



## Application for Licence Amendment

### Part V Division 3 of the *Environmental Protection Act 1986*

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|                       |   |
|-----------------------|---|
| <b>Licence Number</b> | L6876/1989/12   |
| <b>Licence Holder</b> | Westpork Pty Ltd  |
| <b>ACN</b>            | 009 148 789   |
| <b>File Number</b>    | DER2014/001577-2  |
| <b>Premises</b>       | Australind Piggery<br>96 Rosamel Road<br>PARKFIELD WA 6233<br><br>Legal description –<br>Lot 2 on Diagram 76597<br><br>As defined by the Premises maps attached to the Revised<br>Licence |
| <b>Date of Report</b> | 20/07/2022  |
| <b>Decision</b>       | Revised licence granted   |

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# 1. Decision summary

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the premises. As a result of this assessment, revised licence L6876/1989/12 has been granted

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the Department of Water and Environmental Regulation (the department; DWER) has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

### 2.2 Application summary

Licence L6876/1989/12 is held by Westport Pty Ltd (licence holder) for the Australind Piggery (the premises), located at 96 Rosamel Road, Parkfield, WA 6233.

On 2 December 2021, the licence holder submitted an application to the department to amend licence L6876/1989/12 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- reduce the total number of animals held on site from 11,800 standard pig units (SPU) to 7,621 SPU with a 10% variation (to manage stock) to 8,384 SPU;
- remove all works conditions (conditions 1 to 7, including Schedule 3);
- update all sheds as dry shelters removing all references regarding intensive conventional sheds with associated effluent pits and fans;
- remove the requirement to monitor groundwater quality including Schedule 4;
- change the annual reporting period from 1 October until 30 September to 1 July to the 30 June;
- update Schedule 1 site layout map and,
- update Schedule 2 General Description to reflect the change in maximum number of animals held on the premises and infrastructure.

The existing licence L6876/1989/12 allows for an assessed design capacity of 11,800 SPU, which is aligned to approved works within the existing licence for the construction of sixteen mechanically ventilated intensive conventional sheds, waste storage, waste treatment plant, biogas transport and flaring. Westport Pty Ltd purchased Australind Piggery from GD Pork Pty Ltd and the licence was transferred on the 10 May 2021. Westport Pty Ltd has decided to simplify the operations as intensive dry sheds at the Australind Piggery and does not intend to install the additional intensive conventional sheds and associated wastewater treatment and biogas capture infrastructure. Table 1 below outlines the proposed changes to the existing licence

**Table 1: Proposed design capacity changes**

| Category | Current design capacity | Proposed design capacity | Description of proposed amendment  |
|----------|-------------------------|--------------------------|--|
| 2        | 11,800 SPU              | 8,384 SPU                | <i>The licence holder proposes to operate the premises with dry shelter domes at a</i> |

|  |  |  |   |
|--|--|--|---|
|  |  |  | <i>design capacity of 8,384 SPU, under Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations) (more than 1,000 animals)</i> |
|--|--|--|---|

## 2.3 Overview of operations and completed works

### 2.3.1 Completed works

The existing licence granted the licence holder approval to decommission infrastructure. The following table (Table 2) outlines the works undertaken by the licence holder. This information is supplied by the licence holder and obtained from Near Maps December 2021 aerial photos of the premises.

**Table 2: Overview of works undertaken by licence holder**

| Item | Description of works   | DWER comments  |
|------|--|--|
| 1    | 22 dry dome shelters have replacement covers   | This activity was not listed within the existing licence. The replacement of covers is considered a maintenance operational activity, and this will be clarified within the revised licence.   |
| 2    | Two lined wastewater ponds located on the south of the premises have been decommissioned. The ponds were pumped dry with wastewater directly infiltrate into the soil. Liners were cut up and taken to landfill and the ponds were backfilled and levelled.  | This activity was not authorised within the existing licence. No evidence of water quality samples was provided to determine if the wastewater was clean and viable to be directly discharged to the environment. See section 3.2.2 for further details. |
| 3    | Four shelters, associated structures and solids separator located at the southern section of the premises have been decommissioned and removed from site.  | This activity was granted within the existing licence.   |
| 4    | The existing licence granted the licence holder to decommission three evaporative ponds on the west side of the premises. This activity was not undertaken, with the licence holder indicating that the ponds will not be used and will be left with the sludge at the bottom of the ponds to biodegrade insitu. | The decommissioning activity will be removed from the revised licence, with a condition for the ponds to be not used as part of the piggery operation.   |
| 5    | Sixteen enclosed intensive sheds were not built and are requested to be removed from the licence.  | This activity will be removed from the revised licence.  |
| 6    | Waste treatment plant and associated structures including biogas capture were not built and are requested to be removed from the licence.  | This activity will be removed from the revised licence.  |

### 2.3.2 Operations

The licence holder provided details of the existing 22 dry shelter domes consisting of:

- 4x weaner dome shelters 28 x 9 m = 252 m<sup>2</sup> each
- 6x grower dome shelters 31 x 9 m = 279m<sup>2</sup> each

- 11x finisher dome shelters 33 x 9 m = 297 m<sup>2</sup> each
- 1x load out dome shelter 31 x 9 m = 279 m<sup>2</sup> each.

with a current total area of 6,228 m<sup>2</sup> or 5,949 m<sup>2</sup> without loading shelter included.

The licence holder calculated the design capacity based on CSIRO 2008 (Code of Practice for Pigs) that 5,949 m<sup>2</sup> can house a maximum of 10, 257 animals (11,942 SPU). The licence holder has requested a total holding capacity of 8, 384 SPU. Table 3 outlines the calculation for the holding capacity.

**Table 3: Holding capacity of the piggery dome shelters (licence holder supplied)**

| Shelter type | Area per shelter m <sup>2</sup> | Number of shelters | Total area m <sup>2</sup> | Adjustment for dry straw based shelters <sup>1</sup> m <sup>2</sup> | Area per animal <sup>2</sup> | Total animals allowed (averages) | Total SPU allowed | Animals per pig class for 7621 SPU | Area per animal for 7621 SPU (m <sup>2</sup> ) | Area per animal for 7621 SPU (m <sup>2</sup> ) |
|--------------|---------------------------------|--------------------|---------------------------|---|------------------------------|----------------------------------|-------------------|------------------------------------|--|--|
| Weaners      | 252                             | 4                  | 1,008                     | 705   | 0.18-0.23                    | 3,439                            | 1,767             | 2,167                              | 0.47   | 0.33   |
| Growers      | 279                             | 6                  | 1,674                     | 1,172   | 0.24-0.42                    | 3,551                            | 4,527             | 2,273                              | 0.74   | 0.52   |
| Finishers    | 297                             | 11                 | 3,267                     | 2,287   | 0.5-0.9                      | 3,267                            | 5,648             | 2,058                              | 1.59   | 1.11   |
| Total        | -                               | -                  | 5949                      | =   | -                            | 10,257                           | 11,942            | 6,498                              | -  | -  |

Notes

1 -The code specifies that the area required is 30% larger for straw-based systems

2 - The Model Code of Practice specifies a space allowance as follows:

- 5-15kg weaners: code specifies 0.18-0.23m<sup>2</sup> each animal.
- 16-50kg growers: code specifies 0.24-0.42m<sup>2</sup> each animal.
- 51-110kg finishers: code specifies 0.5-0.9m<sup>2</sup> each animal.

The licence holder indicated that stormwater that enters the sheds are absorbed by the straw-based litter placed on the concrete floor to absorb urine and feces. The back wall of the shelters has concrete tilt panel blocks. These blocks are placed on the hardstand to fence in the pigs and to make concrete aprons on the back to collect any spills. The concrete tilt panel blocks are removed by a telehandler when cleaning out the shelters. The front end of the shelters is gated with concrete aprons connecting to two concrete laneways. The laneways and aprons are immediately cleaned, after each pig movement by sweeping or scrapping. No water is used to clean the laneways or aprons. The laneways directly discharge all stormwater to the ground. The licence holder has stated that they have not observed any significant quantity of contaminated stormwater exiting the hardstand of the site and infiltrate to the soil.

The licence holder has indicated that 2 to 3 sheds are cleaned each week. Indicating a 7-to-11-week rotation between cleans. The weaner sheds are washed out, grower shelters have the raised feed pads washed and the remaining shelters are initially hosed down with straw and manure still in place, where water is left to absorb into the straw. The straw and manure are scraped with a bucket loader and placed into the manure storage area. Approximately 40 to 50 m<sup>3</sup> of manure is collected each week and is stored for up to two weeks in the temporary manure storage area. A broad acre farmer collects the raw stored spent manure/litter.

The manure storage area is a concrete hardstand 28 x 20 m (560 m<sup>2</sup>). The hardstand is bunded on two sides with 1 metre concrete walls. The hardstand is graded to the rear wall to capture liquids including stormwater. All liquids are allowed to absorb into the spent manure/litter. The licence holder has indicated that no external stormwater runs onto the manure storage area and no contaminated stormwater runs off. There are no contaminated wastewater treatment facilities operating within the facility.

All carcasses are composted within the compost bunker located on the southern boundary of the manure storage area. The compost bunker is 8 x 8 x 1.5 m divided into 2 bays with concrete floor and walls. The compost bunker caters for up to 24 tonnes of carcasses at 4 m<sup>3</sup> per tonne of carcasses. The licence holder indicated that this would have a capacity to store up to 1 year of carcasses. The bunded compost bunker is designed to retain all incidental rainwater and the licence holder advises that external stormwater cannot enter the compost bunker.

Mortalities are removed once discovered and placed in a front-end loader bucket and transferred to the compost bunker. Spent bedding is added each time to cover the carcasses. The compost facility is managed to breakdown and denature pig carcasses and the compost is given away to farmers. The licence holder considers that the compost bunker is not run as a commercial operation, therefore Australian Standards 4454-2012 Compost, soil conditioners and mulches (AS4454-2012) for compost treatment including pasteurisation is not required. The delegate officer notes that AS4454-2012 excludes only home composting end products for self-use and does not exclude commercial facilities composting end products.

### **3. Risk assessment**

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway, and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

#### **3.1 Source-pathways and receptors**

##### **3.1.1 Emissions and controls**

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 4 below.

**Table 4: Licence holder controls**

| <b>Emission</b>  | <b>Sources</b>   | <b>Potential pathways</b>   | <b>Proposed controls (licence holder supplied)</b>   |
|--|--|---|--|
| Noise  | Dry shelters and site traffic, including loading and unloading, housing of pigs and removal of solid waste   | Air/windborne pathway   | None provided.   |
| Dust   | Manure and spent bedding storage and composting  | Air/windborne pathway   | Spent bedding (straw and manure) is moist and added to the compost pile.   |
| Odour  | Manure and bedding in dry shelters and the disturbance thereof.<br>Solid and liquid waste storage<br>Composting of spent bedding and carcasses and the turning/disturbance therefore | Air/windborne pathway   | Raw manure is stored in the temporary storage area for no longer than 2 weeks (100 m <sup>2</sup> ).<br>Deep litter sheds to absorb urine and feces.<br>Deep litter and manure clean out of shelter domes every 7 – 11 weeks.<br>Pig carcasses moved to compost are within two hours of discovery.<br>Spent bedding (straw and manure) is moist and added to cover each new carcass.   |
| Wastewater, contaminated stormwater and leachate runoff    | Manure and bedding in dry shelters, solid manure storage area and compost area   | Seepage/runoff of leachate to soils and groundwater                   | 560 m <sup>2</sup> concrete hardstand with a grade towards 2x 1-metre-high concrete bunding walls for temporary storage of manure.<br>Concrete aprons and laneway on opening to dome shelters.<br>Shelters are covered reducing rainwater entry.<br>Concrete blocks create a wall with a removal gate on the back sides of dome shelters prevent stormwater entry and exit.<br>Rain entering the shelters and wash down water is allowed to absorb into the straw and manure.<br>Raw manure is stored in the temporary storage area for no longer than 2 weeks (100 m <sup>2</sup> ).<br>Leachate is captured within the compost bunker and manure storage area. |
| Solid manure waste spills and overtopping from hardstands. | Dry shelters, solid manure storage area<br>Compost area  | Spills and overtopping contaminating soil and leaching to groundwater | Storage area monitored daily to minimise spills and overtopping of bunds. All spills are immediately cleaned up and placed within concrete pad.<br>Deep litter and manure clean out of shelter domes every 7 – 11 weeks.   |

| Emission | Sources | Potential pathways | Proposed controls (licence holder supplied)   |
|----------|---------|--------------------|---|
|          |         |                    | <p>Manure and straw waste are held for a maximum of 2 weeks (100 m<sup>2</sup>).</p> <p>One metre concrete apron at the rear of shelter domes created with concrete tilt panel blocks to prevent solid spilling.</p> <p>Sweeps and scrapes laneways on each pig movement.</p> |

### 3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the delegated officer has excluded employees, visitors, and contractors of the licence holders from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 5 below provides a summary of potential human and environmental receptors that may be impacted because of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

**Table 5: Sensitive human and environmental receptors and distance from prescribed activity**

| Human receptors                                     | Distance from prescribed activity   |
|---|---|
| Australind townsite                                 | 5.4 km south of the piggery shelters  |
| Special Residential Areas (Leschenault)             | 1.4 km west of the piggery shelters   |
| Rural residential Areas (Parkfield)                 | 1.7 km northwest of the piggery shelters.   |
| Industrial premises - Abattoir                      | 870 m east of the piggery shelters  |
| Industrial premises – Water Corporation plant       | 700 m southeast of the piggery shelters.  |
| Industrial premises – Lithium refinery              | 1.8 km east of the piggery shelters.  |
| Industrial premises – Simcoa plant                  | 1.6 km southeast of the piggery shelters  |
| Industrial premises – Tronox pigment plant          | 2 km southeast of the piggery shelters.   |
| Environmental receptors                             | Distance from prescribed activity   |
| Conservation category sumpland / dampland wetlands  | 139 m southwest, 700 m south, 280 m west 550m north and 300 m west of the piggery shelters.   |
| Resource enhancement wetlands                       | 350 m northwest, 760 m north and 1300 m west of the piggery shelters.   |
| System 6 Conservation wetland – Leschenault Estuary | 1700 m from the piggery shelters.   |
| Underlying groundwater (potable purposes)           | Area is proclaimed under the <i>Rights to Water and Irrigation Act 1914</i> (RIWI), Bunbury Groundwater Area – Perth Swan Superficial 3-5 metres below ground |



|   |   |
|---|---|
|   | <p>level.</p> <p>An abattoir located approximately 870 m the west of the premises has several bores used for abattoir washing and stock watering.</p> <p>A bore is located north of the premises at approximately 200 m (detailed as no current owner on WIN DoW GIS) and detailed for domestic/householder use. It is likely that the bore is down hydraulic gradient of Australind Piggery.</p> <p>Statewide groundwater salinity mapping indicates that the total dissolved solids (TDS) at the premises are between 500-1000 mg/L. Mapping of the superficial aquifer suggests the TDS is between 250-500mg/L (GIS Groundwater Salinity – Superficial Aquifers). Given the TDS values, the groundwater value is likely to be beneficial.</p> <p>Soils are deep yellow sands with high permeability.</p> |
| <p>Nutrient rich emissions that could impact on Swan Coastal Plain Banksia and / or tuart woodland endangered under the <i>Protection and Biodiversity Conservation Act 1999</i> located 60 m south, 215 m west, 70 m north and 20 m south of the piggery shelters.</p> | <p>No specific controls provided</p>  |

## 3.2 Compliance inspections and complaint history

### 3.2.1 History of prescribed premises

The Australind Piggery has received several complaints and DWER has undertaken compliance inspections, that have been recorded into DWER's Incident Management Complaints System (ICMS). The following table outlines the prescribed premises recorded ICMS events from the current licence holder, where odour complaints have been consistent.

**Table 6: Complaint and compliance history of prescribed premises.**

| Date       | Time     | Location of compliant | Issue                      | Comments   |
|------------|----------|-----------------------|----------------------------|--|
| 14/12/2021 | N/A      | N/A                   | Licence condition breaches | Assessment of prescribed premises indicated that potential unauthorised discharge under the EP Act occurred between May to August 2021. The two anaerobic wastewater ponds were pumped dry, untested wastewater was discharged to ground, liner disposed of, and basins filled in. DWER had not issued a licence amendment to undertake these decommissioning works. |
| 20/05/2022 | 10:08 am | Leschenault           | Odour                      | Pig waste smell, prevented from leaving the house because of odour.  |
| 23/05/2022 | 9:57am   | Leschenault           | Odour                      | A strong pig waste smell   |
| 20/05/2022 | 8:30 am  | Leschenault           | Odour                      | Stench of animal feces. This is preventing me from leaving the house.  |
| 25/06/2022 | 10:00 am | Leschenault           | Odour                      | Overpowering rotting dead animal smell.  |

|            |          |             |       |   |
|------------|----------|-------------|-------|---|
| 25/06/2022 | 11:47 am | Leschenault | Odour | Stench of animal feces.   |
| 7/07/2022  | 5:00 pm  | Leschenault | Odour | Stench from piggery has been ongoing for 8 weeks on an almost daily basis. Going outside is uncomfortable due to smell. |
| 8/07/2020  | 9:45 am  | Leschenault | Odour | Foul manure smell.  |
| 11/07/2022 | 6:15am   | Leschenault | Odour | Animal odour.   |
| 11/07/2022 | 8:00 am  | Leschenault | Odour | Strong manure smell, preventing me from leaving the house. Going outside makes me feel nauseous.                        |

### 3.3 DWER technical review

#### 3.3.1 PIG odour assessment

Odour has been identified as a principal community amenity concern in relation to piggeries. The National Environmental Guidelines for Indoor Piggeries, 2018, Australian Pork Limited (NEGIP guidelines) provide a site-specific separation distance based on odour dispersion of odours from their source. The separation distance calculation follows.

$$\text{separation distance (D)} = N^{0.55} \times S1 \times S2 \times S3$$

- N** = number of standard pig units (SPU)
- 0.55** = piggery size exponent determined using the results of modelling
- S1** = piggery design factor for estimating the relative odour potential for the piggery design selected for a particular site (S1 = effluent removal factor, S1<sub>R</sub> x effluent treatment factor, S1<sub>T</sub>)
- S2** = piggery siting factor for estimating the relative odour dispersion potential for the selected piggery site (S2 = receptor type factor, S2<sub>R</sub> x surface roughness factor, S2<sub>S</sub>)
- S3** = terrain weighting factor for estimating the potential changes to odour dispersion, in situations where meteorological conditions may be influenced by local terrain influences

Where: N = 8, 384 SPU  
S1 = 0.63  
S2 = 9  
S3 = 1.0

DWER calculated that the minimal separation distance for a rural residential area was 0.813 km, the closes rural residential area is 1.7 km and special residential areas 1.4km.

#### 3.3.2 Review of infrastructure and operations with current guidelines

Table 7 compares the licence holder controls to current industry standards for the management of emissions at piggeries as detailed in the NEGIP guidelines and DWER *Guideline – Better Practice Composting* (DWER 2020c) (DWER compost guidelines).

**Table 7: Licence holder controls compared to current industry standards for the management of piggery infrastructure.**

| Site infrastructure / control  | Operation details (odour, solid waste, leachate, and stormwater management) controls from licence holder)   | Guideline requirements/performance measures.  |
|--|---|---|
| National Environmental Guidelines for Indoor Piggeries (NEGIP), 2018, Australian Pork Limited. |   |   |
| Deep litter shed   | <ul style="list-style-type: none"> <li>• Concrete base with concrete apron and laneway at the front of the dry shelters.</li> <li>• 1 metre concrete apron at the rear of shelter domes created with concrete tilt panel blocks.</li> <li>• Liquid waste from hosing is managed through being allowed to 'absorb' into straw and manure waste.</li> <li>• Rain entering the shelters from front or back of sheds is allowed to absorb into the straw and manure.</li> <li>• Concrete blocks create a wall with a removal gate on the back ends of dome shelters to prevent stormwater entry and exit.</li> <li>• Front of shed has gate for movement of pigs.</li> <li>• Deep litter is removed every 7 – 11 weeks.</li> <li>• Laneway is cleared of manure on loading and unloading of pigs.</li> <li>• Potentially contaminated stormwater from aprons and laneways drains direct to ground.</li> </ul> | <ul style="list-style-type: none"> <li>• Concrete base and concrete apron and laneway at the front of the piggery sheds.</li> <li>• 1 metre concrete apron at the rear of shelter domes created with concrete tilt panel blocks.</li> <li>• <b>Liquid wastewater from hosing is captured and managed (<i>It unlikely that all hosed liquid will absorb into manure/straw. There are no details on how hosed wastewater is managed and captured once it exits the shed (front or back of the sheds).</i>)</b></li> <li>• <b>No leachate and stormwater management proposed once on concrete aprons or laneways.</b></li> </ul> |
| Manure and spent bedding (waste storage area)  | <ul style="list-style-type: none"> <li>• Stored on impermeable 300 mm thick floor with bunded areas.</li> <li>• Site is on a 520 m<sup>2</sup> concrete graded floor.</li> <li>• Waste area has a 1m high concrete bund on two sides only, with two sides with no bunding.</li> <li>• Manure and straw waste is held for a maximum of 2 weeks (100 m<sup>2</sup>).</li> <li>• Storage area sized to hold the maximum amount plus contingency and space truck loadings and vehicle movements.</li> <li>• Storage area monitored daily to minimise spills and overtopping of bunds. All spills are immediately cleaned up and placed within</li> </ul>  | <ul style="list-style-type: none"> <li>• Stored on impermeable 300 mm thick floor with bunded areas.</li> <li>• <b>Bunding a minimum of 0.3m that is sufficient to divert external stormwater and to contain rainfall landing within the storage area.</b></li> <li>• <b>Rainfall caught within the storage area is directed to an effluent treatment system or collection pond that is sized and managed for a 1 in 10-year spill frequency.</b></li> </ul>  |

| Site infrastructure / control                   | Operation details (odour, solid waste, leachate, and stormwater management) controls from licence holder)   | Guideline requirements/performance measures.  |
|---|---|---|
|   | concrete pad.<br><ul style="list-style-type: none"> <li>Contaminated stormwater and leachate captured within the storage area.</li> </ul>   |   |
| Mortality composting                            | <ul style="list-style-type: none"> <li>Occurs within an impermeable base (<math>1 \times 10^{-9}</math> m/s) 2 metres above highest seasonal groundwater level.</li> <li>Stored on impermeable 300 mm thick floor with 3 bunded walls 1.5 m high.</li> <li>Pad sizes provides at least 4 m<sup>3</sup> of bay or windrow capacity for each tonne of carcasses and ensure sufficient space for vehicle maneuvering between and around windrows.</li> <li>Pig carcasses are moved to the compost site within 2 hours and covered with stream material.</li> </ul> | <ul style="list-style-type: none"> <li><b>Rainfall caught within the storage area is directed to an effluent treatment system or collection pond that is sized and managed for a 1 in 10-year spill frequency.</b></li> <li>Occurs within a bunded area with an impermeable base (<math>1 \times 10^{-9}</math> m/s) 2 metres above highest seasonal groundwater level.</li> <li>Pad sizes must provide at least 4 m<sup>3</sup> of bay or windrow capacity for each tonne of carcasses and ensure sufficient space for vehicle maneuvering between and around windrows.</li> </ul> |
| Groundwater monitoring                          | <ul style="list-style-type: none"> <li>Existing licence requires three bores to sample groundwater and parameters. One bore is up gradient two bores are down gradient. Parameters sampled are biannually and consist of water level, pH, electrical conductivity, total nitrogen, total phosphorus, total acidity, total alkalinity, dissolved metals, sulfate and chloride</li> </ul>   | <ul style="list-style-type: none"> <li>Upgradient and down gradient monitoring bores of effluent treatment areas, manure storage.</li> <li>Monitoring quarterly to annually based on risk.</li> <li>Monitoring parameters (depth to groundwater, total nitrogen, nitrate-nitrogen, total phosphorus, electrical conductivity, <b>total dissolved solids</b>, pH, <b>biological oxygen demand</b> and <b>bacteria (<i>Escherichia coli</i>)</b>.</li> </ul>  |
| Guideline: Better practice composting DWER 2020 |   |   |
| Compost dust management                         | <ul style="list-style-type: none"> <li>Spent bedding (straw and manure) is moist and added to the compost pile.</li> <li>Straw product when dry is unlikely to become windblown dust.</li> <li>No pasteurisation processes are managed.</li> </ul>  | <ul style="list-style-type: none"> <li><b>Stockpiles and windrows must be maintained in a damp state to prevent dust liftoff.</b></li> <li><b>Stockpile and windrow heights must be maintained at a height of 5m or less.</b></li> <li><b>Moisture content of is maintained 40 and 64 % in stockpiles / windrows of material during pasteurisation.</b></li> </ul>  |
| Compost odour management                        | <ul style="list-style-type: none"> <li>Spent bedding (straw and manure) is moist and added to cover each new carcass.</li> <li>No pasteurisation processes are managed.</li> </ul>  | <ul style="list-style-type: none"> <li><b>Compost facility is designed to operate to ensure the whole compost product is pasteurised.</b></li> <li><b>Maintains a 55°C core temperature for 15 days or longer during which the windrow is turned five times</b></li> </ul>  |
| Distance from                                   | <ul style="list-style-type: none"> <li>Conservation sumpland and</li> </ul>   | <ul style="list-style-type: none"> <li><b>Compost facilities are 1,000 m from a</b></li> </ul>  |

| Site infrastructure / control                                | Operation details (odour, solid waste, leachate, and stormwater management) controls from licence holder)                                     | Guideline requirements/performance measures.  |
|--|---|---|
| wetland, surface water and groundwater from compost facility | dampland 120 m down gradient from the manure storage area. <ul style="list-style-type: none"> <li>• Groundwater 3 m below surface.</li> </ul> | <b>conservation or resources enhancement wetland down the hydraulic gradient.</b> <ul style="list-style-type: none"> <li>• Must be a minimum of 3m between the based the containment structure and the maximum regional groundwater level).</li> </ul>  |
| Compost and manure storage leachate management               | <ul style="list-style-type: none"> <li>• Leachate is captured within the compost area.</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Containment structure must be designed to separate uncontaminated stormwater from the defined leachate containment system.</b></li> <li>• <b>All stormwater in contact with compost material must be collected in the leachate containment system</b></li> <li>• <b>Leachate system must be informed by a quantitative water balance accounting for inputs and outputs and stormwater. Balance must be designed to account for monthly inputs and outputs and demonstrate that the system will operate in a satisfactory manner throughout the year.</b></li> </ul> |
| Leachate storage structures                                  | <ul style="list-style-type: none"> <li>• Leachate stored within the compost area.</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Leachate must be collected and stored in a pond or an above ground tank.</b></li> <li>• <b>Storage tanks for leachate must be bunded and have a 10% storage area of the tank.</b></li> <li>• <b>Leachate storage ponds must be able to:</b> <ul style="list-style-type: none"> <li>• <b>contain runoff that result from a 1 in 20 AEP 24 hour rainfall event.</b></li> <li>• <b>Maintain a 500 mm freeboard for ponds</b></li> </ul> </li> <li>• <b>Storage areas must have high level alarms to prevent over filling.</b></li> </ul>                               |

Note: **Bold highlights** indicate controls not met or unsubstantiated to industry standards. *Italic bold* indicates insufficient information.

### 3.4 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020b) for those emission sources which are proposed to change and considers potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the licence holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the delegated officer considers the licence holders proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the licence holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented

and justified in Table 8.

The revised licence L6876/1989/12 that accompanies this Amendment Report authorises emissions associated with the operation of the premises i.e. indoor piggery activities.

The conditions in the revised licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

**Table 8. Risk assessment of potential emissions and discharges from the premises during operation**

| Risk Event   |  |  |  |   | Risk rating <sup>1</sup><br>C = consequence<br>L = likelihood   | Licence Holder's controls | Conditions <sup>2</sup> of licence       | Justification for additional regulatory controls   |
|--|--|--|--|---|---|---------------------------|--|--|
| Source/Activities  | Potential emission   | Potential pathways and impact  | Receptors  | Licence holder's controls   |   |                           |  |  |
| <b>Operation</b>   |  |  |  |   |   |                           |  |  |
| Operation of dry shelters, solid manure waste storage and compost of carcasses | Dust   | Air/windborne pathway causing impacts to health and amenity  | Rural residential houses 1.4 km west, special rural residents<br>1.7 km northwest and adjacent industrial areas surrounding the premises, 870 m east, 700 m southeast, 1.8 km east, 1.6 m southeast, 2 km southeast of the piggery sheds.                  | Manure and compost stockpiles to be maintained in a damp state.<br>Refer to section 3.1.1   | <b>C = Minor:</b> Low level impacts to amenity at local scale.<br><b>L = Unlikely:</b> Risk event will probably not occur in most circumstances.<br><b>Medium Risk</b><br>Acceptable, generally subject to regulatory controls. | N                         | <b>Condition 1</b><br>Condition 1        | The delegated officer considered the separation distance from the nearest receptors, DWERs composting guidelines, and the licence holder's controls and considered that the licence holder controls were insufficient. The delegated officer determined there was a medium risk of dust being emitted from manure storage and compost operations and impacting on upon the health and amenity of nearby receptors.<br>Based on this risk the delegated officer considered it necessary to specify the following:<br><ul style="list-style-type: none"> <li>Manure stockpiles and compost windrows/stockpiles must be maintained at a height no greater than 1 metre above the highest bunded wall of the containment.</li> </ul> Furthermore, the licence holder's controls will be regulated, they are:<br><ul style="list-style-type: none"> <li>Manure stockpiles and compost windrows/stockpiles must be maintained in a damp state to prevent dust liftoff.</li> </ul> These conditions are to prevent dust from the piggery operations and to minimise the impact of the operations upon the amenity and health of close receptors.  |
|  | Contaminated stormwater and leachate, runoff from hardstands | Overland flow, seepage through soil and transported through groundwater impacting on bore users water quality and eutrophication of wetland systems/threatened ecological communities. | Threatened ecological communities 20 to 215 m west / northwest and southwest of the piggery shelters<br>Conservation wetlands 139 to 800 m west, northwest, and southwest of the piggery shelters.<br>Bore users 200 – 870 m west of the piggery shelters. | Licence holder has concreted hardstands for temporary manure storage and piggery shelters with covers. Shelters are cleaned every 7 to 11 weeks. Refer to Section 3.1.1 | <b>C = Moderate:</b> Mid-level on-site impacts, low-level off-site impacts on local scale.<br><b>L = Possible:</b> Could occur at some time<br><b>Medium Risk</b><br>Acceptable, generally subject to regulatory controls.      | N                         | <b>Condition 1</b><br><b>Condition 2</b> | The delegated officer considered the separation distance from groundwater, the distance of wetlands (down hydraulic gradient), the history of complaints and non-compliances, the NEGIP guidelines, DWER compost guidelines and the licence holder's controls and considered that the licence holder's controls were insufficient. The delegated officer determined there was a medium risk of contaminated wastewater and leachate being emitted from the dry shelters, laneways, manure storage area and compost area contaminating soil and impacting upon groundwater and wetlands.<br>Based on this risk the delegated officer considered it necessary to specify the following:<br><ul style="list-style-type: none"> <li>All potential contaminated stormwater and leachate must be captured and contained within all hardstands including dry shelters, laneways, manure storage and compost facility and must not be discharged to land.</li> <li>Manure storage and compost hardstand areas must have bunding around the perimeter that prevents all external stormwater entering the hardstand areas.</li> <li>Three monitoring bores are maintained to allow sampling of groundwater.</li> <li>Groundwater is sampled every six months and monitored for total dissolved solids, biological oxygen demand and bacteria (<i>Escherichia coli (E. coli)</i>).</li> </ul> Furthermore, the licence holder's controls will be regulated, they are:<br><ul style="list-style-type: none"> <li>Laneway is cleared of manure after each pig movement upon the laneway.</li> </ul> In addition, the delegated officer considered that the current groundwater monitoring is essential to observe potential impacts from the piggery operations and to gage compliance of the licence conditions. This is supported by the licence holder's operation that relies on either capturing and containing all contaminated |



| Risk Event        |  |   |   |   | Risk rating <sup>1</sup><br>C = consequence<br>L = likelihood   | Licence Holder's controls | Conditions <sup>2</sup> of licence                      | Justification for additional regulatory controls   |
|-------------------|--|---|---|---|---|---------------------------|---|--|
| Source/Activities | Potential emission                               | Potential pathways and impact   | Receptors   | Licence holder's controls   |   |                           |   |  |
|                   |  |   |   |   |   |                           |   | stormwater (sheds, compost, and manure storage) or allows potentially contaminated wastewater to infiltrate direct to ground (laneways, aprons) Whilst operating the facility without a dedicated wastewater treatment facility. Furthermore, the national guidelines (NEGIP 2018) consider groundwater monitoring is an important tool to monitor for impacts to soil and groundwater from dry shed operations. Therefore, the delegated officer will retain the existing six-monthly groundwater monitoring program on the revised licence and refuse the licence holders request for an amendment to remove groundwater monitoring. The delegated officer considers that these conditions are to prevent leachate and wastewater impacting upon sensitive environmental receptors from the piggery operations.  |
|                   | Spills and overtopping of solid manure materials | Spills and overtopping of manure, spent bedding and compost material contaminating soil and groundwater | Threatened ecological communities 20 to 215 m west / northwest and southwest of the piggery shelters Conservation wetlands 139 to 800 m west, northwest, and southwest of the piggery shelters.   | Licence holder cleans up all spills, minimises holding time for manure, clean sheds regularly and cleans up manure on pig movements. Refer to Section 3.1.1 | <b>C = Minor:</b> Low level impacts to amenity at local scale.<br><b>L = Unlikely:</b> Risk event will probably not occur in most circumstances.<br><b>Medium Risk</b><br>Acceptable, generally subject to regulatory controls. | N                         | <b>Condition 1</b><br>Condition 1                       | The delegated officer considered the separation distance from groundwater and wetlands, the licence holder's controls and considered that the licence holder controls were insufficient. The delegated officer determined there was a medium risk of spills and overtopping of manure solids within the manure storage and compost operations, potentially contaminating soil and leaching to groundwater affecting nearby groundwater receptors (wetlands).<br>Based on this risk the delegated officer considered it necessary to specify the following: <ul style="list-style-type: none"> <li>All composting and manure stockpiles are to be heaped no greater than 1 metre above bunded walls.</li> </ul> Furthermore, the licence holder's controls will be regulated, they are: <ul style="list-style-type: none"> <li>Spent manure and straw is to be removed from the manure storage area a minimum of once every 2 weeks.</li> <li>Deep litter is removed from shelter domes a minimum of every 11 weeks.</li> <li>All aprons and laneways to be swept and scrapped after each pig movement.</li> <li>All spills and overtopping incidents are to be immediately cleaned up.</li> </ul> These conditions are to prevent overtopping and spilling of the manure solids within the piggery operations and to minimise the impact of the operations on sensitive environmental receptors. |
|                   | Odour  | Air/windborne pathway causing impacts to health and amenity   | Rural residential houses 1.4 km west, special rural residents<br>1.7 km northwest and adjacent industrial areas surrounding the premises, 870 m east, 700 m southeast, 1.8 km east, 1.6 m southeast, 2 km southeast of the piggery sheds. | Licence holder cleans shelters 7 – 11 weeks and stores manure for 2 weeks maximum. Refer to Section 3.1.1   | <b>C = Moderate:</b> Mid-level on-site impacts, low-level off-site impacts on local scale.<br><b>L = Possible:</b> Could occur at some time<br><b>Medium Risk</b><br>Acceptable, generally subject to regulatory controls.      | N                         | Condition 1<br><b>Condition 1</b><br><b>Condition 9</b> | The delegated officer considered the separation distance from the nearest receptors, the S-factor odour distance, the history of complaints and non-compliance, the NEGIP guidelines, DWER composting guidelines, AS4434-2012, the licence holders' controls and considered that the licence holder controls were insufficient. The delegated officer determined there is a medium risk of odour being emitted from operations within the piggery shelter, manure storage and composting of pig carcasses and impacting upon the health and amenity to local residential receptors.<br>Based on this risk the delegated officer considered it necessary to specify the following: <ul style="list-style-type: none"> <li>Books are to be kept outlining: the volume of manure removed from the manure storage area every 2 weeks; the records of when each shelter dome is clean out; that compost is monitored for odour and odour detected at the boundary recorded and recording monthly SPU numbers.</li> </ul>  |



| Risk Event   |                    |   |           |                                       | Risk rating <sup>1</sup><br>C = consequence<br>L = likelihood   | Licence Holder's controls | Conditions <sup>2</sup> of licence   | Justification for additional regulatory controls  |
|--|--------------------|---|-----------|---------------------------------------|---|---------------------------|--|---|
| Source/Activities  | Potential emission | Potential pathways and impact                               | Receptors | Licence holder's controls             |   |                           |  |   |
|  |                    |   |           |                                       |   |                           | <p>Furthermore, the licence holder's controls will be regulated, they are:</p> <ul style="list-style-type: none"> <li>Spent manure and straw is to be removed from the manure storage area a minimum of once every 2 weeks.</li> <li>Deep litter is removed from shelter domes a minimum of every 11 weeks.</li> <li>Pig carcasses are moved from the dome shelters to the compost facility within two hours.</li> <li>Holding a maximum pig number to 8,384 SPU at any one time.</li> </ul> <p>These conditions are to prevent odour from the piggery operations and to minimise the impact of the operations upon sensitive residential receptors.</p> |   |
| Eco-shelters and site traffic, including loading and unloading, housing of pigs and removal of solid waste | Noise              | Air/windborne pathway causing impacts to health and amenity |           | No controls<br>Refer to Section 3.1.1 | <p><b>C – Minor:</b> Low level impact to amenity.</p> <p><b>L – Rare:</b> Likely to occur only in exceptional circumstances.</p> <p><b>Low Risk</b><br/>Acceptable, generally not subject to regulatory</p> | Y                         | No conditions  | <p>The delegated officer considers that the separation distance from the location of the shelters and loading and unloading facilities to the closest residential receptor is sufficiently large for there to be no adverse impact from noise emissions from the operation of the piggery.</p> <p>The Environmental Protection (Noise) Regulations 1997 apply to noise emissions.</p> |

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed licence holders controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

## 4. Consultation

Table 9 provides a summary of the consultation undertaken by the department.

**Table 9: Consultation**

| Consultation method   | Comments received   | Department response   |
|---|---|---|
| Shire of Harvey were consulted with the transfer applications of DWER licences (EP Act and <i>Rights to Water and Irrigation Act 1914</i> ) from GD Pork Pty Ltd to Westpork Pty Ltd. | Shire of Harvey emailed DWER on the 12 May 2021 indicating that the piggery had planning permission to operate providing that additional works are not required, or that piggery numbers will not increase. | DWER noted this information and did not seek further advice as the amendment application outlines that the piggery will operate out of existing structures and piggery numbers will decrease. Therefore, not requiring new development permission from the shire. |
| Licence holder was provided with draft amendment on 28 June 2022  | Licence holder replied on the 18 July 2022. Refer to Appendix 1   | Refer to Appendix 1   |

## 5. Conclusion

Based on the assessment in this amendment report, the delegated officer has determined to grant most of the requested amendments to licence and refuse to grant one amendment request.

The delegated officer determined that the changes to the reporting period and schedule 1 layout map does not change the existing emissions, receptors, or pathways. Therefore, the delegated officer considered that the existing risk profile has not changed, and these amendments did not require further risk assessment, and therefore have been granted within the amendment.

The amendments for reduction to pig numbers, removal of works conditions, update of shelter types, and premises infrastructure did change the existing assessed emissions, receptors, and pathways. These changes were risk assessed with a medium risk to health, amenity, and environmental impacts on close receptors.

The requested amendment to remove the groundwater monitoring represents an unacceptable increased risk to fugitive impacts on soil and groundwater from leachate and contaminated stormwater and spills of liquid and solid manure laden material impacting on the groundwater causing eutrophication to sensitive wetlands and bore users down gradient. Therefore, this has been refused as the delegated officer has the following concerns:

- the existing operations has no operable leachate or contaminated stormwater containment infrastructure; and
- historical piggery operations at the facility by the previous and existing licence holders have demonstrated potential unauthorised discharge (under the EP Act) of potentially contaminated leachate and wastewater to the environment (see section 3.2.1).

The proposed amendments (as outlined in section 2.2) have been considered and the delegated officer has made the following determinations:

- The delegated officer has determined that the amendment to decrease design capacity from 11,800 SPU to 8,384 SPU has been risk assessed and **has been granted**.
- The delegated officer has determined that removing all works conditions (conditions 1-

7 and Schedule 3) has been risk assessed and **has been granted**.

- The delegated officer has determined that updating the sheds to dry shelters and removing all references to intensive conventional shelters with associated effluent pits and fans has been risk assessed and **has been granted**.
- The delegated officer has determined that amendment to remove the requirement to monitor groundwater quality has not demonstrated that sufficient controls to manage leachate and potentially contaminated stormwater from contaminating soil and groundwater. Therefore, the delegated officer **has refused to grant** the proposed changes to groundwater monitoring. Where the delegated officer assessed that leachate and potentially contaminated stormwater as a medium risk and determined that contaminating groundwater and soil would cause an unacceptable impact to environmental receptors. The application did not propose sufficient evidence of controls to mitigate environmental impacts to soil and groundwater from leachate and contaminated stormwater from all hardstand areas.
- The delegated officer has determined that changing the annual reporting period to 1 July to the 30 June does not change the risk profile and this **has been granted**.
- The delegated officer has determined that updating Schedule 1 site layout map does not change the risk profile and this **has been granted**.
- The delegated officer has determined that changing the maximum number of animals held on the premises and infrastructure has been risk assessed and **has been granted**.

The delegated officer is satisfied that the refusal of one aspect of the requested amendments manages the potential risk from the piggery operational changes.

## 5.1 Summary of amendments

Table 10 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

**Table 10: Summary of licence amendments and consolidation of licence.**

| Existing condition   | Condition summary                                      | Revised licence condition   | Conversion notes and comments   |
|--|--|---|---|
| Front page   | Assessed design capacity<br>11,800 SPU at any one time | Assessed design capacity<br>8,384 SPU at any one time                                   | Pig numbers on the prescribed premises have been amended.   |
| Conditions 1, 2, 3, 4, 5, 6, 7 including Table 1 Works infrastructure requirement table. | Works conditions                                       | N/A   | Conditions for expansion for conventional shed piggery with effluent treatment and biogas have been removed as per licence amendment. |
| Table 1 Works infrastructure requirement table.  | Works for decommissioning of evaporative ponds.        | Condition 1, Table 1 Item 4. Evaporative ponds must not be used for piggery operations. | Decommissioning requirement removed and ponds remain unused within the facility as per amendment.                                     |

| Existing condition  | Condition summary  | Revised licence condition               | Conversion notes and comments  |
|---|--|---|--|
| Conditions 8, 9 10 and Table 2 Infrastructure control table | Operational conditions for new works infrastructure.                           | N/A                                     | Conditions for expansion for conventional shed piggery with effluent treatment and biogas have been removed as per licence amendment.  |
| Condition 11 Table 3  | Groundwater monitoring   | Condition 2 Table 2                     | Condition has been revised to current licensing format. Additional monitoring parameters have been added including total dissolved solids, biological oxygen demand and <i>E. coli</i> . |
| Condition 12  | Water sampling standards and NATA accreditation requirements.                  | Condition 2, Table 2 and Condition 3    | Condition has been revised to current licensing format   |
| Condition 13  | Interval of sampling requirement   | Condition 3                             | Condition number updated.  |
| Condition 14  | Monitoring report requirement for water data.                                  | Condition 9                             | Condition requirement revised to be reported in AER  |
| Condition 15  | Reporting and records  | Condition 7                             | Reporting condition revised to new reporting format and redundant sections deleted.  |
| Condition 16  | Complaints management  | Condition 6                             | Condition has been revised to current licensing format   |
| Condition 17  | AACR   | Condition 5                             | Condition number updated and due date changed from 1 March to 1 August in line with changes to annual reporting period as per amendment.   |
| Condition 18  | Accurate and auditable books.  | Condition 8                             | Condition number updated   |
| Definitions Table 4   | Definitions  | Table 4                                 | Annual reporting period dates changed to reflect amendment. Professional engineer definition deleted.  |
| Schedule 1 Plans  | Premises Plan  | Schedule 1 Maps<br>Premise Map Figure 1 | Map updated.   |
| Schedule 1 Plans  | Wastewater Treatment plant plan  | N/A                                     | Deleted as per amendment.  |
| Schedule 1 Plans  | Existing site plan   | Site layout map,<br>Figure 2            | Plan updated with correct infrastructure.  |
| Schedule 2  | General description, pig maximum numbers and infrastructure and equipment list | N/A                                     | Schedule 2 deleted, redundant schedule. Pig maximum numbers are listed on the front page. Infrastructure list is listed in Condition1 Table 1.   |

| Existing condition | Condition summary             | Revised licence condition                              | Conversion notes and comments  |
|--------------------|-------------------------------|--|--|
| Schedule 3         | Works specifications          | N/A  | Schedule 3 deleted as per amendment.   |
| Schedule 4         | Groundwater monitoring events | Schedule 1 Figures 1 and 2, and Condition 9            | Schedule redundant. Information on reporting requirements placed under condition 9 in the AER and location of bores is illustrated in Schedule 1 Figures 1 and 2.  |
| New                | N/A                           | Condition 1 and Table 1, Infrastructure, and equipment | Updated to new licensing format. All pollution control infrastructure previously listed in Schedule 4 and operation of that infrastructure is listed in Table 1. Additional infrastructure and operations have been added from the assessment of amendment.  |
| new                | N/A                           | Condition 9  | Updates to new licence format with a requirement for an Annual Environment Report (AER). This report includes the previous reporting requirements from Schedule 4 (water quality reporting) and includes operation reporting for monthly pig numbers, shelter cleaning, manure storage volumes, and pasteurisation information for composting. |

## References

1. Australian Pork Limited, 2018, *The National Guidelines for Indoor Piggeries, Third Edition*, Kingston, Australian Capital Territory
2. CSIRO 2008, *Model Code of Practice for the Welfare of Animals Pigs*, Third edition PISC Report 92, Collingwood Victoria
3. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. DER 2016, *Decision Report Licence Amendment L6876/1989/12 issued 23 June 2016*, Perth, Western Australia.
5. DER 2016, *Licence Amendment L6876/1989/12 issued 23 June 2016*, Perth, Western Australia.
6. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
7. DWER 2020b, *Guideline: Risk Assessments*, Perth, Western Australia.
8. DWER 2020c, *Guideline – Better Practice Composting*, Perth Western Australia.
9. DWER 2021, *Transferred Licence L6876/1989/12, issued 10 May 2021*, Perth Western Australia.
10. DWER 2021, *Decision Report L6876/1989/12 issued 10 May 2021*, Perth Western Australia
11. Westpork Pty Ltd 2021, *Application and supporting documents*, Perth, Western Australia.
12. Standard Australia 2012, *Australian Standard 4454-2012: Compost, soil conditioners and mulches*, Sydney New South Wales.

## Appendix 1: Summary of licence holder's comments on risk assessment and draft conditions

| Condition                             | Summary of licence holder's comment  | Department's response   |
|---------------------------------------|--|---|
| <b>Amendment Report – No comments</b> |  |   |
| <b>Revised Licence</b>                |  |   |
| Table 1 Item 1(c)                     | Westpork views that the collection of data on individual shelters is unnecessary as it collects the volumes of manure leaving the property and considers the administrative requirement does not improve the environmental protection. If DWER insist on the condition, then Westpork prefers the wording to be rephased for clarity to <i>'dates of when each shelter dome is cleaned and the volume of manure and spent litter that are removed must be logged.'</i>   | The condition will remain as it records the operational management of the shelters for odour management. DWER agrees to the change of wording.  |
| Table 1 Item 2(e)                     | The design of the manure storage area requires vehicle access and bunding would inhibit this, thus Westpork have designed the pad to slope towards the internal bunded walls. Westport requests that the condition is revised to the following <i>'Manure storage area must be graded to ensure that all incident rainfall is trapped on the pad and drains towards the area with concrete sidewalls which act as bunds to retain surface water flows on the pad.'</i>   | DWER disagrees. The condition is to prevent external stormwater from entering the manure storage pad not to control the incidental rain falling on the storage pad. Low profile bunding can be used to accommodate vehicle traffic. |
| Table 1 Item 3                        | Westpork request that the compost requirements to monitor, and record temperature and moisture content are removed. The compost process is used for pig mortalities and compost is reused in the process or applied to agriculture land and not for commercial purposes. Westpork requests that the conditions are changes to the following: <ul style="list-style-type: none"> <li>• <i>Westpork shall monitor the composting process to ensure that all mortalities are effectively covered and odours from the composting process are not detectable at the site boundary.</i></li> <li>• <i>Westpork shall ensure that the quality of compost produced is suitable for application to agriculture land.</i></li> </ul> | DWER agrees to remove the monitoring and recording for temperature and moisture content.  |