Government of Western Australia
Department of Environment Regulation

Decision Document

Environmental Protection Act 1986, Part V

Proponent: Westpork Pty Ltd

Licence: L4409/1988/8

Registered office:	Westpork Pty Ltd Unit 1/7 Foundry Street MAYLANDS WA 6051
ACN:	009 148 789
Premises address:	Westpork Gingin Breeder Farm Lot 8 on Diagram 68836 Boonanarring Road BOONANARRING WA 6503 Being Lot 8 on Diagram 68836
Issue date:	Thursday, 1 October 2015
Commencement date:	Monday, 5 October 2015
Expiry date:	Sunday, 4 October 2020

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue a licence. 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:	Jonathan Bailes Delegated Officer

Contents

1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to 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 ☐ New Licence ☒ Licence amendment ☐ Works Approval amendment ☐	
Activities that cause the premises to become prescribed premises	**Category number(s)** 2	**Assessed design capacity** 5,500 animals
Application verified Application fee paid	Date: 06/07/2015 Date:16/07/2015	
Works Approval has been complied with Compliance Certificate received	Yes☐ No☐ N/A☒ Yes☐ No☐ N/A☒	
Commercial-in-confidence claim	Yes☐ No☒	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes☐ No☒	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*?	Yes☐ No☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Is the proposal subject to Ministerial Conditions?	Yes☐ No☒	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 *Environmental Protection Act 1986*)?	Yes☐ No☒ Department of Water consulted Yes ☐ No ☐	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes☒ No☐ Environmental Protection (Swan Coastal Plains Lakes) Policy 1992		
Is the Premises subject to any EPP requirements? Yes☐ No☒ The EPP (SCPL) Policy 1992 requires that any lakes within the Swan Coastal Plain shall not be degraded or destroyed by activities nearby. The Westpork Gingin Breeder Farm is located 1.7 km east of EPP Lakes (see Appendix A) and it is considered unlikely that piggery operations will impact on lake ecology		

3 Executive summary of proposal and assessment

Westpork Gingin Breeder Farm is located on Lot 8 in Boonanarring, which is approximately 70km north east of Perth. The piggery has been operating since 1987 and licensed with Westpork since 1988. The Boonanarring Reserve is a crown reserve (#539) located 1.3km north east of the property boundary on Lot 11350 and owned by the Department for Planning and Infrastructure. The closest receptor is a farm residence, located at 570m south of the premise boundary and approximately 1km south of the anaerobic wastewater treatment ponds. The next closest is resident is 1.4km to the north of the property.

Hydrogeology and surface Water:
While there is no detailed hydrogeological data regarding groundwater at the site, the Department of Water's 2001 Historical Maximum Groundwater Contours indicate that the groundwater is at 50 to 60m depth. In March 2014, EnviroAg Australia provided a desktop assessment of bore drill log records that were carried out in the location of the wastewater treatment pond system prior to the ponds becoming operational. This assessment notes that the site is overlaid by varying bands of sands to a depth of 6m, and the deeper soils include sand and clays to a depth of 21m underlain by clay with sand bands to a depth of 50m. While small amounts of perched groundwater have been located in the upper sand layers, the underlying clay layers are relatively impermeable and act as a confining layer.

The current licence requires Westpork to monitor the quality of groundwater every six months from three onsite bores. These bores were placed into the 6m deep sands overlying the clays and Westpork reported that the bores have been dry since 2010. According to the advice provided by EnviroAg Australia in March 2014, the monitoring bores have not recorded any water due to the presence of a pine forest which surrounds the effluent ponds where the roots from the mature pine trees have exhausted soil water in the sands, causing a water deficit.

The nearest surface water is the Boonanarring Brook which runs across the Premises on the south eastern edge of the property. This is an ephemeral brook where no water flow has been observed by the Licensee. The brook is located 280m away from the closest effluent pond. A section of the Boonanarring Brook on an adjacent property is mapped as a geomorphic wetland and Ecologically Sensitive Area (see Appendix A). The land between the brook and the wastewater treatment pond system is slightly up-gradient and well vegetated (see Appendix B). Another nearby surface water body is the Wallering Brook; both the Boonanarring and Wallering Brooks feed into the Gingin Brook.

Operations:
The piggery currently houses an average of 5,130 animals at any one time, based on the number of sows. Operations include the breeding of pigs up to three weeks of age, at which time they are transferred off site to Westpork's grower operations (Westpork Mindarra Farm Licence L5724/1993/11). There are 16 sheds used for the intensive rearing of pigs.

Wastewater treatment system:
Following flushing of the sheds, the wastewater is directed to a sealed concrete channel prior to treatment in one of two anaerobic ponds. One pond is clay lined and the other anaerobic pond is HDPE lined. The wastewater is then transferred to a facultative pond and final storage is an evaporative pond, both of which are clay lined.

The amount of wastewater discharged to the treatment system is approximately 160,000m^3 per annum, based on the Annual Environmental report for the 2014-2015 reporting period. Treated wastewater is used to flush the sheds daily, which amounts to 77,744m^3 per annum. The piggery operated for several years where treated wastewater from the effluent ponds was used to irrigate bluegum trees on a neighbouring property. In 1989 Westpork constructed a wastewater treatment system and the current licence requires the Licensee to monitor the quality and quantity of the wastewater to be used for irrigation. Due to efficiency measures, there has been insufficient wastewater in the ponds to allow irrigation which has not occurred since the July-September monitoring period in 2014.

Current Works Approval:
A works approval (W5854/2015/1) was issued on 18 September 2015 to construct a sludge drying bed. This will allow sludge to be removed from the HDPE lined anaerobic pond to improve the efficiency of the pond. Desludging is expected to occur twice a year and only during the summer months when evaporation is high.

4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and 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	L1.2.3	**Operations** Emission Description *Emission:* Stormwater contaminated with nutrient rich wastewater from on-site operations. *Impact:* There is the potential for stormwater to become contaminated by on site processes and impact on the Boonanarring Brook drainage line, located 280m from the effluent system. *Controls:* The pig sheds are enclosed to prevent entry of stormwater. The area surrounding the wastewater ponds is contoured with diversion channels to divert stormwater away from the wastewater treatment system. Westpork has an Environmental Procedures Manual in place which includes daily and periodic management measures to be taken during desludging operations. Risk Assessment *Consequence*: Minor *Likelihood:* Rare *Risk Rating:* Low Regulatory Controls Current licence Condition 1.2.3 requires the operator to keep uncontaminated stormwater away from contaminated stormwater. Residual Risk *Consequence*: Minor *Likelihood:* Rare *Risk Rating:* Low	L4409/1988/7 *Supporting Information and Environmental Procedures Manual for the construction and maintenance of Drying Beds* (FSA Consulting, Revised February 2015)

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Premises operation	L1.3.1 L1.3.2 L1.3.3 L1.3.4	**Operations** Emission Description *Emission: Discharge of* nutrient rich wastewater from the wastewater treatment system. *Impact:* If wastewater overflows from the wastewater treatment system, including the proposed sludge drying bed, there is the potential for contamination of the nearby Boonanarring Brook drainage line, located 280m from the effluent system. *Controls:* The area surrounding the wastewater ponds is contoured with diversion channels to divert stormwater. All piggery sheds are enclosed and wastewater is directed via a pull-plug system to underground channels which feeds into the wastewater into the treatment system. Risk Assessment *Consequence*: Minor *Likelihood:* Rare *Risk Rating:* Low Regulatory Controls Condition 1.3.1 requires that all wastewater from operations are directed to a wastewater treatment system. Condition 1.3.2 ensures wastewater and treated wastewater is appropriately contained as per Table 1.3.2. Condition 1.3.3 requires a minimum freeboard of 500mm to be maintained on all effluent ponds. Condition 1.3.4 requires all carcasses buried on site to be covered with at least 500mm of soil immediately upon deposit. Residual Risk *Consequence*: Minor *Likelihood:* Rare *Risk Rating:* Low	L4409/1988/7 *Supporting Information and Environmental Procedures Manual for the construction and maintenance of Drying Beds* (FSA Consulting, Revised February 2015)

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Emissions to land including monitoring	L1.3.2 L2.2.1 L2.3.1 L3.2.1	**Operations** Emissions Description: *Emission*: Flushing of the pig sheds with treated wastewater and the irrigation of nutrient rich wastewater *Impact*: Treated wastewater is used to flush the pig sheds daily and to irrigate bluegum trees on a nearby property. Treated wastewater can contain high levels of nutrients which can impact on nearby surface water bodies, including the Boonanarring Brook drainage line, located 280m from the effluent system. *Controls*: Treated wastewater used for flushing is fed into an enclosed pull-plug system where the wastewater is collected in drains under the sheds and fed into the effluent treatment system. Due to efficiency measures, there has been insufficient wastewater in the wastewater treatment system for irrigation, which has not occurred since July-September monitoring period in 2014. Risk Assessment *Consequence*: Insignificant *Likelihood:* Rare *Risk Rating:* Low Regulatory Controls According to Condition L1.3.2, the flush tanks are sealed and constructed of concrete. Condition L2.2.1 requires the cumulative volume of all treated wastewater to be used for flushing, wash down water or removed off-site for irrigation to be measured on a quarterly basis. Condition L2.3.1 requires all treated wastewater to be monitored for pH, TDS, TN and TP prior to removal off-site for irrigation, where the frequency of monitoring is on a 6-months basis. Condition L3.2.1 requires the Licensee to provide an Annual Environmental Report which includes details of the monitoring of treated wastewater sent off site for irrigation purposes.	L4409/1988/7 Supporting Information and Environmental Procedures Manual for the construction and maintenance of Drying Beds (FSA Consulting, Revised February 2015)

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		Residual Risk *Consequence*: Insignificant *Likelihood:* Rare *Risk Rating:* Low	
Fugitive emissions	L1.3.1 L1.3.2 L1.3.3 L2.4.1	**Operations** Emission Description *Emission*: Wastewater seepage from the ponds. *Impact*: There is the potential for seepage from the wastewater treatment system to contaminate underlying groundwater and nearby surface water drainage systems, including the Boonanarring Brook which is approximately 280m from the effluent system. This could impact on the ecology of the brook due to the addition of nutrients contained in the seepage. The naturally occurring clay soils provide a barrier to the underlying groundwater which is at a depth of approximately 55m. *Controls:* The wastewater treatment system are located down gradient of the geomorphic wetland associated with the Boonanarring Brook (see Appendix A) where the intervening area between the brook and the pond system is well vegetated. Monitoring bores are available to monitor the shallow groundwater quality, although it is noted that these bores have been dry since 2010. Risk Assessment *Consequence*: Minor *Likelihood:* Unlikely *Risk Rating:* Moderate Regulatory Controls Current licence condition 1.3.1 requires all wastewater to be directed to a wastewater treatment system. Condition 1.3.2 requires containment infrastructure to be lined. Condition 1.3.3 requires the wastewater treatment system to maintain a freeboard of 500mm, erosion of embankments by stormwater runoff is to be prevented, overtopping of the ponds is not to occur unless it is the result of an extreme rainfall event, vegetation and floating debris is not	L4409/1988/7

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Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		allowed to encroach on the embankments, trapped overflows are maintained between ponds, and a water cover is maintained over the ponds to protect the clay or synthetic liners. These conditions minimise the potential for seepage from the effluent ponds. Condition 2.4.1 requires six monthly monitoring of groundwater quality from the site production bore and there monitoring bores. Residual Risk *Consequence*: Minor *Likelihood:* Unlikely *Risk Rating:* Moderate	
Odour	L3.1.4 L3.2.1 L3.3.1	**Operations** Emission Description *Emission:* Odour emissions can occur from the anaerobic ponds and during desludging operations when the sludge is placed in the drying bed. *Impact:* There is the potential for odour emissions from the anaerobic ponds and during desludging events to cause a nuisance impact on nearby odour sensitive residences, where the closest resident is located 570m south of the premises boundary and approximately 1,000m south of the proposed drying bed and anaerobic ponds. The next closest resident is 1.4km north of the property. The frequency of desludging is expected to occur twice a year during the summer months. Two unsubstantiated odour complaints were received by the Department in 2006 and 2008 but there have not been any recent complaints. Odour emissions are not expected to occur from the evaporation ponds during normal operating conditions. *Controls:* When sludge is transferred to the proposed drying bed, it will have undergone some treatment/decomposition in the anaerobic pond. Inert organic material (sawdust and/or straw) will be available to spread over the sludge to further reduce the potential for odour emissions and, once the sludge has dried, it will be removed off site. Westpork intend to monitor potential sources of odour (Environmental Procedure Manual #9) and retain all records for a period of three years. The procedure requires the monitoring of odour emissions at the pond site and on the property boundary downwind of the ponds, where monitoring will occur at the	L4409/1988/7 Supporting Information and Environmental Procedures Manual for the construction and maintenance of Drying Beds (FSA Consulting, Revised February 2015) Draft Guidance Statement, *Separation Distances*, Division 3, Part V, *Environmental Protection Act*

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Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		beginning and at the end of desludging operations. If unacceptable odour emissions are detected, further management procedures will be implemented, which will be based on wind direction and height of the discharge point into the drying bed. If the problem can't be resolved, desludging will cease until conditions improve. Any complaints will be logged immediately in Westpork's Complaints Register, along with details and feedback from any complainants. If mitigation measures are not found to be effective, desludging will cease and new procedures implemented. Risk Assessment *Consequence*: Minor *Likelihood:* Possible *Risk Rating:* Moderate Regulatory Controls Condition L3.1.4 requires the Licensee to implement a complaints management system along with actions taken in response to complaints. Condition L3.2.1 requires a summary of all complaints to be provided in the Annual Environmental Report. Condition L3.3.1 requires the Licensee to notify DER at least 14 days in advance of any desludging operations. Residual Risk *Consequence*: Minor *Likelihood:* Possible *Risk Rating:* Moderate	*1986,* (DER, August 2015, DER2015/001526)
Noise	N/A	**Operations** Emission Description *Emission*: Noise emissions from the piggery sheds *Impact*: Noise emissions from the pig sheds can impact on nearby noise sensitive premises. The closest single residence is 775m south of the pig sheds. The piggery has been operating since 1987; during that period the Department has not received any complaints about noise emissions from the facility.	*Environmental Protection (Noise) Regulations 1997* L4409/1988/8

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		Controls: The piggery sheds are enclosed. Risk Assessment *Consequence*: Minor *Likelihood:* Likely *Risk Rating:* Moderate Regulatory Controls Condition L3.1.4 requires the Licensee to implement a complaints management system along with actions taken in response to complaints. Condition L3.2.1 requires a summary of all complaints to be provided in the Annual Environmental Report. The Licensee is required to comply with the *Environmental Protection (Noise) Regulations 1997.* Residual Risk *Consequence*: Minor *Likelihood:* Likely *Risk Rating:* Moderate	
Monitoring general	L2.1.1 – L2.1.5	**Operations** General monitoring conditions are captured by licence conditions L2.1.1 – L2.1.5.	L4409/1988/8
Licence Duration	N/A	The assessment of operations is considered of moderate risk regarding the potential to impact on nearby residences and the surrounding environment. The licence will be issued for a period of five years.	L4409/1988/8

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
27/07/2015	Application advertised in West Australian	No comments received	N/A

6 Risk Assessment

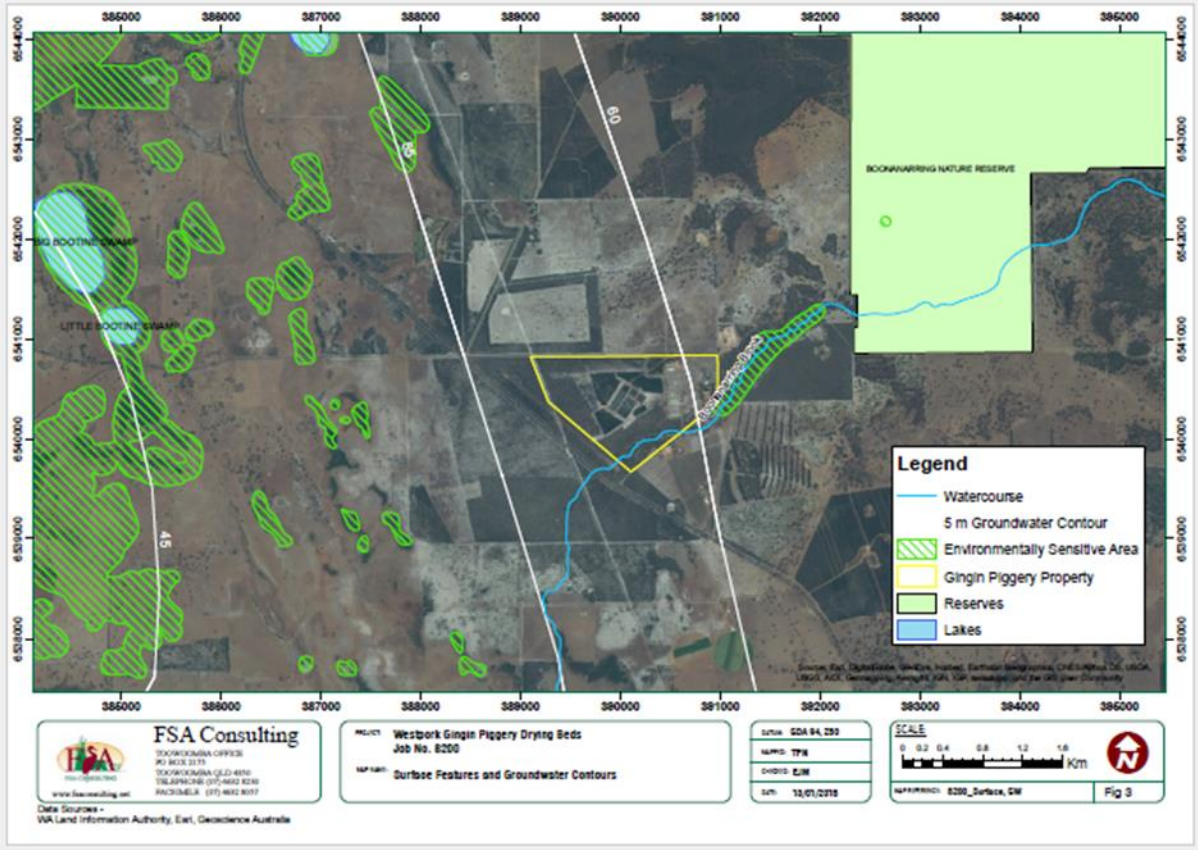
Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

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

Map: Westpork Gingin Breeder Farm showing groundwater contours, watercourses and the Boonanarring Nature Reserve



Appendix B

Map: Westpork Gingin Breeder Farm showing topography contours and the Boonanarring Brook