



## Application for Licence Amendment

### Division 3, Part V *Environmental Protection Act 1986*

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<b>Licence Number</b>	L5199/1983/12
<b>Applicant</b>	Western Australian Meat Marketing Co-operative Limited
<b>File Number</b>	DER2014/001668-1
<b>Premises</b>	WAMMCO International – Katanning Abattoir Great Southern Highway KATANNING WA 6317  Legal description - Lot 3 on Diagram 42266 Certificate of Title Volume 566 Folio 127A
<b>Date of Report</b>	8 October 2019
<b>Status of Report</b>	Final

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# 1. Definitions of terms and acronyms

In this decision report, the terms and acronyms in the table below have the meanings defined.

**Table 1: Definitions**

Term	Definition
category / categories	Categories of prescribed premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer of the Department. “submit to / notify the CEO” (or similar), means either: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
DAF	Dissolved Air Flotation
decision report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
existing licence	The licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of, and during this review
kL	kilolitres
kW	kilowatts
licence holder	Western Australian Meat Marketing Co-Operative Limited
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
permeate	refers to the portion of the reverse osmosis feedwater collected after it has passed through all the RO membranes, otherwise referred to as the product water
prescribed premises	has the same meaning given to that term under the EP Act.
premises	refers to the premises to which this decision report applies, as specified at the front of this decision report
revised licence	the amended licence issued under Part V, Division 3 of the EP Act following the finalisation of this amendment.
risk event	As described in <i>Guidance Statement: Risk Assessment</i>
RO	Reverse Osmosis
WWTS	Wastewater Treatment System

## 2. Purpose and scope of assessment

A licence amendment application was submitted by Western Australian Meat Marketing Co-Operative (WAMMCO) Ltd on 13 June 2019. WAMMCO is the licence holder operating the WAMMCO International – Katanning Abattoir (the premises) under licence L5199/1983/12 on Lot 3, 28013 Great Southern Highway, Katanning. The amendment application is for the installation and commissioning of a reverse osmosis water treatment plant designed to treat input (feed) water and deliver 200kL of permeate per day. The application also seeks to incorporate operation of the new dissolved air flotation unit into the licence (as constructed in accordance with Works Approval W6230/2019/1).

The assessment of this application has been undertaken in accordance with DWER's published guidance statements as listed in Appendix 1. The scope of the assessment includes:

- the design and location of the proposed RO works;
- a risk-based assessment of the emissions and discharges associated with the construction, commissioning and operation of the RO plant; and
- changes to the premises primary wastewater treatment infrastructure previously assessed for operations under works approval W6230/2019/1 to authorise ongoing operation of the new DAF unit.

The existing licence is due to expire on 15 October 2019. DWER has extended the expiry date by 24 months making the new expiry date 15 October 2021. The revised licence has been issued in an updated format with works conditions inserted, other conditions relevant to the future operation of the RO plant added or conditions updated where appropriate and administrative changes applied. Otherwise, existing licence conditions have been transferred without review to the revised licence. A summary of these changes is presented in Section 8.

### 2.1 Application details

Table 2 lists the documents submitted during the assessment process.

**Table 2: Documents and information submitted during the assessment process**

Document/information description	Date received (Reference)
Licence amendment application – Western Australian Meat Marketing Co-operative Ltd	13 June 2019 (A1797104)
Response to request for further information	5 September 2019 (A1820963)

## 3. Background

The licence holder has been operating since 1973 at the WAMMCO Katanning Abattoir premises. The first licence to operate the abattoir under the EP Act was issued in 1983. The operations include the receipt, slaughter and processing of slaughter bi-products from sheep.

Table 3 lists the prescribed premises categories in the existing licence

**Table 3: Prescribed premises categories in the existing licence**

Classification of premises	Description	Approved premises production / throughput
Category 15	Abattoir: premises on which animals are slaughtered	47,000 tonnes per year
Category 16	Rendering operations: premises on which substances from animal material are processed or extracted	4,900 tonnes per year
Category 55	Livestock saleyard or holding pens: premises on which live animals are held pending their sale, shipment or slaughter	1,200,000 animals per year

## 4. Overview of Premises

### 4.1 Operational aspects

WAMMCO slaughters up to one million animals (primarily sheep and occasionally goats) per annum in the abattoir complex providing meat predominantly for the export market. The rendering plant receives animal by-products from slaughtering (including blood, offal, and paunch) processed in cookers, cake presses and driers to produce blood, meat and bone meal products, gall concentrate and tallow. These products are sold on domestic and overseas markets.

Two boilers fuelled by dehydrated refined waste oil are operated to generate steam to run the cookers and provide hot potable water for use in the slaughter house. Gases generated from operation of the rendering plant cookers pass through a wet scrubber treatment process and condenser prior to discharge to air. This maximises the treatment of water soluble and odorous gases through the WWTS reducing odour emissions for the site. All animal by-product from slaughtering suitable for rendering, is required to be rendered within 24 hours of slaughter of the animals to minimise the generation of malodours.

The WWTS receives wastewater from abattoir operations and rendering activities at the premises. The existing WWTS infrastructure includes solids and fats separation units (inclusive of the new DAF plant installed under works approval W6230/2019/1), a rotary screen and a series of anaerobic and aerobic treatment ponds. Wastewater from abattoir and rendering operations has very high Biological Oxygen Demand (BOD) and the role of the anaerobic treatment cycle is to reduce BOD prior to oxidative treatment of the wastewater. Treated wastewater from the final aerobic pond (Pond 3 in Figure 1 below) is periodically pumped to one of several areas authorised to receive treated wastewater via irrigation. In addition, to manage wastewater volumes and rainfall inputs to ponds over the winter months, wastewater from the final aerobic pond (Pond 3) may be transferred to other ponds for storage and evaporation over the summer months. Solid animal carcasses (mortalities) and other solid animal waste material (e.g. sheep heads & hide trimmings) are disposed of in an on-site burial pit. Sheep skins are salted and cured in large tumblers and are baled up and stored on pallets pending off site sale and export. Manure is disposed of off-site.

Following installation of the RO plant (works authorised under this licence amendment), treated wastewater from the final treatment pond will be transferred daily to supply feed water for further treatment by reverse osmosis. The treated water output from the RO plant (permeate), produced at the rate of 200kL per day, will be temporarily stored in tanks and used for non-food handling requirements including water supply to the rendering plant cooling towers and wet scrubber and for stockyard (lairage) cleaning purposes.

Operational hours are generally from 7am to 3.30pm Monday – Thursday and 7am -12noon Friday and Sunday for livestock deliveries. Slaughtering occurs from 6am – 4.10pm Monday-Thursday and 5.30am – 1pm Friday. The rendering plant generally operates from 8am – 8pm Monday to Friday. Additional slaughtering and rendering operations may occur on Saturdays.

The existing infrastructure and layout of the abattoir complex and WWTS is shown in Figure 1 below. Figure 2 shows key infrastructure at the premises.



Figure 1: WAMMCO Katanning abattoir complex and wastewater ponds



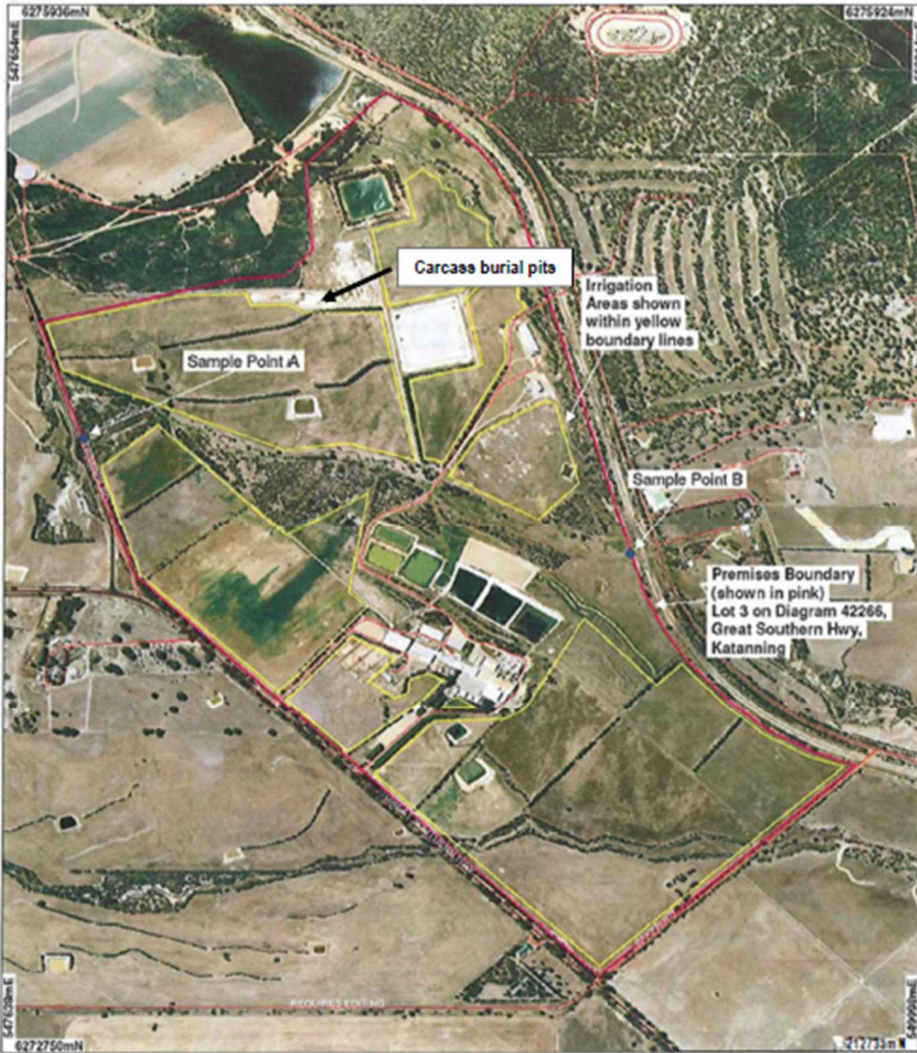
Figure 2: WAMMCO Katanning Abattoir key infrastructure

## 4.2 Existing infrastructure

The existing infrastructure and equipment relevant to the prescribed premises activities are outlined in Table 4 below and the site layout plans shown in Figures 1, 2 and 3 of this decision report.

**Table 4: WAMMCO Katanning abattoir existing infrastructure**

Existing Infrastructure		Site Layout Plan Reference
<b>Ref</b>	<b>Prescribed Activity Category 15: Abattoir and lairage</b>	
Animals (sheep & occasionally goats) are held in the livestock holding yards (lairage) pending processing within the abattoir. Animals are slaughtered to produce meat for human consumption.		
1	Covered livestock holding pens (lairage) with raised slatted floor. Concrete hardstand below slopes downwards connecting to an open concrete channel collecting and conveying wash down water to solids settlement sump	Sheep Yards 1 & 2 in Figure 2
2	Manure storage area and solids settlement sump (concrete floor and walls)	
3	Open concrete spoon drain – conveys manure contaminated wastewater from the solids settlement sump to aerobic pond	Wastewater drains from solids settlement and Pond system 2 in Figure 1
4	3 x clay lined aerobic/evaporation ponds (Pond numbers 5.6 & 7)	Pond system 2 in Figure 1
5	Abattoir facility (animal processing including slaughter room floor and boning room)	Slaughter Room & Abattoir Facility Part 1 in Figure 2
<b>Prescribed Activity Category 16: Rendering</b>		
Rendering of animal material derived from the onsite abattoir (including offal and blood) to produce tallow, meat meal, bone meal, blood meal and gall concentrate.		
6	Key infrastructure includes a hogger, cooker, cake presses, driers, blood tank (10kL storage capacity), tallow storage tanks (46kL & 115kL storage capacities), 2 x boilers (each 5000kW capacity) and associated emissions stacks, cooling towers, wet scrubber, condensing unit with vapour stack/outlet	Rendering Facility in Figure 2
<b>Wastewater Treatment System infrastructure</b>		
7	Concrete sump (5kL capacity), pump and pipeline to rotary screen	Wastewater sump in Figure 2
8	Rotary screen installed on a raised steel platform	Rotary Screen in Figure 2
9	Waste bin receiving separated solid waste via chute from the rotary screen	Located below the rotary screen
10	Dissolved Air Flotation (DAF) plant installed within a concrete hardstand	DAF in Figure 2
11	1 x clay lined anaerobic pond (Pond number 1)	Pond System 1 in Figure 1
12	2 x clay lined aerobic / evaporation ponds (Pond numbers 2 & 8)	
13	1 x clay lined final treated wastewater storage / evaporation pond (Pond number 3)	
14	Extraction pump, flow meter and PVC pipelines conveying treated wastewater from the final pond to irrigation areas	Not specified
15	Specified irrigation areas	Marked by yellow boundary lines in Figure 3
<b>Carcass management infrastructure</b>		
16	Carcass burial pit	Carcass burial pits in Figure 3
<b>Fellmongering infrastructure</b>		
17	2 x skins processing and storage sheds, includes tumble driers, salt store, baling equipment	Skin Shed 1 & 2 in Figure 2



**Figure 3: Premises boundary and site layout (Irrigation areas marked by yellow boundary lines)**



### 4.3 Proposed works – new infrastructure

The proposed infrastructure related to the RO plant to be installed under works in the revised (amended) licence is described in Table 5 below with the layout for the new infrastructure shown in Figure 4.

**Table 5: Proposed works related to installation of reverse osmosis plant**

Infrastructure	Design specifications
1 x <i>Integra</i> I INT BW30-200 model Reverse Osmosis Plant	4 sets of housings (pressure vessels rated to pressure of 300psi) each containing 3 spiral wound thin film composite polyamide membranes
Pumps <sup>1</sup> and associated infrastructure	1 x low pressure stainless steel feed pump (4kW motor) and low pressure PVC piping (treated wastewater in-feed line)
	1 x 36 inch automatic, back washable filter
	Depth filters – 2 housings per train with 5 micron and 1 micron cartridge filters. Suspended solids filter housings with 5 x 40 inch filter elements
	1 x high pressure stainless steel pump (15kW motor)
Anti-scalant dosing system	Not specified
Control panel	Control panel including alarm system, on/off auto switch for pumps and LED display for monitored values
Accessories - include flow meters, valves, pressure gauges, feed and permeate conductivity meters, low/no flow protection, sampling ports	Not specified
Storage tanks	1 x 50kl feed water tank
	4 x 50kL permeate tanks
RO brine discharge pipe	300mm by 30m long, heavy duty PVC pipeline connected to RO plant to convey both daily flush of saline concentrate waste (brine) and the periodic (quarterly) cleaning cycle waste <sup>2</sup> from the RO plant to the clay lined anaerobic pond
Permeate distribution pipeline	300 mm diameter PVC pipeline (as shown in Works plan – location of reverse osmosis plant and associated infrastructure)



Figure 4: Location of proposed reverse osmosis plant and associated infrastructure

## 5. Legislative context and other approvals

### 5.1 Local government approvals

Table 6 summarises approvals relevant to the assessment.

**Table 6: Relevant approvals and tenure**

Legislation	Number	Approval
<i>Planning and Development Act 2005</i>	Shire Reference: DA 2019-04	Local Government Authority – Shire of Katanning – Development Approval, issued on 4 June 2019.

### 5.2 Part V of the EP Act

#### 5.2.1 Works approval and licence history

Table 7 summarises the works approval and licence history for the premises.

**Table 7: Works approval and licence history**

Instrument	Issued	Nature and extent of works approval, licence or amendment
L5199/1983/12	15/09/2011	Licence renewal
L5199/1983/12	21/06/2012	Licence Amendment
L5199/1983/12	29/04/2016	Notice of Amendment of Licence Expiry Dates – extended Licence expiry date to 15 October 2019
W6230/2019/1	26/06/2019	Upgrade to primary wastewater treatment infrastructure
L5199/1983/12	9/10/2019	Licence amendment application to authorise works for the installation and operation of the RO plant and operation of new DAF plant. Includes CEO initiated amendment to extend the licence expiry date to 15 October 2021, and update licence format.

### 5.2.2 Works approvals – W6230/2019/1

A works approval (W6230/2019/1) was issued on 26 June 2019 to authorise the decommissioning and removal of the existing DAF unit and the installation and commissioning of a new DAF unit.

A compliance report was submitted by WAMMCO on 5 September 2019. One variation to the fat storage (tank) infrastructure installed was noted, along with a reported change to the material used (PVC instead of stainless steel) for one section of pipeline.

The newly installed DAF has been commissioned and is currently operational under the works approval. Ongoing operation is authorised under this licence amendment with respect to specific reference to the DAF (fat separation system) in conditions 8 and 9 of the revised licence and inclusion in relevant plans and the infrastructure table.

### 5.2.3 Compliance inspections and complaints history

The Shire of Katanning reported having one record of a complaint reported on 22 October 2018 in relation to odour impacting a nearby rural residence. The Shire Environmental Health Officer visited the site of the complainant and followed up with WAMMCO. WAMMCO noted the complaint and their investigation into the possible odour source in their 2018/2019 Annual Environmental Report. No other complaints for this premises have been reported to the Shire of Katanning in the last 5 years.

The most recent compliance inspection was conducted by DWER in September 2016. At the time of the inspection several non-compliances with licence conditions were identified and subsequently addressed and reported back on by WAMMCO to DWER's satisfaction. The issues identified included stockpiling of sheep manure outside of the required hardstand for temporary storage, inadequate covering of carcasses and animal waste in the carcass burial pit and a leaking valve at the contra-shear causing discharge of untreated wastewater onto the concrete hardstand. These compliance issues and their resolution are recorded in DWER's Incidents and Complaints Management System under ICMS 43014.

There are no other ICMS records for the WAMMCO premises for the last 5 years of operations.

## 6. Location and siting

### 6.1 Siting context

The premises is located approximately 280 km southwest of Perth and 1.5km northwest of the Katanning townsite. The abattoir complex and wastewater ponds are located centrally within the premises (defined by the Lot 3 boundary), with a rail corridor running along the north-eastern boundary and the Great Southern Highway adjacent to sections of the southwestern lot boundary.

The land is zoned Special Use 8 under the Shire of Katanning's Local Planning Scheme No. 5. The surrounding land is zoned rural to the west and southwest and rural residential / small landholdings to the north, northeast. Two adjacent lots to the immediate north are held by Water Corporation being managed for the Katanning town water supply (Pinwernying Dam). Surrounding agricultural land is mainly used for cropping and grazing.

### 6.2 Residential and sensitive premises

Distances to residential and sensitive receptors are detailed in Table 8.

**Table 8: Receptors and distance from activity boundary**

Residential and sensitive premises	Distance from the abattoir complex (within the Premises lot boundary)
Rural residence – Lot 1 on Diagram 13958	985m west of the abattoir complex
Rural residence – Lot 4 on Diagram 47930	870m south-southeast of the abattoir complex
Rural residence / small landholding – Lot 25 on DP 223053 (250 Forrest Hill Rd)	780m east northeast of the northern edge of the abattoir complex
Rural residence / small landholding – Lot 22 on DP 223053 (230 Forrest Hill Rd)	
Rural residence / small landholding – Lot 21 on DP	890m north northeast of the northern edge of the abattoir complex
Rural residence / small landholding – Lot 37 on DP	960m northeast of the northern edge of the abattoir complex
Nearest residents – Katanning townsite	Approximately 2.3km southeast of the eastern boundary of the abattoir complex

### 6.3 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 9.

**Table 9: Groundwater and water sources**

Environmental receptors	Distance from Prescribed Premises
Public Drinking Water Source Area – Katanning Town Water Supply (Pinwernying Dam)	Approximately 1.1km north, northwest from nearest wastewater treatment pond to point on the shared lot boundary closest to the Pinwernying Dam
Watercourses / water bodies	Two non-perennial watercourses run through the Premises, both watercourses forming part of upper drainage catchment of the Cobline River
Groundwater – located within the Karri Groundwater Area (unproclaimed)	Depth to groundwater unknown. No nearby groundwater bores. GIS 250 Map series indicates total dissolved solids (TDS) between 0-1000mg/L over most of the lot, and between 1000 - 3000mg/L in the northern section.

## 7. Risk assessment

### 7.1 Determination of emission, pathway and receptor

The risk assessment identifies all potential emissions, pathways and potential receptors to establish whether there is a risk event which requires detailed risk assessment.

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. Where there is no actual or likely pathway and/or no receptor, the emission is screened out and will not be considered as a risk event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 11.

The identification of the sources, pathways and receptors to determine risk events related to the construction and operation of the Reverse Osmosis Plant are set out in Tables 10 and 11 below.

**Table 10: Identification of emissions, pathway and receptors during construction**

Risk event					Consequence rating	Likelihood rating	Risk	Reasoning	Regulatory controls
Source/Activities	Potential emissions	Potential receptors	Potential pathway & receptor (impact)	Applicant controls					
<p>Construction of a shed and concrete pad (7m width) by 3m (depth) and 2.5m (height)</p> <p>Installation of Reverse Osmosis (water treatment) plant and associated water storage tanks and transfer infrastructure (pipelines, pumps and meters).</p> <p>Connection to final treatment pond for feed water source, wastewater (brine) discharge storage tank and treated water (permeate) distribution pipelines for re-use in non-food handling applications</p>	<p><b>Dust</b> associated with:</p> <ul style="list-style-type: none"> <li>• construction activities;</li> <li>• vehicle movements</li> </ul>	<p>Closest rural residential receptors are 780m east northeast of the northern edge of the abattoir complex</p> <p>Closest residences in Katanning townsite are 2.3km southeast of the eastern boundary of the abattoir complex</p>	<p>Air/windborne pathway causing impacts to health and amenity of closest human receptors.</p>	<p>Installation operations to be monitored by Environmental Officer; and</p> <p>On-site water suppression equipment will be used if required</p>	Slight	Unlikely	Low	<p>No history of dust complaints for routine premises operations.</p> <p>Minimum distance from works area to nearest premises boundary is 440m to the ENE</p> <p>Construction activities will be for a short timeframe.</p> <p>Applicant's monitoring and mitigation controls considered adequate.</p>	<p>Existing licence condition 1<sup>1</sup> applies (visible dust is not to cross the boundary of the premises)</p>
	<p><b>Noise</b></p> <ul style="list-style-type: none"> <li>• construction activities;</li> <li>• vehicle movements</li> </ul>			<p>Air/windborne pathway causing impacts to amenity of closest human receptors.</p>	<p>None-specified</p>	Slight	Unlikely	Low	<p>No history of noise complaints under normal operating conditions.</p> <p>Construction activities will be for a short timeframe.</p> <p>Noise impact is adequately addressed by the EP (Noise) Regulations.</p>

**Note: 1** Reference is to new condition number in the revised licence

**Table 11: Identification of emissions, pathway and receptors *during commissioning and operation***

Risk event					Consequence rating	Likelihood rating	Risk	Reasoning	Regulatory controls
Source/Activities	Potential emissions	Potential receptors	Potential pathway & receptor (impact)	Applicant controls					
Daily discharge of RO plant brine waste and quarterly cleaning wash-down waste to anaerobic pond.	<b>High salt brine</b> (estimated 4,967mg/L concentration) daily discharge to anaerobic pond where wastewater is undergoing biological treatment process	N/A	N/A	N/A	Insufficient information contained within the application on volumes of brine discharge, potential dilution to determine likely impact and consequence on the effectiveness of biological waste treatment processes of a high salt loading. Potential to significantly impact on the biological treatment processes of treated wastewater applied to land.			<p>The Delegated Officer is unable to assess the discharge of brine waste from the RO plant to the first pond (anaerobic pond) in the 4 pond WWTS.</p> <p>The Delegated Officer considers that the addition of brine discharge could have a significant negative impact on the long term effectiveness of the biological water treatment processes. Impacts to final treated wastewater quality / odour and residence time of wastewater within the treatment system have not been determined on the basis of insufficient information provided within the application. Impacts on the salinisation and sodicity of irrigation areas have not been assessed on the basis of insufficient information provided within the application.</p>	<p>New licence condition 7 requires brine waste and quarterly wash-down waste either be stored in an enclosed tank or disposed of to the WWTS.</p> <p>Specifications on the ultimate disposal of the brine and quarterly cleaning waste is deferred subject to licence condition 25 requiring the licence holder to submit further information.</p>
	<b>Emissions to land</b> from: Additional total dissolved salts loading from carryover of brine discharge through WWTS ponds to final pond	Soil and vegetation in irrigation areas	Irrigation of final treated wastewater causing soil contamination and potential death or reduced growth of vegetative cover (pastures) and potential infiltration to groundwater due to salt loading	No controls.	Minor	Possible	Medium		

Risk event					Consequence rating	Likelihood rating	Risk	Reasoning	Regulatory controls
Source/Activities	Potential emissions	Potential receptors	Potential pathway & receptor (impact)	Applicant controls					
Reverse Osmosis (water treatment) plant and associated water storage tanks and pipelines.	<b>Emissions to land from:</b> <ul style="list-style-type: none"> <li><i>Rupture of pipes / overtopping of feed water storage tank</i></li> <li><i>Chemical spills from anti-scalant dosing system</i></li> </ul>	Soil and groundwater	Direct discharge causing soil contamination and potential infiltration to groundwater	Anti-scaling dosing system and cleaning chemical supplies are all housed within a fully enclosed shed installed on a concrete hardstand;  Feed water is wastewater pre-treated to a standard suitable for irrigation to land and stored in a fully enclosed tank on a concrete hardstand;  Operating system is automated including alarms and automated on/off switches for pumps.	Slight	Soil contamination – Possible  Groundwater contamination – unlikely / rare	Low	Infrastructure and equipment design and operation as proposed are considered adequate to mitigate risk to the environment from spills or leaks.  Short distance (30m) and natural gradient sloping away from RO plant to adjacent anaerobic pond.  Separation to groundwater is expected to be adequate (no on-site bore data available).	EP (Unauthorised Discharges) Regulations apply.  Licence reporting conditions 23(d) and 24 (Annual Audit Compliance Report). <sup>1</sup>
Operation of pumps to: transfer feed water to storage tank, introduce feed water (under pressure) into RO plant, discharge brine and quarterly cleaning wash-down waste to a storage tank and distribute permeate to end use operational areas.	<b>Noise</b> from operation of pumps	Closest rural residential receptors are 440m east northeast of the northern edge of the RO plant	Air/windborne pathway causing impacts to amenity of closest human receptors.	None-specified	Slight	Unlikely	Low	No history of noise complaints under normal operating conditions.  Significant distance to closest rural residential receptor.  Noise impact is adequately addressed by the EP (Noise) Regulations.	The EP Noise Regulations apply.  Licence complaints recording and reporting requirements Condition 23(c) <sup>1</sup> will determine if amenity impacts arise

## 7.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 12 below.

**Table 12: Risk rating matrix**

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the risk event in accordance with Table 13 below.

**Table 13: Risk criteria table**

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
			Environment	Public health* and amenity (such as air and water quality, noise, and odour)
Almost Certain	The risk event is expected to occur in most circumstances	Severe	<ul style="list-style-type: none"> <li>onsite impacts: catastrophic</li> <li>offsite impacts local scale: high level or above</li> <li>offsite impacts wider scale: mid-level or above</li> <li>Mid to long-term or permanent impact to an area of high conservation value or special significance<sup>^</sup></li> <li>Specific Consequence Criteria (for environment) are significantly exceeded</li> </ul>	<ul style="list-style-type: none"> <li>Loss of life</li> <li>Adverse health effects: high level or ongoing medical treatment</li> <li>Specific Consequence Criteria (for public health) are significantly exceeded</li> <li>Local scale impacts: permanent loss of amenity</li> </ul>
Likely	The risk event will probably occur in most circumstances	Major	<ul style="list-style-type: none"> <li>onsite impacts: high level</li> <li>offsite impacts local scale: mid-level</li> <li>offsite impacts wider scale: low level</li> <li>Short-term impact to an area of high conservation value or special significance<sup>^</sup></li> <li>Specific Consequence Criteria (for environment) are exceeded</li> </ul>	<ul style="list-style-type: none"> <li>Adverse health effects: mid-level or frequent medical treatment</li> <li>Specific Consequence Criteria (for public health) are exceeded</li> <li>Local scale impacts: high level impact to amenity</li> </ul>
Possible	The risk event could occur at some time	Moderate	<ul style="list-style-type: none"> <li>onsite impacts: mid-level</li> <li>offsite impacts local scale: low level</li> <li>offsite impacts wider scale: minimal</li> <li>Specific Consequence Criteria (for environment) are at risk of not being met</li> </ul>	<ul style="list-style-type: none"> <li>Adverse health effects: low level or occasional medical treatment</li> <li>Specific Consequence Criteria (for public health) are at risk of not being met</li> <li>Local scale impacts: mid-level impact to amenity</li> </ul>
Unlikely	The risk event will probably not occur in most circumstances	Minor	<ul style="list-style-type: none"> <li>onsite impacts: low level</li> <li>offsite impacts local scale: minimal</li> <li>offsite impacts wider scale: not detectable</li> <li>Specific Consequence Criteria (for environment) likely to be met</li> </ul>	<ul style="list-style-type: none"> <li>Specific Consequence Criteria (for public health) are likely to be met</li> <li>Local scale impacts: low level impact to amenity</li> </ul>
Rare	The risk event may only occur in exceptional circumstances	Slight	<ul style="list-style-type: none"> <li>onsite impact: minimal</li> <li>Specific Consequence Criteria (for environment) met</li> </ul>	<ul style="list-style-type: none"> <li>Local scale: minimal to amenity</li> <li>Specific Consequence Criteria (for public health) met</li> </ul>

<sup>^</sup> Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting*.

\* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines*.

"onsite" means within the Prescribed Premises boundary.



### 7.3 Acceptability and treatment of risk event

DWER will determine the acceptability and treatment of risk events in accordance with the risk treatment table below:

**Table 14: Risk treatment table**

Rating of risk event	Acceptability	Treatment
<b>Extreme</b>	Unacceptable.	Risk event will not be tolerated. DWER may refuse application.
<b>High</b>	May be acceptable. Subject to multiple regulatory controls.	Risk event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
<b>Medium</b>	Acceptable, generally subject to regulatory controls.	Risk event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
<b>Low</b>	Acceptable, generally not controlled.	Risk event is acceptable and will generally not be subject to regulatory controls.

## 8. Determination of revised licence conditions

The licence holder submitted a licence amendment application on 13 June 2019 seeking authorisation to install, commission and operate a RO water treatment plant and include operation of the new DAF plant. The Delegated Officer (DO) in assessing the requested alteration to the premises, and taking into consideration the licence expiry date and operation of new and existing equipment at the premises, has issued an amended (revised) licence in an updated licence format.

The DO has:

- extended the licence by 2 years (amended expiry date to 15 October 2021);
- corrected and updated definitions, adding new definitions as required;
- transferred existing licence conditions to the new format with minimal or no changes (except where specified below);
- added a new authorised works conditions set to allow for installation and subsequent commissioning and ongoing operation of the RO and DAF plant;
- added a condition (Condition 7) specifying a requirement that brine and other RO cleaning wash-down waste is either to be temporarily stored in an enclosed tank or discharged to the WWTS, subject to further information on options for disposal of this waste being presented for assessment (Condition 25 - authorised works section);
- converted all previous - 'Attachments' in the licence to 'Schedules' including deletion of the redundant Annual Audit Compliance Report (AACR) and notifications forms set out previously in Attachment 1 of the licence;
- included additional site infrastructure plans to Schedule 1 of the licence and inserted an infrastructure and equipment table in Schedule 3;
- corrected licence condition numbers following the removal of redundant conditions and addition of new conditions; and
- updated the style and appearance of the licence.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the licence under the EP Act.

## 9. Licence holder's comments

The licence holder was provided with the draft decision report and draft revised licence on 23 September 2019. Comments received from the licence holder on 2 October 2019 have been considered by the Delegated Officer as shown in Appendix 2.

## 10. Conclusion

This assessment of the risks of activities on the premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this decision report (summarised in Appendix 1).

Based on this assessment, it has been determined that the amended licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

**Caron Goodbourn**  
**Manager, Process Industries**  
**Regulatory Services**

Delegated Officer  
under section 20 of the *Environmental Protection Act 1986*

## Appendix 1: Key documents

	Document title	In text ref	Availability
1.	WAMMCO Licence Amendment Application Form and Supporting Document received on 13 June 2019	Amendment application	DWER records (A1797104)
2.	Works Approval W6230/2019/1 – new DAF installation	W6230/2019/1	DWER records (A1800163)
3.	Works Approval W6230/2019/1 – Compliance Report	Compliance Report	DWER records (A1823010)
4.	WAMMCO International – Katanning Abattoir – existing licence (L5199/1983/12)	Existing licence	DWER records (A1789171)
5.	WAMMCO International – Environmental Report 2018	Annual Environmental Report	DWER records (A1758377)
6.	DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	Guidance	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
7.	DER, February 2017. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.		
8.	DWER, June 2019. <i>Guideline: Statement: Decision Making.</i> Department of Water and Environmental Regulation, Perth.		

## Appendix 2: Summary of applicant’s comments on risk assessment and draft conditions

Summary of licence holder comment	DWER response
<p>The licence holder provided comments on several premises operational details.</p>	<p>The Delegated Officer (DO) has updated operational descriptions accordingly. The DO further notes with respect to comments made that:</p> <ul style="list-style-type: none"> <li>the licence holder should consult with DWER prior to implementing changes to the boilers fuel source to discuss implications for licence conditions related to emissions to air monitoring and reporting;</li> <li>details provided by the licence holder on operating hours are specified and considered relevant to potential emissions (e.g. noise, air, odour) and impacts on sensitive receptors; and</li> <li>treated wastewater can only be irrigated to the specified areas authorised under the licence as defined by the areas marked by yellow boundary lines in the premises map in Schedule 1 of the licence.</li> </ul>
<p>Licence holder requested changed wording on the restriction of rendering to only apply to materials derived from on-site abattoir operations, to make allowance for potential additional material for rendering to be brought in from other sources.</p>	<p>The DO has determined that this restriction will apply, noting that, based on current annual reporting, the premises is already operating at the upper limit of authorised production throughput for Category 16: Rendering - Not more than 4,900 tonnes per year.</p> <p>Any increases to approved premises throughputs, currently authorised as defined in Schedule 2 of the licence, should be requested through a licence amendment or future licence renewal (pre expiry in October 2021) with required supporting documentation and with regard to DWER’s recently published Industry Regulation Guide to Licensing (June 2019) accessible at: <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a></p>
<p><b>Works – Reverse Osmosis Plant</b></p> <p>Licence holder requested that the disposal method for the brine and quarterly cleaning waste not be prescribed and restricted only to off-site disposal by a controlled waste carrier, due to limited disposal options.</p> <p>Licence holder has referred the option of waste disposal to the existing anaerobic pond / WWTS to consultants for risk assessment of impacts on treatment functions and final treated wastewater quality and is otherwise considering the possible option of waste disposal to an on-site evaporation area with subsequent removal of dried aggregate to a licensed facility.</p> <p>Additional time is required to submit further information.</p>	<p>The DO has taken into consideration limitations on available facilities licenced to receive brine waste, the pending licence expiry date (15/10/2019) and the licence holder’s request to not specify disposal requirements, subject to the provision of further information to allow the disposal method to be further assessed and determined.</p> <p>An additional licence condition in the authorised works condition set (condition 25) has been inserted requiring the licence holder to submit further information within 90 days of the revised licence issue date (and prior to commencing the works) on brine disposal options.</p> <p>As part of the reporting required by Condition 25 of the amended licence, Condition 7 on waste material management, will be subject to amendments based on the final determined method (and associated infrastructure required) for RO plant waste disposal.</p>