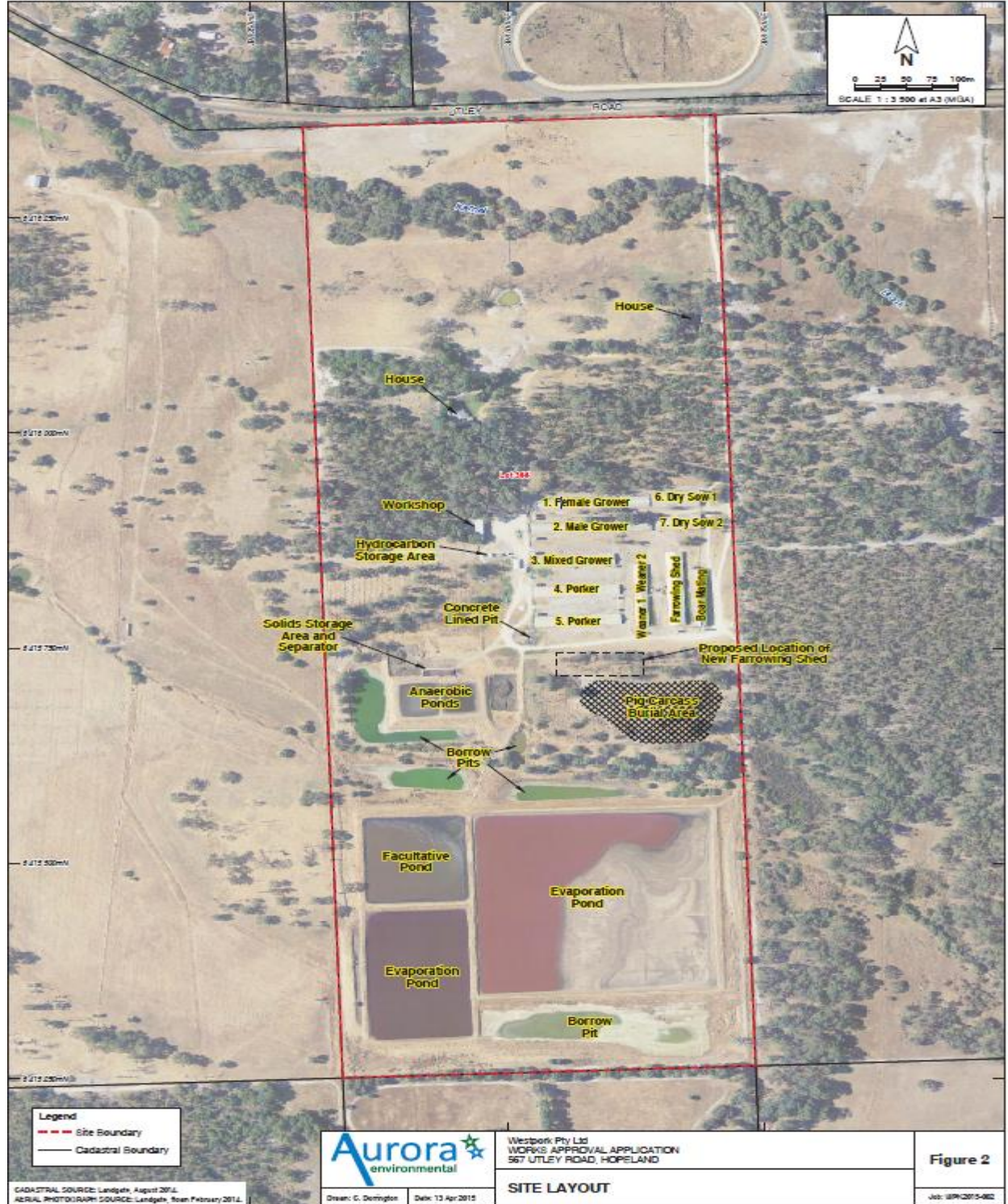
- (a) certify that the works were constructed in accordance with the conditions of the works approval; and
- (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.



Schedule 1: Maps

Premises map

The Premises is shown in the map below. The red line depicts the Premises boundary.





Decision Document

Environmental Protection Act 1986, Part V

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Works Approval: W5870/2015/1

Registered office: Unit 1
7 Foundry Street
MAYLANDS WA 6051

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Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue a works approval. DER considers that in reaching this decision it has taken into account all relevant considerations.

Decision Document prepared by: Nanette Schapel
Licensing Officer

Decision Document authorised by: Ed Schuller
Delegated Officer



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1 Purpose of this Document

This decision document explains how the DER has assessed and determined the application and provides a record of the DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to the DER's assessment and decision making under Part V of the Environmental Protection Act 1986. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



2 Administrative summary

Administrative details		
Application type	Works Approval <input checked="" type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	2	5,500 animals (7,708 Standard Pig Units)
Application verified	Date: 20 July 2015	
Application fee paid	Date: 31 July 2015	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>Environmental Protection (Peel Inlet – Harvey Estuary) Policy 1992</i>	
Is the Premises subject to any EPP requirements?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> This EPP outlines the environmental quality objectives for the Estuary and sets broad environmental quality objectives for the median mass load of total phosphorus flowing into the estuary from the Serpentine, Murray and Harvey Rivers.	



3 Executive summary of proposal and assessment

Westpork Serpentine (the Applicant) is an intensive piggery that, under current operations, can house 8,800 animals in conventional sheds. Odour, waste products and the protection of groundwater are the significant environmental factors for the piggery. There was a change of ownership at the beginning of 2015 when Westpork Pty Ltd purchased the piggery from Tralka Pty Ltd, who had operated the piggery since 1985. The current licence is L6373/1989/10, which was amended on 19 February 2015 to note the transfer of occupier.

Location:

The piggery is located at 567 Utlely Road, Hopelands, which is approximately 47km south-east of Perth. The Premises is located in an area zoned rural and it is surrounded in all directions within 5,000m by other small rural land holdings. The closest single residence is located 42m from the northern Premises boundary and 520m from the piggery sheds. There are a further five single farmhouses located less than 500m from the boundary and eight single residences located between 500 to 1,000m. There are five existing poultry industries located within 2km of the piggery. One is located 700m south-east of the Premises boundary and another is located 1,170m in a north-west direction. The other three poultry farms are located between 100m and 1,800m from the Premises boundary in a westerly direction.

Surface and groundwater hydrogeology:

The Karnet Brook traverses the northern half of the Premises approximately 540m north of the wastewater treatment system. An agricultural drain is also located just north of the evaporation ponds. There is another brook (Line String) located 855m south of the Premises boundary. The monitoring of groundwater is a licence requirement where three bores are monitored on a six-monthly basis. The groundwater in the region varies seasonally and the latest monitoring results carried out by the Applicant in July 2015 shows that the standing water levels are between 3.5m and 4m below ground level (bgl). Historical results show that levels can be as high as 0.5m bgl during the winter months and 2.3m bgl during the summer months. The Serpentine River is 5.1km away at its closest point to the Premises boundary.

The Peel Inlet – Harvey Estuary Catchment is under pressure from nutrient inputs and eutrophication and the Premises is located within the *Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992* (EPP) area. This EPP provides objectives to limit the total amount of phosphorus flowing into the Peel Inlet. The Premises is located on the eastern margin of the Swan Coastal Plain. Soils are part of the Bassendean Dune system, with layers of Bassendean Sands over clayey sands of the Guildford formation. The Applicant carried out a search of the WA Atlas (Landgate, 2015) where it was determined that the site is in an area regarded as “moderate to low known risk of acid-sulfate soils occurring within 3 m of natural soil surface”. The proponent has also noted a Conservation Category Wetland, which has a 50m surrounding buffer, in the northern end of the site.

Current Operations:

The piggery includes the following infrastructure:

- Ten intensive piggery sheds;
- Workshop,
- Bunded hydrocarbon storage area; and
- Carcass burial pit.

The wastewater treatment system is comprised of:

- Open and underground drains that channel wastewater to a concrete-lined pit;
- Solids separator/screen;
- Concrete bunded solid storage area;
- Two sludge drying beds;
- Two anaerobic ponds (37m x 37m) which operate on a 12-month rotational basis;
- One facultative pond (96m x 102m); and
- Two evaporation ponds (96m x 147m and 236m x 212m).



The piggery sheds are a pull-plug system where wastewater is collected in sumps under the sheds and discharged into a concrete holding pit. It is then directed through a screen where the solids fall into a concrete bunded storage area where they are removed by a third party and taken off site to a composting facility. The solids and sludge following a desludging event of the effluent ponds are allowed to dry before removal from site to a composting facility.

The anaerobic ponds, facultative pond, and evaporation pond #1 were constructed in 1991 using clay material sourced on site. Samples taken at the time showed the permeability of the material to be 2.5×10^{-11} m/s. Evaporation pond #2 was constructed in 2000 and is also clay lined. The sludge drying beds have clay walls and liners that were also constructed from in-situ clay, with the same permeability as the effluent ponds. The wastewater system is closed with no direct discharge to the environment and treated wastewater is not re-used on site. A water balance was calculated using PigBal, which shows that wastewater will be generated at a rate of $56.8\text{m}^3/\text{day}$. The two anaerobic ponds each have a capacity of $5,120\text{m}^3$ that includes a freeboard of 300mm. Based on the projected wastewater output, the required volume for the anaerobic pond is $4,609\text{m}^3$ which means that the current ponds are adequate. The Applicant intends to carry out a desludging programme approximately every one to two years to maintain the freeboard and operating efficiency of the ponds. A micro-dredge system is used to avoid taking the ponds off-line during desludging events.

The total capacity of all wastewater ponds (excluding freeboard) is $84,645\text{m}^3$. Following a reduction in pig numbers, PigBal was used to calculate the total amount of wastewater directed to the anaerobic pond to be $20,732\text{m}^3$ per year. This includes flushing / hosing water, manure, waste feed and drinker waste water. Incidental rainwater has not been included in the calculation. Due to the large capacity of evaporation pond #1, only small overflows will be discharged into evaporation pond #2 which is expected to remain dry for the majority of the year. This allows Westpork to retain evaporation pond #2 as either another sludge drying bed or a backup if the other ponds need to be taken offline for maintenance.

Pig carcasses are either buried on site in burial pits or disposed off-site at a licensed rendering plant. Other than pig carcass burial, there is no onsite disposal of piggery solids or piggery sludges by land application or burial.

Westpork has an Environmental Management System (EMS) in place where one of the requirements is to carry out daily visual inspections of the wastewater piping system to check for spills and leaks. Stormwater is diverted away from the effluent ponds, desludging beds and burial pits.

Works Approval:

This Works Approval is for the construction of a new farrowing shed to be located approximately 15m south of the current sheds. Construction of the shed is expected to take a period of two months. The dimensions of the new shed will be 97m x 29m; it will be totally enclosed, and have the capacity to hold 384 sows. By constructing another farrowing shed, the Premises operations will change from a 1,000 sow farrow-to-finish operation with an assessed capacity of 8,800 animals to a breeder only facility. This change in operations will reduce the capacity to a 2,500 sow facility with the capability to house up to 5,500 pigs, a reduction in the carrying capacity of 50%. The piggery will produce 61,152 pigs per annum, which includes 112 farrowings per week at an average of 10.5 pigs per litter. The majority of the pigs will be moved off site at 3 to 4 weeks of age once they are weaned. Approximately 100 weaner pigs per week will be retained and grown out at the Premises.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and the DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision, they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	W1.2.1 L1.2.4 L1.2.5	<p>Construction Condition W1.2.1 requires the Works Approval Holder to construct the works in accordance with the documentation submitted with the works approval application.</p> <p>Operations General requirements are captured by licence condition L1.2.4, which requires the Licensee to recover immediately or remove and dispose of spills of environmentally hazardous materials outside of a containment system. Condition 1.2.5 requires the operator to keep uncontaminated stormwater away from contaminated stormwater.</p>	Application supporting documentation L6373/1989/10
Premises operation	L1.3.1, L1.3.2, L1.3.3, L1.3.4, L1.3.5	<p>Construction There are no specific Premises operation conditions required during construction activities.</p> <p>Operation There are specific conditions for Premises operation concerning management of wastewater and the processing of wastes. As this project will facilitate a reduction in pig numbers and, therefore, a reduction in wastewater and wastes, these conditions have not been re-assessed as part of this works approval.</p>	L6373/1989/10
Emissions general	-	Construction and operation: There are no conditions relating to general emissions required during construction or operation of the piggery.	-
Point source emissions to air including monitoring	-	Construction and Operation No point source emissions to air are expected to occur during the construction of the farrowing shed. Licence L6373/1989/10 does not have any conditions for regulating point source emissions to air and no new conditions are required.	-



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Point source emissions to surface water including monitoring	-	Construction and Operation No point source emissions to surface water are expected to occur during construction of the farrowing shed. Licence L6373/1989/10 does not have any conditions for regulating point source emissions to surface water and no new conditions are required during operations.	-
Point source emissions to groundwater including monitoring	-	Construction and Operation No point source emissions to groundwater are expected to occur during the construction of the farrowing shed. Licence L6373/1989/10 does not have any conditions for regulating point source emissions to groundwater and no new conditions are required during operations.	-
Emissions to land including monitoring	-	Construction and Operation No emissions to land are expected to occur during the construction of the farrowing shed. Licence L6373/1989/10 does not have any conditions for regulating emissions to land and no new conditions are required during operations.	-
Fugitive emissions	-	Construction <i>Emission:</i> Dust emissions <i>Impact:</i> Fugitive dust emissions can be generated during the construction of the farrowing shed and can impact on the amenity of nearby residential and commercial dwellings. The nearest single residence is located 750m from the proposed farrowing shed. Minimal clearing of vegetation is required as the farrowing shed will be located in an area already cleared for agricultural purposes and the site location is dominated by weeds and pasture grasses. <i>Controls:</i> Water sprays will be used to manage dust arising from construction and transport activities, and the clearing of vegetation will be minimised to the footprint of the shed. If significant dust is generated, there will be an increase in water sprays. If ineffective, construction activities will cease until additional controls are implemented or weather conditions change. A verbal or written response will be provided to any complainant within 48 hours and all complaints recorded in a site register.	Application supporting documentation



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Risk Assessment</u></p> <p><i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory controls:</u> No specific works approval conditions are required as the risk can be adequately managed by the mitigation controls stated in the works approval documentation as applied through condition W1.2.1.</p> <p><u>Residual Risk</u></p> <p><i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p>Operation Fugitive dust emissions are not expected during operations and there are no fugitive dust conditions on the current licence.</p>	
Odour	L5.1.4 L5.2.1	<p>Construction There are no odour emissions expected during the construction of the farrowing shed.</p> <p>Operations DER's assessment of odour emissions are detailed in Appendix A.</p>	<p>Application supporting documentation</p> <p>Westpork <i>Odour Management Plan</i> (Aurora Environmental, 4 September 2015)</p> <p>L6373/1989/10</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
			Draft Guidance Statement: <i>Separation distances</i> , (DER, August 2015)
Noise	-	<p>Construction</p> <p><u>Emission Description</u> <i>Emission:</i> Noise emissions.</p> <p><i>Impact:</i> There is the potential for noise emissions during construction of the farrowing shed to impact on nearby noise sensitive residences. The nearest noise sensitive residence to the proposed farrowing shed is 750m north. The Department has not received any complaints from neighbouring properties about noise emissions during normal operations.</p> <p><i>Controls:</i> The Applicant has provided a <i>Noise Management Plan</i> to manage noise emissions during construction activities. These measures include restricting construction activities only to occur between the hours of 0700 and 1700 on weekdays and 0700 and 1430 on Saturday. Construction activities are expected to be completed within two months. The Applicant will log any noise complaints in a complaints register. If mitigation measures are found to be ineffective, work will cease and the noise producing activities will be reassessed with the intent to implement new control procedures.</p> <p><u>Risk Assessment</u></p> <p><i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> DER considers that noise emissions during construction can be adequately regulated under the requirements of the <i>Environmental Protection (Noise) Regulations 1997</i>.</p>	<p>Application supporting documentation</p> <p><i>Westpork Noise Management Plan</i> (Aurora Environmental, 4 September 2015)</p> <p><i>Environmental Protection (Noise) Regulations 1997</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p>Operations: <i>Emission:</i> Noise emissions, such as pig squealing at feed time, can occur during operations in the piggery. <i>Control:</i> The Applicant's <i>Noise Management Plan</i> includes the management of noise emissions during operations, such as enclosing the new farrowing shed and introducing electronic sow feeding that will allow the sows to eat when they want. This eliminates noisy behaviour occurring around feeding time. The Applicant intends to use well-maintained equipment to minimise overall noise emissions. Following the destocking of the piggery, no live animals will be regularly brought onto the property, which will reduce the number of trucks leaving the piggery by 50%.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> The DER considers that noise emissions during operation can be adequately regulated under the requirements of the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Monitoring general	L3.8.1	<p>Construction Monitoring conditions are not required during construction.</p> <p>Operation Monitoring of the ambient groundwater in the vicinity of the piggery is captured by licence condition L3.8.1. No further monitoring conditions are required.</p>	L6373/1989/10
Monitoring of inputs and outputs	L5.2.1	<p>Construction Monitoring of inputs and outputs are not required during construction.</p> <p>Operation Monitoring of cumulative volumes and quality of wastewater discharged to the treatment system, quantities of wastewater removed from site for irrigation purposes, and the number of animals on site are required to be recorded in the Annual Environment Report (condition L5.2.1).</p>	L6373/1989/10
Process monitoring	L3.8.1	<p>Construction and operation Process monitoring is not required during construction or operation of the works.</p>	L6373/1989/10
Ambient quality monitoring	L3.8.1	<p>Construction Ambient quality monitoring is not required during construction.</p> <p>Operation Monitoring of groundwater is carried out every six months from three groundwater bores located on site, as required by condition L3.8.1.</p>	L6373/1989/10
Meteorological monitoring	-	<p>Construction and operation Meteorological monitoring is not required during construction activities or operations.</p>	-
Improvements	-	<p>Construction No improvements are required in the works approval.</p> <p>Operations The licence will be reviewed following receipt of a compliance document for the works carried out for the construction of the farrowing shed. This review will determine whether a licence amendment is required.</p>	-



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
10/08/2015	Application advertised in West Australian (or other relevant newspaper)	No comments received	N/A
13/07/2015	Proposal provided to Shire of Serpentine Jarrahdale where it was presented at an Ordinary Council Meeting on 7 December 2015	The Shire received three objections, concerning odour emissions, leakages from trucks, potential groundwater contamination and suitability of the application with the Shire's Town Planning Scheme 2 for 'Rural' zoned land.	<p>The Shire investigated the objections to the application and is satisfied that potential impacts can be adequately managed by Westpork's management plans and the development is unlikely to have any negative impacts on the surrounding area. It was noted that the change in on-site activities will result in a positive outcome for both the Shire and local residents.</p> <p>Shire approval is subject to conditions as follows:</p> <ul style="list-style-type: none">(a) development needs to commence with two years from approval date;(b) all existing native trees and revegetated areas to be protected;(c) construction to be contained wholly within the lot boundaries;(d) all stormwater to be disposed within the property boundaries;(e) development to be in accordance with Westpork's Noise Management Plan; and(f) development to be in accordance with Westpork's Odour Management Plan.
06/10/2015	Proponent sent a copy of draft instrument	Comments received which included: <ul style="list-style-type: none">• clarification of The Applicant's registered address;• the number of existing poultry farms within 2km of the Premises; and• editing suggestions.	Comments included into decision document and works approval.



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High



Appendix A

Operations – Normal Operation conditions

Emission Description

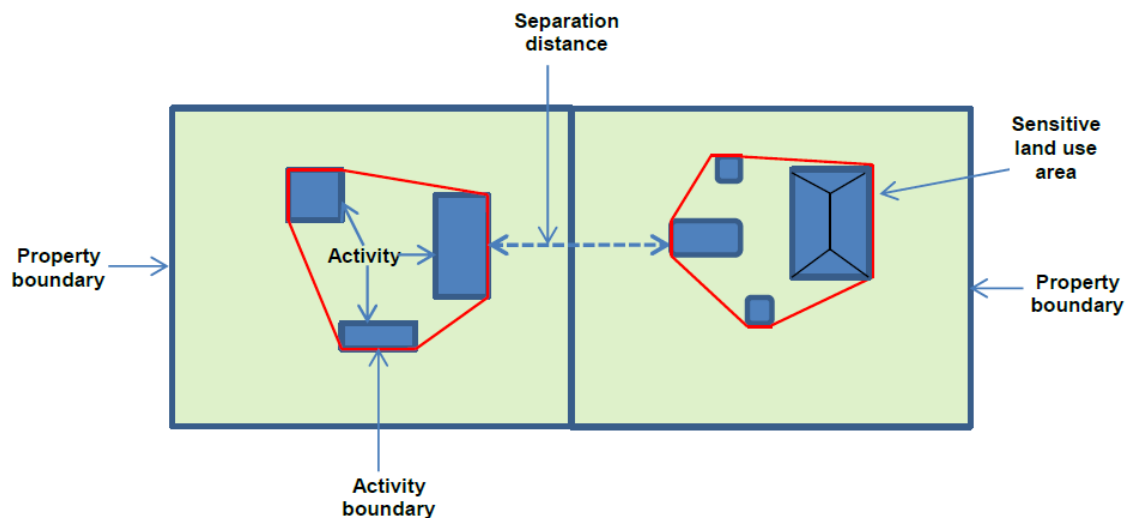
Emission: Odour emissions from the piggery operations. During normal operations, the main odour producing activities are the pig sheds, screening area and the anaerobic ponds.

Impact: There is the potential for odour emissions from piggery operations to cause a nuisance impact on nearby odour sensitive residences, where the closest single residence is located 700m north of the anaerobic ponds.

The *National Environmental Guidelines for Piggeries* (NEGP) provides a recommended separation distance between the piggery and a receptor based on Standard Pig Units, the type of receptor (e.g. isolated dwelling or town), and the intervening terrain. The Applicant has calculated the required separation distance for the Premises to be 775m.

DER has recently provided a Draft Guidance Statement *Separation Distances* (August 2015) which recommends that, when calculating the separation distance, there are two methods to be used. Method 1 is to be applied when the nearest sensitive land use is an urban area or township or a site less than 0.4ha in size. Method 2 is to be used when the sensitive land use is not an urban area and the site is equal to or greater than 0.4ha, which includes nearby single farmhouses. When measuring the separation distance according to Method 2, a boundary is to be drawn around the area where emissions will be emitted and, with regard to the sensitive land use, the boundary is to include the residence and associated activities, as depicted below in Figure 1.

Figure 1: Calculating the separation distance using Method 2 Draft Guidance Statement *Separation Distances* (Department of Environment Regulation, August 2015)



Based on the size of the properties of nearby odour sensitive residences, Method 2 is suitable when assessing the separation distance for the Premises. Under normal operating conditions, the odour producing activities include the pig sheds and the anaerobic ponds. The closest single residence outside of the Premises boundary is located 520m north of the piggery sheds, 750m from the proposed farrowing shed and 700m north of the anaerobic ponds. The next closest neighbour is 790m north-west of the anaerobic ponds and 950m north-west of the proposed farrowing shed. The Applicant has calculated the separation distance as 775m; therefore, the closest neighbour is within the recommended separation distance.

The inclusion of another farrowing shed and the change in operations from a farrow-to-finish operation to a breeding-only facility will reduce the number of pigs on site by approximately 50%. As a result, this will reduce the amount of solid wastes generated in the piggery sheds, hence



reducing the potential odour from this source. It will also reduce the wastewater output that will decrease nutrient loading on the wastewater pond system. The Department has not received any odour complaints concerning the piggery.

The Applicant undertook community consultation with nearby residents before submission of the works approval application. There were no objections from the residents to the proposed development. The Shire approved the proposal on 7 December 2015 and is satisfied that potential issues, including odour emissions, can be adequately managed by The Applicant's Odour Management Plan.

Controls: The management and mitigation strategies noted in the Odour Management Plan (Aurora Environmental, 4 September 2015) include:

- Implementation of a Complaints Register on site;
- All trucks transporting pig wastes off-site are to be covered and inspected before leaving and on arrival at final destination to ensure no wastes have been lost during transit;
- All farrowing sheds are cleaned daily; and
- Senior site staff will carry out field testing for odour emissions at the downwind site on the Premises boundary on a daily basis.

Risk Assessment

Consequence: Minor

Likelihood: Unlikely

Risk Rating: Moderate

Regulatory Controls

Condition L5.1.4 requires the Licensee to implement a complaints management system along with actions taken in response to complaints. Condition L5.2.1 requires a summary of all complaints to be provided in the Annual Environmental Report.

Residual Risk

Consequence: Minor

Likelihood: Unlikely

Risk Rating: Moderate

Operations – Abnormal Operation conditions

Emission Description

Emission: During abnormal operating conditions, odour emissions can occur during desludging of the wastewater treatment ponds.

Impact: There is the potential for odour emissions from piggery operations to cause a nuisance impact on nearby odour sensitive residences, where the closest single residence is located 700m north of the anaerobic ponds. The anaerobic ponds are rotated on an annual basis to allow the resting pond to be desludged.

Due to the 50% reduction in pig numbers and the resultant reduction in wastewater, there will be a corresponding reduction in the nutrient loading into the anaerobic ponds. This will reduce the concentration of odour from the ponds. The overall decrease in the number of animals on the site will also reduce the quantity of solid waste produced which will reduce the frequency of desludging events.

Westpork requires an Offensive Trade Licence from the Shire of Serpentine Jarrahdale to operate the piggery under the *Health Act 1911*. This licence is renewed annually. A condition of this licence is that all nearby residents are notified before any desludging of the wastewater treatment ponds. The Shire has not received any complaints from neighbours since this condition was



included on the Offensive Trade Licence. The proposal to construct farrowing sheds was approved by the Shire on 7 December 2015.

Controls: The management and mitigation strategies noted in the Applicant's works approval application and Odour Management Plan (Aurora Environmental, 4 September 2015) for desludging events include:

- The scheduling of desludging events to occur when easterly winds are expected, to minimise the number of residences potentially affected;
- Desludging events to be completed as quickly as possible;
- The notification of all residents within one kilometre of the site when desludging events occur; and
- If odour complaints are received, the Applicant will cease desludging activities until meteorological conditions are more favourable. Recommencement of desludging activities will be carried out in consultation with the Shire and the complainant.

Risk Assessment

Consequence: Minor

Likelihood: Possible

Risk Rating: Moderate

Regulatory Controls

As noted above, condition L5.1.4 requires the Licensee to implement a complaints management system along with actions taken in response to complaints. Condition L5.2.1 requires a summary of all complaints to be provided in the Annual Environmental Report.

Residual Risk

Consequence: Minor

Likelihood: Possible

Risk Rating: Moderate