



Decision Document

Environmental Protection Act 1986, Part V

Proponent: **Borrello Holdings (WA) Pty Ltd**

Licence: **L6112/1996/11**

Registered office: Lot 3 Adelaide Street
MAIDA VALE WA 6057

ACN: 150 463 442

Premises address: Gingin Meatworks
Lot 195 on Plan 231420, Lot 328 on Plan 231420 and Lot 343 on Plan
231044 Cockram Road
LENNARD BROOK WA 6503

Issue date: Friday, 25 September 2015

Commencement date: Saturday, 26 September 2015

Expiry date: Tuesday, 25 September 2035

Decision

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

Decision Document prepared by:

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Decision Document authorised by:

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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 type="checkbox"/>	New Licence <input checked="" type="checkbox"/>
	Licence amendment <input type="checkbox"/>	Works Approval amendment <input type="checkbox"/>
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	15	25,000 tonnes per annual period
	55	55,000 animals per annual period
Application verified	Date: 10/07/2015	
Application fee paid	Date: 17/07/2015	
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	N/A	
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"/>
<i>Environmental Protection (Swan Coastal Plain Lakes) Policy 1992 (EPP Lakes Policy)</i>		
Is the Premises subject to any EPP requirements?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
The EPP Lakes Policy requires that any lakes within the Swan Coastal Plain shall not be degraded or destroyed by activities nearby. The Gingin Meatworks' (premises boundary) is located approximately 2.4 km south east of an EPP lake and it is considered unlikely the operations will impact on the lake ecology.		



3 Executive summary of proposal and assessment

Gingin Meatworks is an abattoir with livestock holding pens in the Shire of Gingin, north of Perth. It is located within a rural area with surrounding land uses predominantly agricultural with market gardens, farming and other rural activities. There are sensitive receptors including rural residences within 500 m of the abattoir infrastructure, wastewater treatment system (i.e. ponds), the livestock holding pens and irrigation area.

The abattoir slaughters cattle which are held in a covered lairage for up to 24 hours pending their slaughter. Where holding times exceed 24 hours or numbers exceed the lairage capacity, cattle are held in separate livestock holdings pens connected to the lairage via raceway. Wastewater from the abattoir (including the lairage) is treated within a four pond wastewater treatment system that includes two anaerobic ponds, an aerobic pond and an evaporation pond. Treated wastewater is evaporated or irrigated to two irrigation plots in the north eastern portion of the premises. Abattoir solid wastes such as offal and paunch are removed by contractors on a daily basis. Accumulated manure in the livestock holding pens is collected and also removed from site by contractors from time to time.

The emissions of risk are noise, odour, fugitive dust and emission of wastewater onto land or into surface waters. The main source of potential odour is the wastewater treatment ponds in particular the anaerobic ponds; however an organic crust is maintained on the surface. Lennard Brook and a seasonal tributary to Lennard Brook flow within the premises therefore the regulatory controls reflect the need to protect these resources from harm. The site does not accept weaners (calves) to mitigate associated noise issues when they are held in the holding pens. There is significant local community interest in the premises.

This decision document has been prepared because Licence L6112/1996/10 expires on 25 September 2015 and the licensee has applied to renew the licence (L6112/1996/11). The Department of Environment Regulation (DER) has converted the licence into the current template.

In assessing the application, DER considered points raised in three submissions (one a collaborative submission from a local community group) made during the 21 day public consultation phase that closed on 17 August 2015. A summary of the submission points and DER response to these points is contained within Appendix A of this decision document.

DER has retained a majority of the requirements of Licence L6112/1996/10 in the new licence, however key changes from the previous licence can be summarised as follows:

- the addition of requirements to monitor nitrate nitrogen and total nitrogen in the evaporation pond, surface water and groundwater;
- the addition of requirements to monitor sodium, calcium and magnesium in the evaporation pond to allow calculation of the sodium absorption ration to assess the risk of soils becoming sodic and dispersive with ongoing irrigation;
- the addition of requirements to monitor inputs and outputs against the prescribed category design capacities;
- the inclusion of an improvement condition with the objective of identifying changes to ambient environmental quality monitoring locations; and
- the inclusion of an improvement condition with the objective of developing a nutrient and irrigation management plan.

DER is satisfied the regulatory controls imposed in the licence ensure an acceptable level of environmental risk and protection.



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			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	N/A	There are no conditions to be included in this section in addition to conditions 1.2.1 and 1.2.2 that form part of the licence template.	N/A
Premises operation	L1.3.1 – 1.3.5	<p>Condition 1.3.1 replaces the requirements of conditions W1(a) and W2(b) to ensure contaminated wastewaters from the abattoir (including the lairage) are directed into the wastewater treatment system.</p> <p>Licence L6112/1996/10 contains repeated reference to containment infrastructure such as the wastewater treatment ponds, sludge storage area, holding pens and the lairage. Condition 1.3.2 and its associated table has therefore been included to provide clarity on existing approved infrastructure, the materials they can contain and the infrastructure requirements they have been designed to. Condition 1.3.2 also compliments further requirements and sections of the licence such as emissions to land and is accompanied by the map in Schedule 2. The condition does not impose any additional requirements on the licensee and is consistent with the previous licence and the existing specifications of infrastructure.</p> <p>Condition 1.3.3 replaces the requirements of conditions W1(b) (except W1(b)(v) that is replaced by condition 1.3.2) and W2(a) to ensure that wastewater treatment ponds and the evaporation pond are managed appropriately.</p> <p>Condition 1.3.4 replaces the requirements of conditions W3(a) (except W3(a)(i) that is replaced by condition 2.2.1), W3(b) and W3(c) to ensure that waste generated on the premises are managed appropriately.</p> <p>Condition 1.3.5 requires the licensee to ensure that abattoir solid waste (e.g. offal and</p>	Licence L6112/1996/10 – conditions W1(a), W1(b), W2(a), W2(b), W3(a), W3(b), W3(c) and S1(a)



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		<p>paunch) are transferred to collection vehicles or containment vessels for removal off site on a daily basis. It in part replaces condition S1(a), however it also reflects comments in the preamble of licence L6112/1996/10 that indicated solid wastes are to be stored in onsite trailers prior to being collected daily by waste contractors.</p> <p>Conditions 1.3.1 to 1.3.5 replace requirements of the previous licence and DER has not reassessed the risk of emissions and discharges.</p>	
Emissions general	L2.1.1	Numerical limits will be set through condition 2.2.2 of the licence and therefore condition 2.1.1 regarding recording and investigation of exceedances of limits has been included.	N/A
Point source emissions to air including monitoring	N/A	The site does not have point source emissions to air therefore no specific conditions have been imposed relating to point source emissions to air including monitoring.	N/A
Point source emissions to surface water including monitoring	N/A	The site does not have point source emissions to surface water therefore no specific conditions have been imposed relating to point source emissions to surface water including monitoring.	N/A
Point source emissions to groundwater including monitoring	N/A	The site does not have point source emissions to groundwater therefore no specific conditions have been imposed relating to point source emissions to groundwater including monitoring.	N/A
Emissions to land including monitoring	L2.2.1 – 2.2.2 and 3.2.1	<p><u>Emission Description</u> <i>Emission:</i> Treated wastewater in the evaporation pond is pumped to two designated irrigation plots. Characterisation of the emission is based on licence monitoring data from the 2014 Annual Environment Report (AER). Volume irrigated was 10,800 kL with almost all that volume (10,636 kL) irrigated in the period 1 April 2014 to 30 September 2014. Irrigation water quality (pH, TDS, suspended solids, BOD, TKN, nitrates and total phosphorus) is monitored in the evaporation pond quarterly. The key parameters are nutrients and BOD. As per the 2014 AER, the licensee irrigates for the purposes of managing pond freeboard primarily over the winter period.</p>	Licence L6112/1996/10 - conditions W3(a)(i) and W4.



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Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Impact:</i> Soil and groundwater contamination from leeching through the root zone. The irrigation areas are in close proximity to Lennard Brook and a tributary to Lennard Brook which are sensitive receptors at risk of impact from irrigation activities. Groundwater may be hydraulically linked to localised tributary or Lennard Brook. Surface water runoff may access tributary or Lennard Brook through over-irrigation or if irrigation occurs during rainfall events. Poorly managed irrigation can impact on soil structure, infiltration rates and the crops ability to uptake nutrients, such as when soils become sodic or dispersive with ongoing irrigation.</p> <p><i>Controls:</i> The Licensee maintains a 50 m buffer from the irrigation areas to the tributary and 200 m to Lennard Brook. The Licensee has historically fenced and revegetated along the tributary as part of planning approval requirements. DER records indicate the licensee may have an irrigation management plan, however this appears to be original area, concentration, soil characterisation and loading rate calculations provided in approximately 2003 in support of a licence amendment application to commence irrigating. The licensee does not irrigate during periods of rain and monitors surface and groundwater.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> The licence has emission loading limits on phosphorus, nitrogen and BOD, however these are based on an old outdated version of a Waters and Rivers Commission guideline that was applicable at the time. Whilst there is no evidence to suggest unacceptable impact since the commencement of irrigation in 2003/2004; it is appropriate that the limits be reassessed. DER has included the existing limits in condition 2.2.2 and the irrigation controls in Table 1.3.2 as per licence L6112/1996/10. In reference to the 'Improvement requirements' section of this table, DER has included an improvement condition (IR2) in Table 4.1.1 of the licence. This requires the licensee to prepare a nutrient and irrigation management plan (NIMP) and will provide the ability to reassess the risk of emissions to land, including the ongoing applicability of the irrigation loading limits.</p>	



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Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>DER has also included additional evaporation pond monitoring parameters in condition 3.2.1. Sodium, calcium and magnesium will now need to be analysed to allow calculation of the sodium absorption ratio to assess the risk of soils becoming sodic and dispersive with ongoing irrigation.</p> <p>In addition to IR2, DER has also made changes to the ambient environmental quality monitoring program and included improvement requirement IR1. Refer to the 'Ambient environmental quality monitoring.'</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Residual Risk Rating:</i> Moderate</p>	
Fugitive emissions		<p>Licence L6112/1996/10 contained a fugitive dust condition therefore the risk of fugitive dust has been reassessed as part of this licence renewal.</p> <p><u>Emission Description</u> <i>Emission:</i> Fugitive dust from stock movement within holding pens and the lairage from cattle movement and also during cattle deliveries or transfers. Dust lift off from truck movements on internal trafficable areas and from paddocks within the premises that are not specifically used for abattoir or cattle holding purposes. Fugitive dust can occur during all operating scenarios (i.e. normal, abnormal, and emergency) and is primarily related time of year with hot, dry and windy conditions being the most conducive of fugitive dust emissions. <i>Impact:</i> Reduced local air quality causing a nuisance at off site receptors. The site is located within a rural area with surrounding land uses predominantly agricultural with market gardens, farming and other rural activities. There is a 'rural residential' zoned area approximately 700 m north of the abattoir and ponds or approximately 350 m north the Lot 343 boundary of the premises. DER has no recent records of dust complaints reported against the premises.</p>	<p>Licence L6112/1996/10 – condition A1</p> <p><i>Environmental Protection Act 1986</i></p>



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Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Controls:</i> Extensive grass cover is maintained around the premises. A large area in the north eastern portion of the premises can be irrigated with treated wastewater.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Licence L6112/1996/10 contained condition A1 requiring reasonable and practicable measures to prevent or minimise the generation of visible dust from crossing the boundary of the premises. As fugitive dust is assessed to be low risk, Licence L6112/1996/11 will not include specific conditions relating to control of fugitive dust emissions. The licensee is required to comply with the general provisions of the <i>Environmental Protection Act 1986</i> and DER is satisfied this is an appropriate level of regulatory control to achieve an acceptable level of environmental risk and protection.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Residual Risk Rating:</i> Low</p>	
Odour	N/A	Odour was not reassessed as part of this licence renewal. Licence L6112/1996/10 indirectly contained one odour related condition (W1(b)(v) – maintaining a crust on anaerobic ponds) and this has been included in condition 1.3.3 for management of wastewater treatment and evaporation ponds.	<p>Licence L6112/1996/10 – condition W1(b)(v)</p> <p>Part V of the <i>Environmental Protection Act 1986</i></p>
Noise	N/A	Licence L6112/1996/10 did not contain any noise conditions. Noise was not reassessed as part of this licence renewal and Licence L6112/1996/11 will not contain any specific noise conditions. The licensee is required to comply with the <i>Environmental Protection (Noise Regulations) 1997</i> .	Licence L6112/1996/10



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
			<i>Environmental Protection (Noise) Regulations 1997</i>
Monitoring general	L3.1.1 – 3.1.2	As the licence conditions requirements for monitoring of emissions to land, process monitoring and ambient environmental quality monitoring conditions 3.1.1 and 3.1.2 have been included respectively.	N/A
Monitoring of inputs and outputs	L3.3.1	The licensee will be required to report monthly and annual throughputs for head of cattle received and weight of cattle slaughtered in the Annual Environmental Report (Condition 5.2.1) to allow auditing of compliance with the production or design capacities specified in the licence. For that reasons the licensee will have monitoring of inputs/outputs requirements in condition L3.3.1.	N/A
Process monitoring	L3.3.1	<p>Condition 3.3.1 replaces the requirements of conditions W5 and W6 in Licence L6112/1996/10 that required process monitoring of wastewater flow from the abattoir to the wastewater treatment system and treated wastewater pumped from the evaporation pond to irrigation.</p> <p>The parameters required in process monitoring were reviewed as part of this licence renewal. Condition W7 of Licence L6112/1996/10 required monitoring of the evaporation pond for the purposes of monitoring water quality of treated wastewater irrigated. Refer to the risk assessment in the 'Ambient environmental quality monitoring' section of this table. Total nitrogen and ammonia nitrogen have been added to the list of required process monitoring parameters.</p> <p>Also refer to the risk assessment in the 'Emissions to land' section of this table. Sodium, calcium and magnesium have been added to the process monitoring parameters to allow ongoing risk assessment of soils in the irrigation area becoming sodic and dispersive through calculation of the sodium absorption ratio.</p>	Licence L6112/1996/10 – conditions W5, W6 and W7.
Ambient environmental quality monitoring	L3.4.1	Ambient environmental quality monitoring was reassessed as part of this licence renewal. In the first instance, the scope of parameters and frequency of monitoring in Licence L6112/1996/10 was reviewed to ensure consistency between parameters tested in the evaporation pond, surface water and groundwater for comparative interpretation. Also to ensure a minimum scope of key contaminants related to the sites activities and that allow identification of potential impacts.	Licence L6112/1996/10 <i>Assessment and management of contaminated sites,</i>



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>DER's Contaminated Sites Officers provided technical guidance to inform the assessment of the ambient environmental monitoring requirements.</p> <p><u>Emission Description</u> <i>Emission:</i> Common contaminant types associated with abattoirs and animal processing works include nutrients (nitrogen and phosphorus), biological oxygen demand (BOD), total suspended solids, oil and grease, and pesticides and metals (by-products of rendering where applicable). Relevant to intensive agriculture (including feedlots and saleyards) additional contaminants include carbamates, herbicides, insecticides, salinity, Aldrin, deildrin and toxaphene. (Source: Appendix B of <i>Assessment and management of contaminated sites, Contaminated sites guidelines</i>, DER, December 2014).</p> <p>These contaminants are not necessarily applicable to all sites and should be viewed in the context of the above-mentioned guideline as being for the purposes of known or suspected contaminated sites investigation/assessment under the <i>Contaminates Sites Act 2003</i>. Some contaminants may be associated with non-prescribed activities such as market gardening or cropping that may occur in parallel with abattoirs or feedlots/saleyards. Potential sources of emissions to surface water and groundwater at Gingin Meatworks are the wastewater system (i.e. ponds), irrigation areas, the abattoir inclusive of the lairage and the livestock holding pens.</p> <p><i>Impact:</i> Contamination of soil, groundwater and surface water environments. The beneficial use of groundwater in the localised surrounding area is not known. Treated wastewater is irrigated in close proximity to a tributary to Lennard Brook (approx. 50m west of the irrigation area) and Lennard Brook itself (approx. 200m north of the irrigation area) The tributary also passes in close proximity to the wastewater ponds as does Lennard Brook. Nutrient export into the tributary and Lennard Brook has the potential to result in environmental alterations and impacts on the respective ecosystems.</p> <p><i>Controls:</i> Wastes and wastewaters generated inside the abattoir are contained with wastewater directed to a treatment system and solid wastes transported off site by contractors. All ponds are synthetic lined to minimise seepage. An adjacent sludge drying bed is clay-lined and used infrequently. The livestock holding pens are also clay lined. Irrigation volumes are monitored and treated wastewater tested to calculate nutrient and</p>	<p><i>Contaminated sites guidelines</i>, DER, December 2014</p>



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Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>BOD loading rates. A separation of 50 m from the irrigation area to the tributary is maintained along with a 200 m separation to Lennard Brook. The licensee manages irrigation so as to reduce the risk of runoff during rainfall periods.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Surface water quality monitoring and groundwater quality monitoring requirements will be included in condition 3.4.1 (Tables 2.3.1 and 3.4.2 respectively). Changes from the previous licence include the addition of total nitrogen and ammonia nitrogen. Nutrients are key contaminants of interest from activities on site and the addition of these parameters to the ambient environmental quality programs (and process monitoring in the evaporation pond) improve the ability to interpret monitoring data and identify potential environmental impacts from the sites activities.</p> <p>Assessment of surface water and groundwater monitoring locations indicates a need to review the current monitoring locations to ensure up-gradient and down-gradient monitoring locations are correctly located and in sufficient number to adequately monitor potential impacts on localised environmental receptors. DER believes that all existing groundwater monitoring locations are situated too close to potential sources of contamination to provide reliable indications of the up gradient conditions. Changes to the number and location of surface and groundwater monitoring locations needs to be based on scientific investigation and justifications. DER has therefore included an improvement condition to guide further risk assessment. Refer to the 'Improvements' section below.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Residual Risk Rating:</i> Moderate</p>	



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Meteorological monitoring	N/A	Licence L6112/1996/10 did not contain any specific meteorological monitoring conditions. Meteorological monitoring was not reassessed as part of this licence renewal and Licence L6112/1996/11 will not contain any meteorological monitoring conditions.	Licence L6112/1996/10
Improvements	L4.1.1	<p>As justified by the 'Ambient environmental quality monitoring' section risk assessment, an improvement condition will be included at condition 4.1.1. This will require the Licensee to undertake a basic hydrogeological review to summarise the hydrogeological context of the site, review potential contaminant source/pathway/receptor information against current monitoring locations and ultimately propose a revised ambient environmental quality monitoring program. Once submitted, DER will use the information to guide further risk assessment.</p> <p>As per the 'Emissions to land' section risk assessment, DER will include an improvement requirement for the licensee to prepare a NIMP. This requirement has been informed by advice from DER's Contaminates Sites Officers.</p>	
Information	L5.2.2 – 5.2.3 and 5.3.1	<p>Records There are no conditions to be included in this section in addition to conditions 5.1.1 – 5.1.4 that form part of the licence template.</p> <p>Reporting Condition 5.2.2 has been included to require the licensee to make an assessment of monitoring results against previous results and licence limits. As the licensee sends its ambient environmental quality monitoring samples to a laboratory for analysis, condition 5.2.3 has been included for the submission of original reports on request.</p> <p>Notification Condition 5.3.1 for reporting breaches of limits has been included as the licence specifies numerical limits for emissions to land.</p>	N/A
Licence Duration		DER has considered licence duration consistent with its guidance statement: <i>Licence Duration</i> , DER, May 2015 and determined that the licence will be issued for a period of 20 years.	Guidance statement: <i>Licence duration</i> , DER, May 2015



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
27/07/2015	Application advertised in <i>The West Australian</i> newspaper	Refer to summary table in Appendix A.	Refer to summary table in Appendix A.
27/07/2015	Three direct interest stakeholders notified of application.		
21/09/2015	Applicant sent a copy of draft licence and decision document	<p>The applicant responded in writing on 23/09/2015. The applicant stated as follows:</p> <p><i>"I have reviewed the conditions on the draft copy for the Borrello Holdings(WA) PTY LTD new Licence, licence number L6112/1996/11 and accept all conditions as stated, my only note was in the (interpretations) where they suggested (usual working day's means 0800-1700 hrs) these hours are not relevant to the abattoir industry. Usual working day in abattoirs is 0600-1500hrs for day shift and 2200-0600 hrs for night shift or loadout as it is often referred to."</i></p>	<p>The comments were noted.</p> <p>The comment in relation to 'usual working day' is in reference to the licence definition of this term. The definition is related to condition 5.3.1 where the licensee is required to report a breach of licence limit 'as soon as practicable but no later than 5pm of the next usual working day.'</p> <p>The definition is generic and not necessarily site specific. In consideration of the applicants comments, the definition does not impact on the ability to provide any notifications in accordance with condition</p>



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

STAKEHOLDER SUBMISSIONS

Stakeholder Submissions	DER Consideration & Response
Submission 1	
<p>A submission was received from the Shire of Gingin. It confirmed the abattoir has all necessary planning approvals in place.</p> <p>The Shire confirmed its understanding that DER will manage environmental impacts under its obligations of the <i>Environmental Protection Act 1986</i> and the Shire doesn't have an objection to the licence being renewed.</p>	<p>DER noted the comments.</p>
Submission 2	
<p>The submission stated the following:</p> <p><i>We object most strongly to the re-licensing application by the Gingin Meatworks.</i></p> <p><i>The licence conditions enclosed with your letter of 24th July 2015 do not address any of the well documented and acknowledged breaches of all previous licences.</i></p> <p><i>Please refer to correspondence and evidence of pollution caused by the abattoir over the last 12 years. This has been supplied to DER over the last 5 months of 2015.</i></p> <p><i>These emails are the latest in a long series of complaints and evidence going back over 25 years.</i></p> <p><i>All this correspondence should be on record at DER.</i></p> <p><i>Despite assurances that the licence conditions would be amended to</i></p>	<p>The licence enclosed with the letter dated 24 July 2015 was in reference to Licence L6112/1996/10 that expires on 25 September 2015. DER attached it to stakeholder referral letters to allow comments on perceived shortfalls in regulatory controls that could be considered in any new licence that may be issued. The submitter stated that the conditions do not address the <i>'well documented and acknowledged breaches of all previous licences.'</i> The licence and its conditions are not intended to address historical allegations but rather authorise activities that may otherwise be unlawful, and in doing so ensure those activities do not pose unacceptable risks to public health or the environment.</p> <p>In deciding to grant Licence L6112/1996/11, DER has imposed regulatory controls it considers are proportionate to the level of risk the current activities pose to public health and the environment.</p> <p>The submitter refers to evidence of pollution supplied to DER over the last 5 months. These have been investigated by a DER Senior Investigator. As part of those investigations, the Senior Investigator</p>



<p><i>address the above , there are absolutely no changes in the licence conditions supplied to us.</i></p>	<p>obtained technical advice from DER’s Contaminated Sites Officers and this advice has been considered in determining the licensee’s application.</p> <p>As summarised in section 3 (executive summary) and justified in section 4 (decision table), DER has made a number of changes and improvements in the licence. This includes immediate changes to the ambient environmental quality monitoring programs for surface water and groundwater and also improvement requirements. The improvement requirements are expected to result in further improvements to the monitoring program (e.g. the number and location of monitoring points) that are based on scientific investigations.</p> <p>Once the improvement requirements are completed by the licensee, DER may amend the licence to further modify the ambient monitoring program.</p>
<p>Submission 3</p>	
<p>1. <i>[Identity withheld] believe that environmental impact objectives must be documented and monitored by independents to assure compliance. Self-monitoring invites substandard commitment, risk taking, and oversights. Self-monitoring does not inspire public confidence.</i></p>	<p>The licence contains general monitoring requirements in condition 3.1.1 for adherence to Australian Standards for water sampling and analysis at a laboratory with NATA accreditation for the parameters specified. The licensee is also required to submit an annual report containing monitoring in accordance with condition 5.2.1.</p> <p>These regulatory controls are consistent with Part V of the <i>Environmental Protection Act 1986</i> (the EP Act) licence requirements for water monitoring across industry. DER is satisfied the regulatory controls on the Gingin Meatworks licence implement its objectives for monitoring and reporting as outlined in its draft guidance statement: <i>Setting conditions</i>, December 2014.</p>
<p>2. <i>“Our archives include correspondence of 1 October 2003, re AMENDMENTS TO LICENCE CONDITIONS- GINGIN MEATWORKS. This letter states; “the amendments specifically relate to the irrigation of wastewater to particular areas of the premises”. The letter and the attached draft licence conditions, include no mention of the expansion of category 15 abattoir licence to lots 328 and 343. Since 2001, meatworks management has assured individual neighbours that they had no intension or plans to expand the facility at its current location.”</i></p>	<p>It is unclear as to what is being sought from this submission point, however DER has provided the following for informational purposes.</p> <p>The then Department of Environment (DoE) granted amended licence number 6112/6 on 2 March 2004 that included regulatory controls related to the proposed irrigation of treated wastewater. The irrigation was to be located on Lots 328 and 343. In addition Gingin Meatworks are required to monitor two surface water locations that are on these</p>



	<p>lots. Copies of the draft amended licence provided to stakeholders prior to granting the amended licence all contained reference to Lots 328 and 343.</p> <p>The abattoir infrastructure continues to be located on Lot 195 and other than establishing a treated wastewater irrigation area on Lots 328 and 243 via amended licence number 6112/6, the abattoir including the wastewater ponds has not expanded beyond Lot 195.</p>
<p>3. <i>“By mail dated 24 July 2015 we were provided with a copy of DER Environmental Protection Act 1986 Licence L6112/1996/10, issued 25 September 2013. The enclosing letter, signed Lauren Trott, and the attached copy of Licence number L6112/1996/10, refer to all three Lots, 343, 195 and 328. We understand that the information under the heading, APPLICABILITY, Table 1, and Nominal Throughput are current, and that the application for renewal does not include any changes or additions to that information. Please provide details of proposed changes, if any.</i></p> <p><i>Nominal Rated Throughput</i> <i>Daily throughput assuming 5 day work weeks hence 270 production days per year.</i></p> <ul style="list-style-type: none"> • 25,000 tonnes / year = 92.6 tonnes/day (average) • 55,000 animals / year = 204 animals/day (average)” 	<p>The approved premises production or design capacity remains at 25,000 tonnes per annual period for the abattoir and 55,000 animals per annual period for the livestock holding pens as stated on Page 1 of Licence L6112/1996/11.</p> <p>The licence makes no reference to the assumed operating days per year or daily averages stated in the submission and neither did the previous licence.</p>
<p>4. <i>“The language of this condition, as written, suggests that the audit report is not conducted by DER. Mr Malley’s response to our email inquiry of 5 August 2015 simply states; “The Annual Monitoring Report is reviewed and assessed for compliance by DER.” Throughout industry, self-audit is known to be fraught with risk. In the interest of transparency, accountability and public confidence we recommend that the audit be carried out by an independent and industry recognised third party.”</i></p>	<p>Condition 5.1.2 requires Gingin Meatworks to complete an Annual Audit Compliance Report (AACR) indicating the extent to which it has complied with the conditions of the licence. Failure to comply with condition 5.1.2 may constitute a breach of condition. A breach of condition is an offense under Section 58 of the EP Act. Furthermore Section 112 of the EP Act makes it an offense to knowingly provide false or misleading information. As previously stated, the ACCR together with the Annual Monitoring Report is reviewed and assessed for compliance by DER.</p> <p>In addition to the licensee’s annual reporting obligations, DER undertakes its own compliance audit inspections to assess compliance with the licence and the environmental legislation it administers.</p>



<p>5. <i>“Is DER provided with the log of the volume of waste water disposed of by the irrigation of plots A & B ?</i></p> <p><i>Please confirm what, if any, seasonal restrictions exist for disposal of the wastewater to the irrigation sprinkler system on Plots A & B.</i></p> <p><i>Can DER confirm that the wastewater irrigation system is operating as required by the licence according to the terms listed under the above heading ?</i></p> <p><i>Can DER confirm and provide verification that the volume of wastewater discharged to irrigation, plus evaporation from treatment ponds, reconciles with total water consumption and the volume discharged to the treatment ponds? (as required under sub heading W6, FLOW METERING DEVICE)”</i></p>	<p>The previous version of licence required the licensee to record the daily flow of treated wastewater discharged from the evaporation pond for the purposes of irrigation. The licensee was required to report a monthly record in the annual report. Licence L6112/1996/11 has retained this monitoring requirement in Table 3.4.1 of condition 3.4.1. As per condition 5.2.1 the licensee will be required to report flow monitoring data in an Annual Monitoring Report.</p> <p>The licence does not seasonally restrict the irrigation of treated wastewater. Consistent with the previous licence, Licence L6112/1996/11 specifies that irrigation cannot occur during rainfall or onto flooded areas (Table 1.3.2 of condition 1.3.4).</p> <p>Under the heading of ‘Wastewater Irrigation to Land’ on previous licence L6112/1996/10 was condition W3 relating to irrigation area management and maintenance of separation distance to surface water receptors. DER has no evidence to suggest the irrigation system was not operating as required by that condition.</p> <p>It is not possible to undertake accurate reconciliation using flow meter data along which would require a more robust water balance to provide a more accurate estimation. DER notes that a water balance forms part of improvement requirement 2 (IR2) in Table 4.1.1 of condition 4.1.1 where the licensee will be required to submit a Nutrient Irrigation Management Plan.</p>
<p>6. <i>“Historical Google Earth images indicate wastewater irrigation activity on Plots A & B is apparent in October and November 2003. Evidence of irrigation is less visible in January and February 2010. Similarly, images from December 2014 show little or no evidence of apparent wastewater irrigation activity. On the fourth of this month (August 2015) three or possibly 4 sprinklers were spraying on dense pasture while the winter creek flow through the paddock had reduced to a trickle following about 50mm of rain a few days earlier. See photos enclosed.</i></p> <p><i>Google Earth images also indicate areas south of the meatworks where surface discolouration appears to indicate flow of liquid material towards Lennard Brook from (for example) the open lairage yards.”</i></p>	<p>The licensee is permitted to irrigate treated wastewater subject to regulatory controls on the licence. The licensee is required to report its monthly volumes of irrigated treated wastewater in its Annual Environmental Report. Volumes are obtained through a flow meter that records volumes pumped from the source of treated water (evaporation pond) to the irrigation area. Flow monitoring data is a more accurate indicator than Google Earth images that have little to no value for this purpose.</p> <p>Should the submitter have evidence or knowledge of unauthorised discharges of wastewater from the premises, the information should be reported to DER’s Pollution Watch Hotline on 1300 784 782 for further investigation.</p>



	<p>DER notes that it received allegations of surface discolouration indicating a flow of liquid waste near stock water tanks adjacent to the livestock holding pens in April 2015 together with other allegations of discharge into paddocks and Lennard Brook. These allegations were investigated by a DER Senior Investigator and were found to be unsubstantiated.</p>
<p>7. <i>“Ref: MP 1, on the Lennard Brook Tributary and MP2, on the eastern boundary of the licenced area and approximately 100m north of Lennard Brook.</i></p> <p><i>The ‘tributary’ is a winter creek, normally dry in summer. It flows intermittently during winter and, following significant rain events, is a drainage channel for the southern slope of Moorgup Hill. The winter creek originates in an elevated area (150m ASL approx.) about 1,500 north of the meatworks treatment ponds.</i></p> <p><i>Where the tributary/winter creek intersects the northern boundary of the licensee’s property at MP1, surface elevation is approximately 108m ASL. South and downslope of MP1, where the creek runs parallel to and immediately adjacent the northern bank of Treatment Pond 5, surface elevation is approximately 93m ASL. The north > south elevation change of 15m over 440m horizontal distance averages 3.4m per 100m. The average elevation change over the 1,500m flow, from source of the creek to the meatworks, is 3.8m vertical per 100m horizontal. Surface elevation figures are approximate to < 2m accuracy. There is, however, an obvious and pronounced fall as the creek flows towards Lennard Brook. The creek’s proximity to the meatworks wastewater treatment ponds poses a risk to the integrity of the ponds.</i></p> <p><i>We understand that, although the winter creek is identified as a potential risk factor, DER believes the creek’s natural flow path does not intersect the wastewater treatment ponds. We suggest that, subject to rainfall, volume and velocity of water draining from Moorgup Hill, the flow path immediately adjacent the ponds, is a real potential risk exists. One extra ordinary rain event will present a serious risk of eroding a breach in the earthen wall of pond 5 and thereby draining the pond’s</i></p>	<p>DER has imposed regulatory controls within the licence it considers sufficiently manage the environmental risks associated with the ponds. The ponds system is designed to capture a 1 in 10 ARI rainfall event of 72 hours duration and the licensee is required to maintain a minimum top of embankment freeboard. The licensee is also required to ensure overtopping of the ponds does not occur, the integrity of the containment infrastructure is maintained and that stormwater runoff is prevented from entering the wastewater treatment system.</p> <p>DER considers the likelihood of such a large rainfall event, as described in the submission, to be rare and the likelihood of such an event in the tributary having specific impact on the premises in the vicinity of the ponds to also be rare. There is no evidence to suggest that such an event would overflow the tributary on the premises and consequently cause catastrophic failure of ponds. Given design factors, stormwater should be directed around ponds.</p> <p>DER’s risk assessment procedure is not based on ‘as low as reasonably practicable’ (ALARP). DER has imposed appropriate regulatory controls to minimise risk of pollution or environmental harm.</p>



<p><i>contents into Lennard Brook.”</i></p> <p><i>“Such an event occurred some years ago (c 1980) in which flow from Moorgup Hill westward, washed ballast from under the railway line for a distance of 100m or more. This event also flattened long stretches of fencing on its downhill rush.</i></p> <p><i>Risk of environmental pollution to Lennard Brook associated with the tributary is that which arises from the following:</i></p> <ol style="list-style-type: none"> <i>1. Pollutants from upstream, north of the meatworks property boundary.</i> <i>2. Pollutants from Plots A and B of the meatworks waste water irrigation area.</i> <i>3. Pollutants from a potential breach of waste water treatment ponds.</i> <p><i>Should a circa 1980 rain event occur in this age of heightened awareness and increased environmental sensitivity, the outcome would likely attract press and TV coverage. The meatworks on Lennard Brook is a threat to local environment and amenity. All specific potential threats should be identified and have mitigation measures designed, documented and regularly monitored by the regulator.</i></p> <p><i>[Identity withheld] requests a copy of the risk analysis and assessment matrix diagram used to assess the ALARP environmental pollution risk to Lennard Brook by all possible causes emanating from the Gingin Meatworks.”</i></p>	
<p><i>8. “Surface water monitoring point MP1 monitors winter creek water flowing into the licensee’s property on its way south, towards the treatments ponds and Lennard Brook. MP2 appears to have little relevance, other than as a boundary reference.</i></p> <p><i>The primary and most likely risk of environmental pollution presented by the meatworks at its location is the risk to Lennard Brook by effluent flows from a number of potential points within the Meatworks complex. For example; The Google Earth image of 17 December 2014 appears to indicate flow of (contaminated) fluid from the open lairage/holding</i></p>	<p>DER refers to condition 4.1.1 that includes Improvement Requirement 1 (IR1). DER acknowledges there are potential improvements that can be made to both the surface water and groundwater monitoring program to facilitate monitoring data collection and interpretation that better reflects the contaminant sources, pathways and receptors.</p> <p>DER believes IR1 allows proper investigation to allow any changes to the monitoring program to be based on scientific evidence and justification.</p> <p>Upon completion of IR1, DER may amend the licence to modify the</p>



<p>yard south towards Lennard Brook.</p> <p>We suggest additional surface water monitoring points on Lennard Brook at the following locations: (coordinates are approximate, taken from Google Earth)</p> <ul style="list-style-type: none"> • MP3 Lat. -31.376508° Lon. 115.917821° • MP4 Lat. -31.378790° Lon. 115.914071° • MP5 Lat. -31.379823° Lon. 115.912567° <p>The additional surface water monitoring points will measure pollutants present in Lennard Brook (if any) upstream of the meatworks at MP3. Comparison of MP4 and MP5 samples, with MP3, would detect pollutants entering the stream (if any) over the 630m between MP3 and the Cockram Road bridge.”</p>	<p>groundwater and surface water monitoring requirements based on the findings and recommendations.</p>
<p>9. At this point we are concerned about the cumulative environmental risks posed by the following factors:</p> <ol style="list-style-type: none"> 1. Annual Audit Compliance Report being generated by the licensee. 2. The Annual Monitoring Report being generated by the licensee. 3. No apparent Site Management Plan in place by which routine checks are listed in a chronological/priority order and emergency procedure is documented to manage the unexpected and potentially serious/disastrous effect on the immediate and surrounding environment. 	<p>Refer to DER’s response to point 4 in relation to AACR’s and AER’s being prepared by the licensee/</p> <p>Refer to DER’s response to point 10 in relation to Site Management Plans.</p> <p>DER has assessed the risk of emissions, discharges and impacts in Section 4 and imposed regulatory controls to ensure an acceptable level of environmental risk and protection.</p>
<p>10. “We note the DER website includes a number of active Site Management Plans. In the case of Gingin Abattoir, there are clear reasons why it should also have a documented SMP. Following the examples of SMPs on your website we recommend that an Environmental Plan and Emergency Response Plan for the meatworks be documented and added to the existing SMPs on the DER website.”</p>	<p>The reference to Site Management Plans (SMP’s) on DER’s public website is contained within the section under Contaminated Sites. SMP’s are a mechanism for sites classified under the <i>Contaminated Sites Act 2003</i> to require management procedures to manage risks during intrusive works on contaminated sites.</p> <p>The SMP information and examples on DER’s website do not relate to licensing pursuant to Part V of the EP Act.</p>