



# Works Approval

## *Environmental Protection Act 1986, Part V*

**Works Approval Holder:** Westpork Pty Ltd

**Works Approval Number:** W5854/2015/1

**Registered office:** Unit 1  
 7 Foundry Street  
 MAYLANDS WA 6041

**ACN:** 009 148 789

**Premises address:** Gingin Breeder Farm  
 Lot 8 on Diagram 68836 Boonanarring road  
 BOONANARRING WA 6503  
 as depicted in Schedule 1.

**Issue date:** Friday 18 September 2015

**Commencement date:** Monday, 21, September 2015

**Expiry date:** Thursday, 20 September 2018

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

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
2	Intensive piggery: premises on which pigs are fed, watered and housed in pens	1,000 animals or more	5,500 animals

**Conditions**

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

.....  
 Lauren Trott  
 A/Manager Licensing (Process Industries)  
 Officer delegated under section 20  
 of the *Environmental Protection Act 1986*



# Works Approval Conditions

## 1 General

### 1.1 Interpretation

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

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

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

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

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

**'CEO'** for the purpose of correspondence means;

Chief Executive Officer  
Department Administering the Environmental Protection Act 1986  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: [info@der.wa.gov.au](mailto:info@der.wa.gov.au)

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

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

**'Works Approval'** means this Works Approval numbered W5854/2015/1 and issued under the *Act*;

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

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

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

### 1.2 General conditions

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



<b>Document</b>	<b>Parts</b>	<b>Date of Document</b>
Works Approval Application Form	All	9 July 2014
Works Approval Supporting Information and Environmental Procedures Manual for the Construction and Maintenance of Drying Beds (Revised Document – February 2015) – Gingin Piggery, FSA Consulting	All, including Drawings and Appendices	18 February 2015
Email R Evison dated 25 March 2015 attach <i>Information Request Response with Report Reference</i>	All	13 January 2015
Email R Evison subject W5854 Westpork Gingin Breeder Farm include <i>Information Response with Report Reference</i>	All	14 September 2015
Email R Evison subject <i>Changes to Gingin drying bed works approval with update to collection sump</i>	All	14 September 2015

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

### **1.3 Premises operation**

- 1.3.1 The Works Approval Holder shall ensure that the clay liner of the sludge drying bed is constructed to achieve the following:
- (a) Include successive compaction of a minimum of two separate layers of 150mm of clay once compacted;
  - (b) each layer must be scoured to ensure the layers are effectively bonded;
  - (c) the final liner is to achieve a hydraulic conductivity of less than  $1 \times 10^{-9}$  metres per second;
  - (d) the final layer must be at least 300mm thickness in total; and
  - (e) there must be a protective layer (such as 200mm silty loam or compacted gravel) maintained over the clay liner to protect the liner from damage as a result of day-to-day activities or machinery movements. .

## **2 Information**

### **2.1 Reporting**

- 2.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of the works and prior to commissioning of the same.
- 2.1.2 The compliance document shall:
- (a) certify that the works were constructed in accordance with the conditions of the works approval;
  - (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.
- 2.1.3 The compliance document shall include a Construction Quality Assurance validation report by a suitably qualified engineer, which includes drying bed as-constructed drawings and relevant test certificates which demonstrate that the sludge drying bed has a hydraulic conductivity of less than  $1 \times 10^{-9}$  m/second.

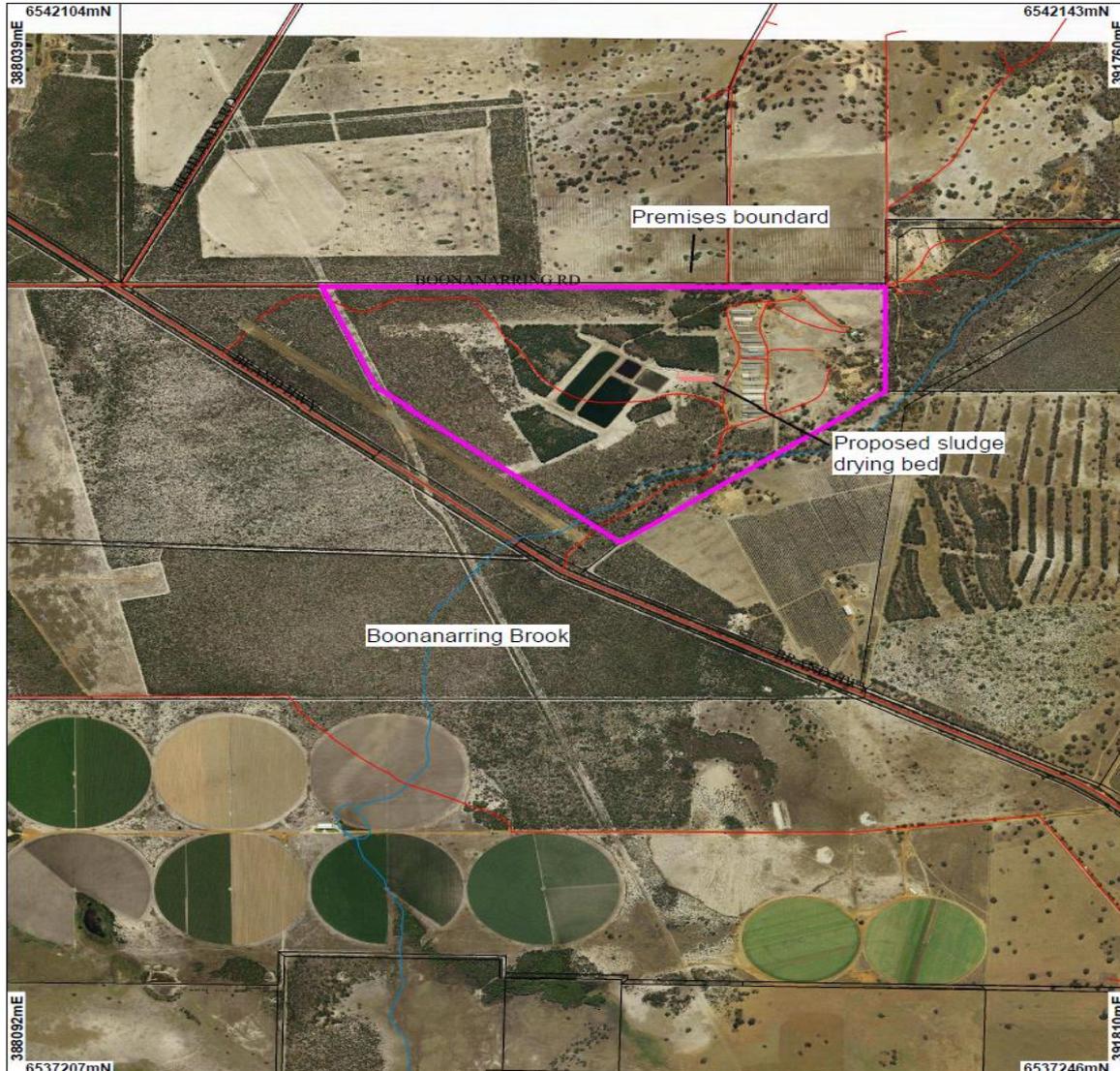


## Schedule 1: Maps

### Premises map

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

### Westpork Gingin Breeder Farm



**LEGEND**

- Cadastre
- Road Centrelines
- Rivers
- Perth Metropolitan Area North 15cm Orthomosaic - Landgate 2012

Scale 1:22709  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Prepared by: nanettes  
Prepared for:  
Date: 31/08/2015 2:27:50 PM

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.

Government of Western Australia  
Department of Environment Regulation  
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\* Project Data. This data has not been quality assured. Please contact map author for details.



# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** Westpork Pty Ltd

**Works Approval:** W5854/2015/1

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**Registered office:** Unit 1  
7 Foundry Street  
MAYLANDS WA 6051

**ACN:** 009 148 789

**Premises address:** Gingin Breeder Farm  
Lot 8 on diagram 68836 Boonanarring Road  
BOONANARRING WA 6503

**Issue date:** Friday 18 September 2015

**Commencement date:** Monday, 21 September 2015

**Expiry date:** Thursday, 20 September 2018

### **Decision**

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

Decision Document prepared by: Nanette Schapel  
Licensing Officer

Decision Document authorised by: Lauren Trott  
A/Manager Licensing – Process Industries



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### 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 <input checked="" type="checkbox"/>	<input type="checkbox"/>
	New Licence <input type="checkbox"/>	<input type="checkbox"/>
	Licence amendment <input type="checkbox"/>	<input type="checkbox"/>
	Works Approval amendment <input type="checkbox"/>	<input type="checkbox"/>
Activities that cause the premises to become prescribed premises; Intensive piggery	<b>Category number(s)</b>	<b>Assessed design capacity</b>
	2	5,500 animals or 10,296 Standard Pig Units (SPU)
Application verified	Date: 12 June 2015	
Application fee paid	Date: 23 June 2015	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i> )?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Environmental Protection (Swan Coastal Plains Lakes) Policy 1992		
Is the Premises subject to any EPP requirements?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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 (L4490/1988/7). 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 970 m south of the wastewater 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 with 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 of odorous quality 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 current piggery operators. The brook is located 200m away from the proposed drying bed and 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 including the proposed location of the sludge drying bed is slightly up-gradient and well vegetated (see Appendix B). Another nearby surface water body is the Wallering Brook and 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 3 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<sup>3</sup> per annum, based on the Annual Environmental report for the 2014-2015 reporting period. Wastewater is used to flush the sheds daily, where the amount of wastewater used for flushing is 77,744m<sup>3</sup> 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. The current licence requires the Licensee to monitor the wastewater to be irrigated. 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:*

This works approval is to construct a drying bed with two channels. This will allow sludge to be removed from the new 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. The clay-lined anaerobic pond was desludged several years ago and will not require de-sludging in the immediate future.

In order to avoid damage to the liner, an agitator will be used to stir the pond prior to discharging a slurry of liquid and solids onto the drying bed. The design of the drying bed will be similar to a sedimentation and evaporation pond system (SEPS). The bed will consist of two parallel 150m long sloping channels with a base of 4m and 1:3 (v:h) batter and 1:10 batter on the entry slope to allow removal of the dried sludge. The slope will allow all liquid to drain towards a collection sump at one end of the drying bed where it will be directed back into the pond system via a channel. A freeboard of 500mm will be provided along the length of the channels to cater for extreme rainfall events, as in accordance with Water Quality Protection Note #27 (Department of Water, August 2013). If an extreme stormwater event does occur, any overtopping of the drying bed will naturally drain back into the pond system due to its elevation and location. Where the clay liner of the drying bed meets the HDPE anaerobic pond liner, a plastic membrane (or similar suitable impermeable material) will ensure there are no leaks at the junction. The current licence requires all stormwater to be diverted around the wastewater pond system.

Clay will be imported into the site and laid in layers. Preparation includes filling any depressions, scarifying the layer to a depth of 150mm then watering prior mechanical compaction to each layer. The final clay liner will have a field dry density of approximately 95% in accordance with Method 5.4.1 of Australian Standard 1289 (*Methods of testing soils for engineering purposes*, November 2014). The final depth of the clay liner will be 300mm with a minimum gradient of 25% and a hydraulic permeability of  $1 \times 10^{-9}$  m/second on the base and sides of the drying bed. A thin layer of sludge (25-50mm) will be left behind when the sludge is removed to prevent the liner from drying out and cracking and the liner will be inspected and replenished as required. Once the sludge has dried, it will be removed from the drying bed and placed in a truck for export off-site.



## 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	L1.2.5 L1.3.1 L1.3.2 L1.3.3 L1.3.4	<p><u>STORMWATER Construction</u> There are no expected impacts on stormwater as a result of construction.</p> <p><b>Operation</b> <u>Emission Description</u> <i>Emission:</i> Stormwater contaminated with nutrient rich wastewater from on-site operations.</p> <p><i>Impact:</i> If wastewater overflows from the sludge drying bed, there is the potential for nutrient rich stormwater runoff to impact on the nearby Boonanarring Brook drainage line, located 200m from the effluent system. While the construction of the sludge drying bed is not expected to increase the risk of stormwater contaminating the brook, desludging will allow a freeboard to be maintained on the effluent ponds and improve their operational efficiency</p> <p><i>Controls:</i> 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/or periodic management measures to be taken during desludging operations. Procedure 11 is the management procedure where desludging operations are to cease during and immediately following heavy rainfall. If necessary, the treatment ponds are to be dewatered before sludge-handling operations re-commence; desludging is not to re-commence until the drying beds are sufficiently dry to allow operation of machinery without bogging or odour release and sludge handling operations are not to recommence until all stormwater runoff in</p>	<p>Works Approval Application supporting documentation</p> <p>Water quality protection note #27 "Linens for containing pollutants, using engineered soils", Department of Water, August 2013</p> <p>DRAFT Environmental Standard for composting – Consultation Paper, DER2015/001388 Amended August</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>the drying bed sump has been redirected or pumped back into the pond effluent system. On completion of construction activities and following receipt of a Compliance Document, the potential risk of stormwater contaminating nearby surface water will be reviewed to determine if a licence amendment is required. According to the latest Annual Environmental Report dated 24 August 2015, irrigation on site has not occurred since the July-September monitoring period in 2014 as there has been insufficient water in the final effluent pond.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor  <i>Likelihood:</i> Rare  <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u>            Current licence Condition 1.2.5 requires the operator to keep uncontaminated stormwater away from contaminated stormwater. Condition 1.3.1 requires that all wastewaters from operations including any contaminated run-off 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 1.3.4 requires all carcasses buried on site to be covered with at least 500mm of soil immediately upon deposit.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Minor  <i>Likelihood:</i> Rare  <i>Risk Rating:</i> Low</p>	<p>2015 L4409/1988/7</p>
Premises operation	W1.3.1 L1.3.2	<p><b>Construction</b>            Works approval condition 1.3.1 has been include to ensure that the sludge bed liner is constructed to achieve a permeability of <math>1 \times 10^{-9}</math> m/second, as assessed below under "Fugitive Emissions".</p> <p><b>Operation</b>            Condition 1.3.2 of the current licence requires storage of wastewater and treated</p>	<p>Works Approval Application supporting documentation DRAFT Environmental Standard for</p>



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
		wastewater as per Table 1.3.2. Storage in accordance with this table ensures risks identified from potential stormwater contamination identified in 'General Conditions' and leachate seepage described in 'Fugitive Emissions' are mitigated. This table will require amendment at the completion of this works approval to include the sludge drying bed.	composting – Consultation Paper, DER2015/001388 Amended August 2015  L4409/1988/7
<b>Emissions general</b>	L2.1.1	<p><b>Construction</b> There are no conditions relating to general emissions required in the works approval.</p> <p><b>Operation</b> Descriptive limits have been set in the licence therefore condition 2.1.1 regarding recording and investigation of limit exceedances has been included.</p>	L4409/1988/7
<b>Point source emissions to air including monitoring</b>	N/A	<p><b>Construction and Operation</b> No point source emissions to air are expected to occur during the construction of the sludge drying beds. There are no point source emissions to air known to occur during operation of the piggery.</p>	N/A
<b>Point source emissions to surface water including monitoring</b>	N/A	<p><b>Construction and Operation</b> No point source emissions to surface water are expected to occur during the construction of the sludge drying beds. There are no point source emissions to surface water known to occur during operation of the piggery.</p>	N/A
<b>Point source emissions to groundwater including monitoring</b>	N/A	<p><b>Construction and Operation</b> No point source emissions to groundwater are expected to occur during the construction of the sludge drying beds. There are no point source emissions to groundwater known to occur during operation of the piggery.</p>	N/A



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Emissions to land including monitoring	L3.7.1	<p><b>Construction</b> No emissions to land are expected to occur during the construction of the sludge drying beds.</p> <p><b>Operation</b> The current licence allows wastewater from the final effluent pond to be sent off site for irrigation. This activity has not been reassessed during the assessment of this works approval as operation of the sludge drying bed will not impact on the volume of treated wastewater produced at the premises. Condition 3.7.1 of the current licence details monitoring requirements for treated wastewater sent off site for irrigation.</p>	L4409/1988/7
Fugitive emissions	W1.3.1 W2.1.3 L1.3.1 L1.3.2 L1.3.3	<p><u>LEACHATE SEEPAGE</u></p> <p><b>Construction</b> W1.3.1 has been included to ensure that the sides and base of the sludge drying beds achieve a permeability of <math>1 \times 10^{-9}</math> m/second. W2.1.3 requires a Construction Quality Assurance validation report to be provided as part of the Compliance documentation which shows that the liner has been constructed to achieve the required permeability. These conditions mitigate the risks from leachate seepage from the sludge drying bed, as assessed below. Current licence conditions remain in force during construction of the sludge drying bed.</p> <p><b>Operations</b> <u>Emission Description</u> <i>Emission:</i> Leachate seepage from the sludge drying bed.</p> <p><i>Impact:</i> There is the potential for seepage from the sludge drying bed to contaminate underlying groundwater and nearby surface water drainage systems, including the Boonanarring Brook which is approximately 200m from the proposed location of the drying bed. 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.</p>	<p>DRAFT Environmental Standard for composting – Consultation Paper, DER2015/001388 Amended August 2015</p> <p>L4409/1988/7</p>



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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
		<p><i>Controls:</i> The drying bed is located down gradient of the geomorphic wetland associated with the Boonanarring Brook (see Appendix A). The intervening area between the brook and the wastewater treatment pond system is well vegetated. The slope of the drying bed ensures that pooling of wastewater does not occur and the liquid portion of the sludge is directed to a collection sump at the base of the drying bed where it is directed back into the wastewater pond system via a channel.</p> <p><u>Risk Assessment</u></p> <p><i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u></p> <p>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 have 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 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 sludge drying beds.</p> <p><u>Residual Risk</u></p> <p><i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p>	
<b>Odour</b>	L5.1.4 L5.2.1	<p><b>Construction</b></p> <p>There are no odour emissions expected from construction of the sludge drying bed.</p>	Works Approval Application supporting documentation



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><b>Operations</b></p> <p><u>Emission Description</u> <i>Emission:</i> Odour emissions from the sludge placed in the drying bed.</p> <p><i>Impact:</i> There is the potential for odour emissions from the sludge drying bed to cause a nuisance impact on nearby odour sensitive residences, where the closest resident is located 570m south of the premises boundary and 970m south of the proposed sludge drying bed. 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. There has been one unsubstantiated odour complaint received by the Department in 2008 but no recent complaints.</p> <p><i>Controls:</i> The sludge will have undergone some treatment/decomposition in the anaerobic pond prior to transfer to the drying bed. 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 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 a Complaints Register, along with details and feedback from any complainants. If mitigation measures are not found to be effective, work will cease and new procedures implemented.</p> <p><u>Risk Assessment</u></p> <p><i>Consequence:</i> Minor <i>Likelihood:</i> Possible</p>	L4409/1988/7



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Risk Rating: Moderate</i></p> <p><u>Regulatory Controls</u> All wastewater to be directed to a wastewater treatment system. Condition L5.1.4 requires the Licensee to implement a complaints management system along with actions taken in response to complaints. Condition L5.2.1 requires a summary of all complaints to be provided in the Annual Environmental Report.</p> <p><u>Residual Risk</u> <i>Consequence: Minor</i> <i>Likelihood: Possible</i> <i>Risk Rating: Moderate</i></p>	
Noise	N/A	<p><b>Construction</b></p> <p><u>Emission Description</u> <i>Emission: Noise emissions.</i></p> <p><i>Impact: There is the potential for noise emissions during construction of the sludge drying bed to impact on nearby noise sensitive residences. The nearest noise sensitive residence is 970 m south of the proposed sludge drying bed and the next closest is resident is 1.4km to the north of the property. The Department has not received any complaints about noise emissions during normal operations from neighbouring properties.</i></p> <p><i>Controls: Westpork's Environmental Procedure Manual (Procedure #5) notes that construction activities will not commence before 7:00am and will cease by 5:00pm. Westpork will log any noise complaints in a Complaints Register. If mitigation measures are found to be ineffective, work will cease and new procedures implemented.</i></p> <p><u>Risk Assessment</u> <i>Consequence: Minor</i> <i>Likelihood: Possible</i></p>	<p>Works Approval Application supporting documentation</p> <p><i>Environmental Protection (Noise) Regulations 1997</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Risk Rating: Moderate</i></p> <p><u>Regulatory Controls</u> Noise emissions can be adequately regulated under the requirements of the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p><u>Residual Risk</u> <i>Consequence: Minor</i> <i>Likelihood: Possible</i> <i>Risk Rating: Moderate</i></p>	
<b>Monitoring general</b>	L3.6.1 L3.7.1 and L3.8.1	<p><b>Construction</b> Monitoring conditions are not required during construction.</p> <p><b>Operation</b> General monitoring conditions are captured by licence conditions L3.6.1, L3.7.1 and L3.8.1. No further monitoring conditions are required during operations</p>	L4409/1988/7
<b>Monitoring of inputs and outputs</b>	L5.2.1	<p><b>Construction</b> Monitoring of inputs and outputs are not required during construction.</p> <p><b>Operation</b> Monitoring of cumulative volumes and quality of wastewater discharged to the treatment system, quantities of wastewater removed off site for irrigation purposes and the number of animals on site are required to be recorded in the Annual Monitoring Report.</p>	L4409/1988/7
<b>Process monitoring</b>	L3.6.1 L3.7.1 and L3.8.1	<p><b>Construction and operation</b> Process monitoring is not required during construction of works. As noted above, monitoring of wastewater is carried out in the current licence and no further conditions are required</p>	L4409/1988/7
<b>Ambient quality monitoring</b>	N/A	<p><b>Construction and operation</b> There are no ambient quality monitoring regulatory requirements at the Premises for the construction of works under W5854/2014/1 and during licence operations under</p>	



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
		L44091988.	
<b>Meteorological monitoring</b>	N/A	<b>Construction and operation</b> Meteorological monitoring is not required during construction activities or during operations	
<b>Improvements</b>	N/A	<b>Construction</b> No improvements are required in the works approval.  <b>Operations</b> The licence will be reviewed following receipt of a compliance document for the works carried out for the construction of the drying bed. This review will determine whether a licence amendment is required.	
<b>Information</b>	W2.1.1 W2.1.2 L5.1.3-5.2.1	<b>Construction</b> W2.1.1 requires a compliance document to be submitted to the CEO following completion of construction works and prior commissioning of the same. W2.1.2 requires the Compliance document to certify that the works were constructed in accordance with the conditions of the works approval and to be signed by a person authorised by the Works Approval Holder.  <b>Operations</b> Section 5 of the current licence requires the licensee to provide an annual report and annual audit compliance report to confirm operations are in accordance with conditions of licence. These conditions are not specific to the sludge drying bed but will allow DER to assess compliance and monitor any potential environmental impacts.	L4409/1988/7
<b>Works Approval Duration</b>	N/A	<b>Construction</b> Due to the types of soil on site, depth of groundwater and stormwater measures carried out on site, the assessment of the works to construct a sludge drying bed is considered of moderate risk regarding the potential to impact on underlying groundwater and nearby surface water bodies. The works approval will be issued for the standard period of three years.	



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
29 June 2015	Application advertised in West Australian	No comments received	N/A
08 September 2015	Proponent sent a copy of draft instrument	Comments received in Email dated 11 September 2015 and 14 September 2015	Update to sump in drying bed where design has changed from concrete sump, according to initial works approval application, to a clay sump to improve interface with drying bed and effluent pond. The drying bed will be located above the effluent pond and any leachate and liquid waste will collect in the sump at the lowest point and either gravity fed or pumped back to the anaerobic pond.



## 6 Risk Assessment

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

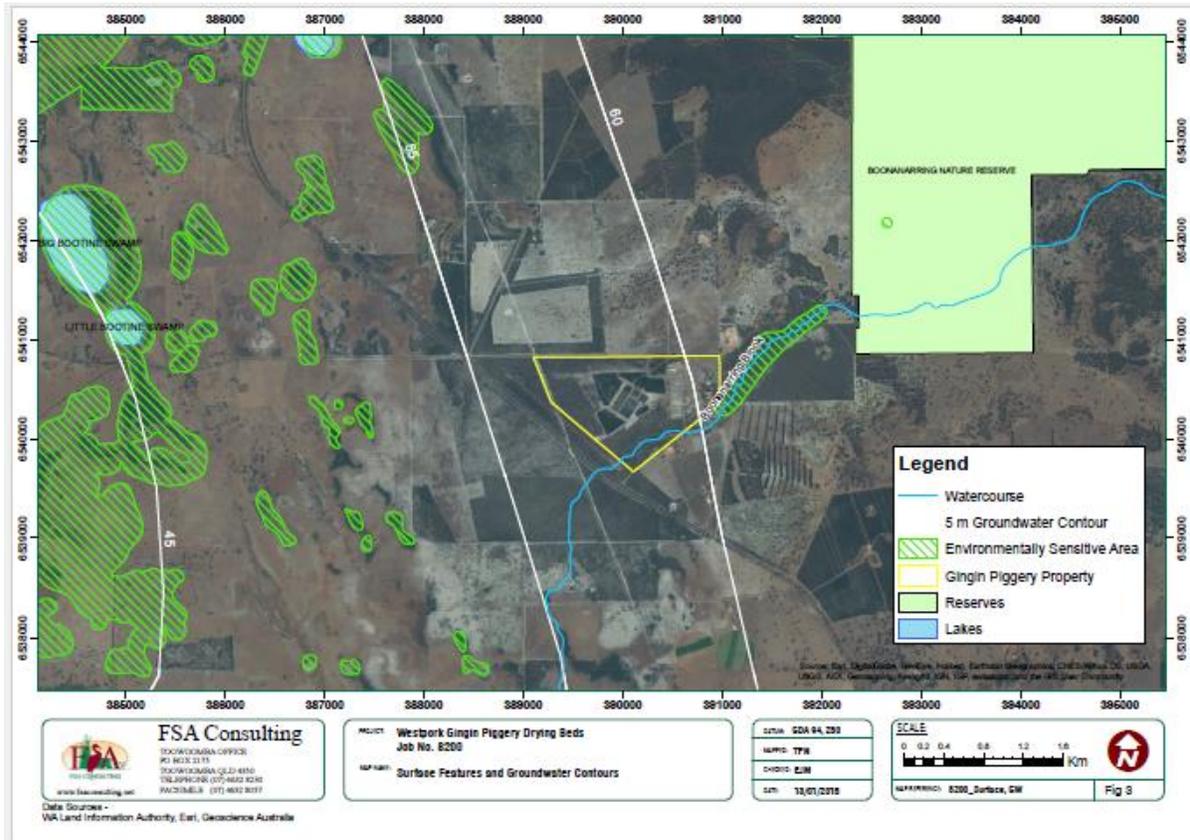
**Table 1: Emissions Risk Matrix**

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 Boonaharring Nature Reserve





## Appendix B

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

