



Licence Number L6373/1989/10

Licence Holder Westpork Pty Ltd

ACN 009 148 789

File Number: 2010/003210

Premises Westpork Serpentine Piggery
567 Utley Road
HOPELAND WA 6125

Legal description –
Being Lot 366 on Plan 202654 as depicted
in Schedule 1

Date of Amendment 04/09/2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Manager Process Industries Regulatory Services

an Officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1 Definitions

Term	Definition
ACN	Australian Company Number
Applicant	Westpork Pty Ltd
Application	means those documents that form the application
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Westpork Pty Ltd
NEGP	means the <i>National Environmental Guidelines for Piggeries</i> (Australian Pork Limited, 2010)
SPU	means standard pigs units, an animal of standard weight as detailed in NEGP

1. Amendment Notice

This amendment is made pursuant to section 59 of the EP Act to amend Licence L6373/1989/10 granted to Westpork Pty Ltd for its category 2 piggery located at 567 Utlely Road, Hopeland. This notice of amendment is given under section 59B(9) of the EP Act.

1.1 Amendment application

On the 23 April 2018, Westpork lodged a Licence Amendment application seeking:

- 1) approval to compost deceased animals and related materials in purpose built infrastructure; and
- 2) clarification as to the relevant stock numbers to include suckers in the licence.

The Applicant provided additional supporting information on 27 June 2018, further clarifying animal numbers held on site. The documents that form the Application and key Departmental guidance that has informed the assessment of the Application are listed in Appendix 1.

2. Amendment history

Table 2 provides the amendment history for L6373/1989/10.

Table 2: Licence and Works Approval history

Instrument	Issued	Amendment
L6373/1989/3	10/10/2000	Licence re-issue
L6373/1989/4	01/10/2001	Licence re-issue
L6373/1989/5	01/10/2002	Licence re-issue
L6373/1989/6	06/10/2003	Licence re-issue
L6373/1989/7	06/09/2004	Licence re-issue
L6373/1989/8	06/09/2005	Licence re-issue
L6373/1989/9	01/08/2008	Licence re-issue
L6373/1989/10	10/08/2013	Licence amendment to update format
L6373/1989/10	19/02/2015	Licence transfer from Tralka Pty Ltd to Westpork Pty Ltd
W5870/2015/1	17/12/2015	Works approval to construct a farrowing shed and change in operations from a grow-out facility to a breeder only facility
L6373/1989/10	29/04/2016	Notice of amendment to extend expiry dates of all EP Act Licenced Premises
L6373/1989/10	DRAFT 2018	Current Amendment Notice 1 to include composting bunkers

3. Proposed Amendment changes

3.1.1 Composting facility for the management of pig carcasses

Deceased animals and related matter such as afterbirth were until recent times disposed by burial in dedicated burial pits. Burial pits were also formerly used by the previous occupier of the Premises.

Westpork considered that burial of deceased animals was not appropriate and constructed concrete bunkers to compost deceased animals and has used them since approximately November 2017. Westpork in its Application is seeking to have the composting process for deceased animals ratified in the Licence as there has been conjecture as to whether or not the composting process is approved. Further details on the composting process have been included in Section 3.2.

3.1.2 Inclusion of suckers in the stock number count

The most recent assessment of the piggery that occurred in the process of granting works approval W5870/2015/1, assessed and subsequently approved the site to hold 8,403 SPU. This works approval was in respect of converting the piggery from a 'farrow to finish' piggery to a 'breeder' piggery and permitted the construction of additional farrowing sheds.

Previously, the piggery when operated as a 'farrow to finish' piggery held up to 10,400 animals and may have held up to 13,000 animals (14,000 SPU) according to Westpork. Notwithstanding this, the licence detailed that the piggery was approved to hold 8,800 animals and the animal count at that time didn't include sucker piglets, which are animals recently born and up to the age of about 4 weeks. The exclusion of suckers in the head count was the custom of the Department at that point in time when L6373/1989/13 was granted.

Earlier this year (2018) the Department published a Fact Sheet on intensive piggeries and determined to use a standardised approach (SPU) to the design and production capacity for piggeries as detail in NEGP.

On the basis of the above, the piggery is currently approved to hold up to 11,210 SPU but in its current configuration and operational design, it is not able to hold (on average) more than 8,614 SPU.

As there has been conjecture as to the approved holding capacity of the piggery, Westpork in its Application is seeking to have its current operational set-up for the piggery, ratified in the licence - as per the average stock holding detailed in Table 3.

3.1.3 Peak number of stock on site at any one time

Stock numbers on site can vary for a number of reasons such as a variation in market demands, stock movement off site and capacity issues at abattoirs. The assessed design capacity for the Existing Licence was based on the average number of stock on site and Westpork has requested that the assessed throughput should also include a peak number of maximum number of animals permitted to be held on site at any one time, as also detailed in Table 3.

Table 3: Maximum stock numbers and SPU for the Serpentine Piggery (Applicant supplied)

PIG CLASS	SPU FACTOR	AVERAGE STOCK		MAXIMUM STOCK (4% GREATER THAN AVERAGE STOCK)	
		NUMBER OF ANIMALS	SPU ¹	NUMBER OF ANIMALS	SPU ²
Gestating Sows	1.600	2400	3840	2496	3994
Lactating Sows	2.498	500	1249	520	1299
Boars	1.600	50	80	52	83
Gilts	1.800	250	450	260	468
Suckers	0.09	6500	585	6760	608
Weaners	0.514	700	360	728	374
Porkers	1.075	600	645	624	671
Growers	1.476	600	886	624	921
Finishers	1.729	300	519	312	539
Premises Total		11900	8614	12376	8958

3.2 Management of carcasses by composting

3.2.1 Design of the composting bunkers

Westpork has built and is currently using five composting bunkers, which are located to the north of the wastewater ponds. Their location is detailed in Schedule 1 and the design of the bunkers is shown in Figure 1.

The dimensions of the five concrete bunkers are shown in Table 4:

Table 4: Dimensions of the composting bunkers

	Width (m)	Length (m)	Height (m)	Capacity (m ³)
Bunkers x 3	4.8	15.6	2.0	149
Bunkers x 2	7.0	12.0	2.0	168

The floor of the bunkers is constructed with 160mm pre-cast reinforced concrete panels and reinforced with F62 mesh. The total volume available for composting will be 783m³. The bunkers have a sloping concrete apron at the front of each bay with a final rise of 200mm. This is to prevent the ingress and egress of stormwater and prevent any leachate and contaminated stormwater from exiting the bunkers. Another bund has been placed at the edge of the apron to prevent external runoff from entering the bunker.

3.2.2 The composting process

The Application notes that the composting process is according to the NEGP recommendations (refer to section 15.1 of the NEGP). Approximately 72 tonnes per annum will be composted in the bunkers. Based on current mortality rates, 36 tonnes of carcasses and associated organic matter (such as afterbirth) require composting every six months. This will occupy up to three bunkers.

Sawdust will be used to provide the carbon source with a 300mm layer placed on the floor of the bunker, followed by approximately 200kg/day of carcasses. Large carcasses are split to release moisture and gasses. The carcasses are covered by a 300mm layer of sawdust, in the ratio of 1.26 tonne of sawdust per tonne of carcasses. These layers are repeated until the bunker is at full capacity, and finished with a final layer of sawdust.

The Application notes that approximately 518m³ will be composted annually and the five bunkers provide 783m³ of available capacity. Bunkers are rotated on a six monthly basis to allow the carcasses to fully breakdown during the composting process. Any incident rainwater is absorbed by the sawdust and extra water will be added during the hot dry summer months if required. Total volumes of compost are detailed in Table 5.

Some of the compost will be used as an inoculant and some will be used as a carbon source for a new compost batch. At the end of the composting process, composted material is removed off site.

The NEGP recommends carcass management practices that prevent groundwater and surface water contamination, odour nuisance and the spread of infectious diseases and vermin breeding (refer section 15.1 of the NEGP). Previously, nutrient rich seepage from carcasses in the burial pits could potentially contaminate the underlying groundwater. Composting of carcasses in concrete bunkers removes this risk. The apron surrounding the bunkers prevents contaminated stormwater runoff from entering the surrounding environment and covering the carcasses will suppress odour emissions, deter nuisance insects and prevent feral animals from disturbing the compost stockpile.

Table 5: Volumes of compost (Applicant supplied)

	Daily	Six Monthly	Annually
Mass of carcasses	200 kg	36 t	72 t
Density of carcasses	840kg/m ³³	840kg/m ³	840kg/m ³
Total volume of carcasses	0.24m ³	82.86 m ³	85.71
Mass of sawdust ⁴	252 kg	45.36 t	90.72 t
Density of sawdust	210kg/m ³	210kg/m ³	210kg/m ³
Total volume of sawdust	1.2m ³	216m ³	432m ³
Total combined volume of feedstocks	0.24 + 1.2 = 1.44m ³	82.86 + 216 = 299m ³	85.71 + 432 = 518m ³
50% reduction in volume by end of composting process	0.72m ³	149.50 m ³	259 m ³
Total finished compost	0.72m ³	149.50 m ³	259m ³



Figure 1: Layout of the five concrete composting bunkers including apron (Applicant supplied)

4. Location and receptors

4.1 Receptors and distance from activity boundary

There are 17 residential dwellings surrounding the Premises, as detailed in Figure 2. The closest receptor is approximately 640m from the composting bunkers and 490m from the activity boundary.

Minimising odour from Piggeries (APL 2015) recommends composting as a carcass disposal method and it is the Department's preferred method for disposal of deceased animals. When managed efficiently, the deceased animal composting area is not a major source of odours on a piggery. The Delegated Officer visited the site on 24 May 2018, examined the carcass composting area and confirmed it to be a minor odour source.

According to the Department's Incidents and Complaints Management System (ICMS), there have not been any odour complaints from nearby residents regarding operations at the Serpentine Piggery in recent times.

4.2 Environmental receptors and distance from activity boundary

Table 6 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment. The location of the Premises and environmental receptors are shown in Figure 3 respectively.

Table 6: Environmental receptors and distance from activity boundary (DWER generated)

Environmental receptors	Distance from Prescribed Premises
Karnet Brook	540m north of the wastewater treatment system
Environmental Protection (Peel Harvey) Inlet – Harvey Estuary) Policy 1992	
Conservation Category Wetland	North of the Premises
Resource Enhancement Wetland (REW) and Multiple Use wetlands	The REW zoning surrounds the Premises and the Multiple Use Wetland zoning is located in the north of the Premises (refer
Superficial Swan Aquifer overlying the Leederville and Yarragadee aquifers	Aquifer underlying the Premises and flow is to the northwest
Groundwater area – Serpentine	Groundwater underlying the Premises and regional flow is to the northwest

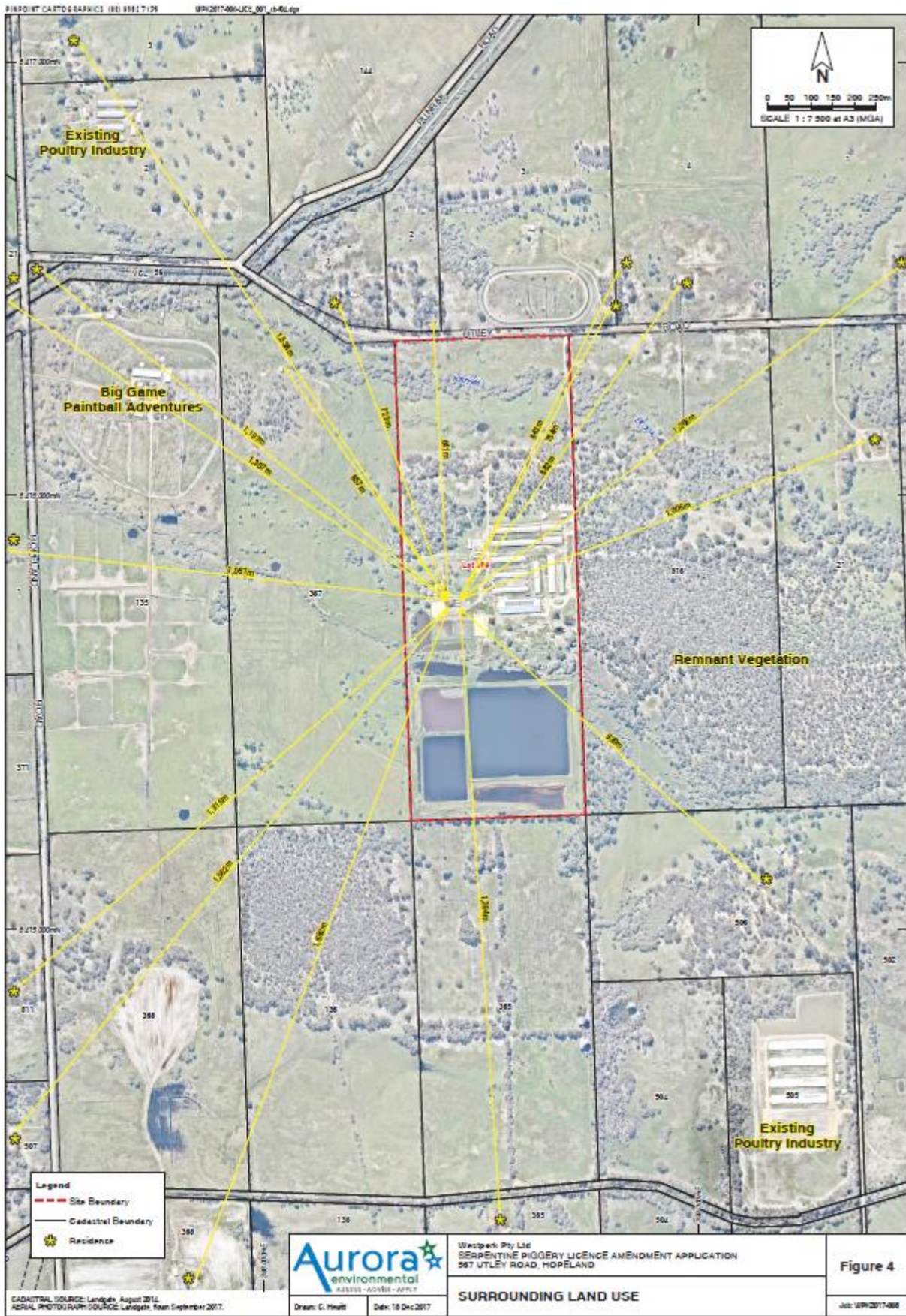


Figure 2: Surrounding landuse (Applicant supplied)

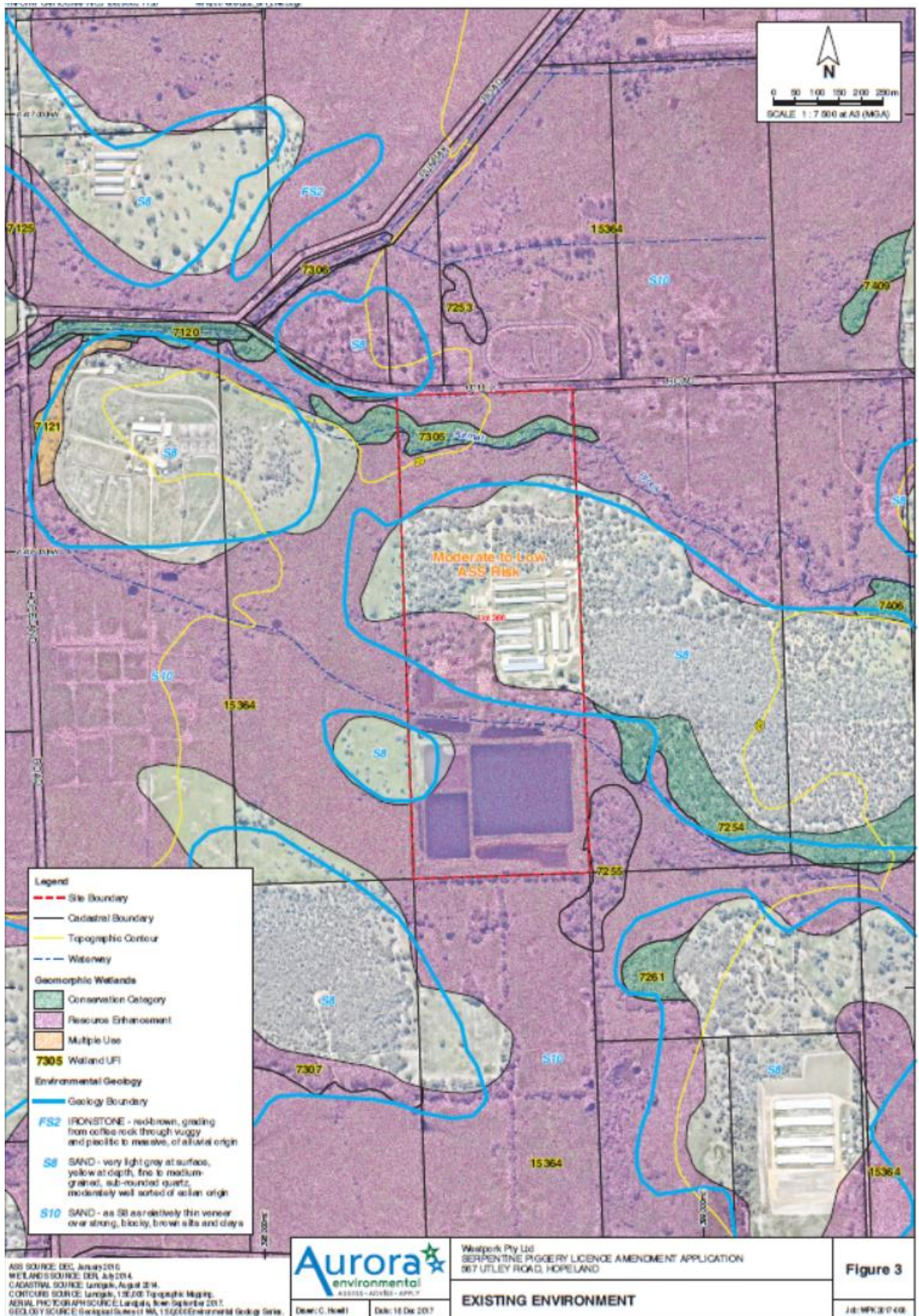


Figure 3: Environment surrounding the Westpork Serpentine Piggery

5. Risk Assessment

Table 7 below describes the Risk Events associated with the amendment. The risk assessment only assesses the management of carcasses in the composting bunkers. The Applicant's request to ratify the site's throughput is of an administrative nature and does not relate to the site's emissions and discharges or to the risks to the environment.

Table 7: Risk assessment for proposed amendment during operation

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning		
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts						
Composting bunkers, as a separate activity	Composting of carcasses and associated organic matter in concrete bunkers	Odour emissions	The closest residence is located 641m from the composting bunkers]	Air:/ wind dispersion	Amenity impacts	Minor	Rare	Low DWER has not received any odour complaints from nearby residents. The Delegated Officer considers that the risk associated with composting of carcasses will not result in a significant increase in odour emissions. Therefore the overall risk rating is considered to be low		
		Contaminated stormwater runoff	Nearby Karnet Brook and surrounding wetlands	No pathway – full containment within built infrastructure. Surplus fluids are adsorbed in saw dust as well as the process occurring in purpose built infrastructure (bunkers)					Low	The Delegated Officer considers that the risk of contamination to the underlying aquifer is Low . Bunkers are constructed from 1.6mm pre-cast reinforced concrete panels, providing full containment.
		Leachate high in nutrients	Seepage to the underlying groundwater						Low	

6. Decision

In relation to Part 1 of the Application, the Delegated officer has determined that the risks to the environment are acceptable. Composting deceased animals is the Department's preferred method of management. Therefore, Part 1 of the Application is granted to authorise this operation of composting of carcasses, subject to conditions.

Current licence conditions relating to burial of deceased animals have been deleted.

In relation to Part 2 of the Application, the Delegated Officer has granted the Application, subject to conditions. The request to ratify the current stockholding in the licence is of an administrative nature and is supported as it clarifies stockholding in accordance with the Department's preferred approach to managing piggeries (to use SPU).

Conditions that are consequential to facilitating the above amendments have also been added to the licence. These are shown in the details of the amendment.

6.1 Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 14 August 2018. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 2.

7. Details of the Amendment

The details of the licence amendment are listed below:

- The Licence is amended by the deletion of the text shown in strikethrough below:

Prescribed premises category

Schedule 1 of the Environmental Protection Regulations 1987

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
2	<i>Intensive Piggery: premises on which pigs are fed, watered and housed in pens.</i>	1,000 animals or more	8,800 animals per annual period

- The Licence is amended by the insertion of the definitions shown below in red underlined text:

'NEGP' means the National Environmental Guidelines for Piggeries (Australian Pork Limited, 2010);

'SPU' means standard pig unit as defined by NEGP being a pig that weighs 40 kg;

- Condition 1.3.3 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

1.3.3 The Licensee shall ensure that wastewater and solid wastes ~~is~~ are only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.3.3.

Table 1.3.3: Containment infrastructure		
Storage vessel or compound	Material	Infrastructure requirements
Solids separator	Wastewater	Concrete lined
Anaerobic ponds (two)	Wastewater	Clay-lined ponds
Facultative pond (one)	Wastewater	
Evaporation ponds (two)	Wastewater	
Solids storage	Screened solids and solids removed from ponds	Lined to achieve a permeability of at least $<10^{-9}$ m/s or equivalent. Bunded with drains such that all runoff is directed to the wastewater treatment pond system.
<u>Composting bunkers</u>	<u>Carcasses and related organic matter</u>	<u>Lined to achieve a permeability of at least $<10^{-9}$ m/s or equivalent.</u> <u>Bunded to prevent the egress of stormwater</u>

- Condition 1.3.5 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

1.3.5 The Licensee shall ensure that where wastes produced on the Premises are not taken off-site for lawful use or disposal, they are only subject to the on-site process(es) described in Table 1.3.5 and in accordance with the process requirements in that table.

Table 1.3.5: Processing of materials		
Waste type	Process	Process requirements
Treated wastewater	Evaporation	None
Piggery carcasses	On-site burial	(a) carcasses and waste material are covered with at least 500mm of soil immediately upon deposit; (b) burial sites are 300m away from watercourses and 50m away from nearest properties; (c) the number of animal carcasses buried is recorded for the duration of the licence; and (d) all carcasses are buried daily.
<u>Piggery carcasses and associated organic matter</u>	<u>Composting in concrete bunkers</u>	<u>(a) large carcasses to be split prior to placing in the composting bunker(s);</u> <u>(b) all carcasses to be buried daily;</u> <u>(c) carcasses to be placed in layers with a minimum of 300mm of sawdust or similar cover material placed in between layers;</u> <u>(d) following completion of the composting process, compost to be taken off site; and</u> <u>(e) the number of carcasses is recorded for the duration of the licence.</u>

5. The Licence is amended by the insertion of the following Condition 1.3.6:
- 1.3.6 The Licensee shall not hold more than 8,958 SPU on the premises at any one time.
6. Condition 5.2.1 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion or the red underlined text shown below:
- 5.2.1 ~~The Licensee shall submit to the Director an Annual Environmental Report within 28 calendar days after the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the form specified in that table.~~

Table 5.2.1: Annual Environmental Report Processing of materials		
Condition or table (if relevant)	Parameter	Format or form¹
	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.8.1	pH, Total Dissolved Solids (TDS), Total Nitrogen (TN), Total Phosphorus (TP) and Standing Water Level (SWL)	None specified
	Total number of animals ² as follows: <ul style="list-style-type: none"> • <u>Daily average stockholding on a monthly basis for each month;</u> • <u>Annual average stockholding; and</u> • <u>Peak stockholding including the date at which this occurred.</u> 	Tabular format: monthly maximum including annual total
5.1.3	Compliance	Annual Audit Compliance Report
5.1.4	Complaint summary	None specified

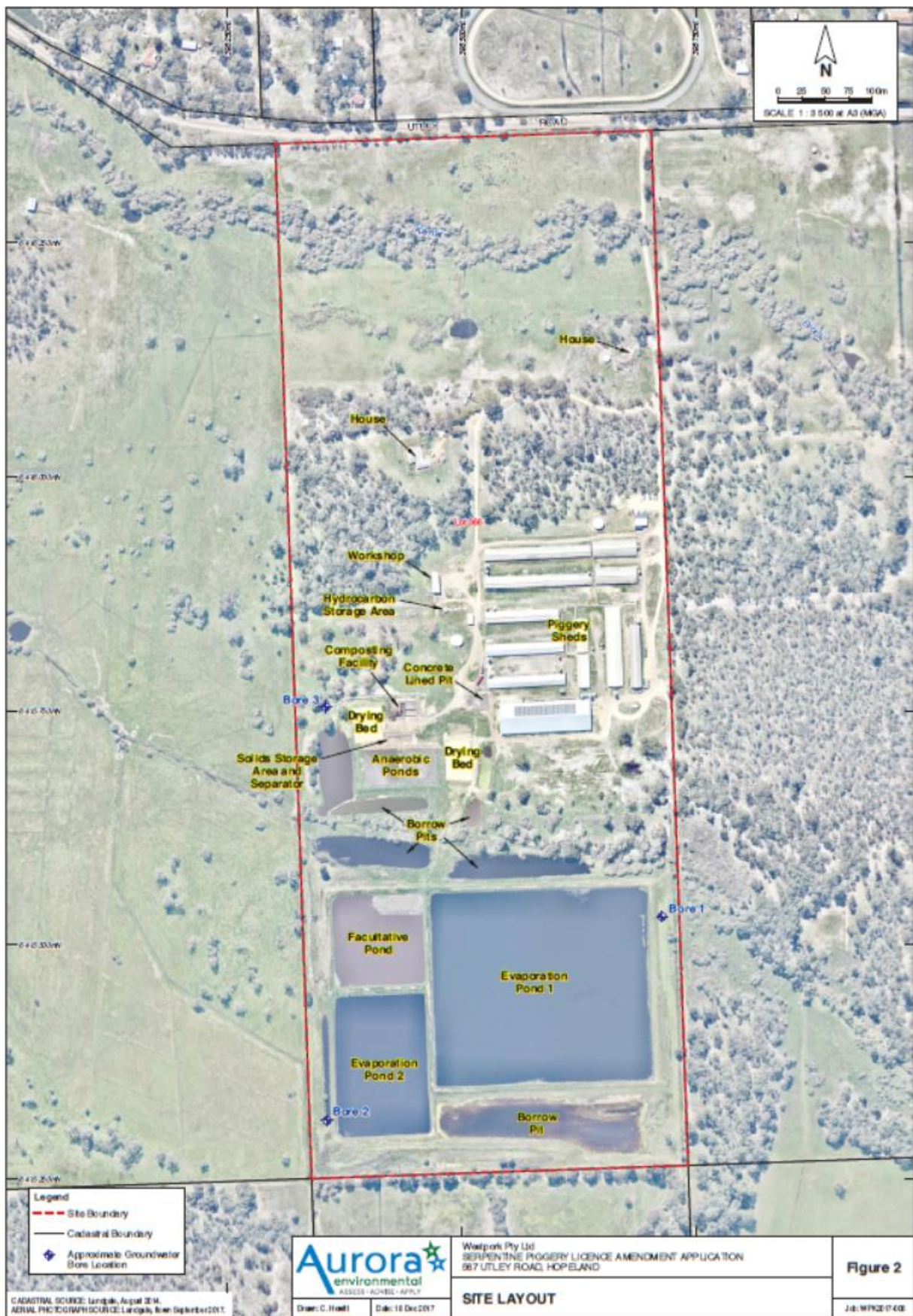
Note 1: Forms are in Schedule 2

Note 2: Animal numbers to be provided in SPU

7. Schedule 1 of the Licence (Premises map) is amended by the deletion of page two (Map of monitoring locations) of the Schedule and the insertion of the one page that follows:

Schedule 1: Maps

Map of monitoring locations



Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L6373/1989/10 – Westpork Serpentine	L6373/1989/10	accessed at www.dwer.wa.gov.au
2	<i>Serpentine Piggery Licence Amendment Application</i> , 567 Utlely Road, Hopelands, WA (Aurora Environmental, report No: AP2017-234, Dated 23 April 2018)	The Application	DWER records (A1662529)
3	Letter from Aurora Environmental: Subject: <i>Confirmation of pig numbers – Westpork Serpentine Piggery Licence L6373/1989/10</i> , dated 27 June 2018, Reference: WPK2017-008_002_ND_V1	Table 3	DWER records (A1699408)
4	<i>National Environmental Guidelines for Piggeries</i> (Australian Pork Limited, 2010)	NEGP	http://australianpork.com.au/industry-focus/environment/national-environmental-guidelines-for-piggeries/
5	Australian Pork Limited <i>Minimising Odour from Piggeries</i> , 2015	APL	http://australianpork.com.au/wp-content/uploads/2013/10/BMP_02_MOFP_2015_06_lr.pdf
6	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
7	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2016b	

Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 15 August 2018 for review and comment. The Licence Holder responded on [waiving the remaining comment period (until [insert date])]. [No comments were submitted on the draft Amendment Notice/ the following comments were received on the draft Amendment Notice.]

Condition	Summary of Licence Holder comment	DWER response