



## Application for Licence Amendment

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

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Licence Number	L6395/1993/16
Licence Holder	Harvey Industries Group Pty Ltd
ACN	117 597 985
File Number:	DER2015/000553-1~3
Premises	Harvey Beef Abattoir  Legal description – Lot 3 on Diagram 70328; Lots 105, 106 and 113 on Plan 202106; Lots 115, 116, 117, 118, 119, 142, 143, 145, 147, 149, 172, 173, 174, 175, 177, 200, 201, 202, 203, 204, 205, 228, 229, 230, 231 and 232 on Plan 2492; Lots 235 and 236 on Plan 29898; and Lots 400 and 401 on Plan 302521, Seventh Street HARVEY WA 6220
Date of Report	08/04/2020
Status of Report	Final

# 1. Definitions and interpretation

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

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
Amended Licence	the amended Licence issued under Part V, Division 3 of the EP Act, with changes that correspond to the assessment outlined in this Amendment Report.
Amendment Report	refers to this document
Category/ Categories/ Cat.	categories of prescribed premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10, Joondalup DC JOONDALUP WA 6919 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
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	Environmental Protection Act 1986 (WA)
EP Regulations	Environmental Protection Regulations 1987 (WA)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Harvey Industries Group Pty Ltd
NIMP	refers to the Harvey Industries Group Pty Ltd, <i>Harvey Beef Abattoir Nutrient and Irrigation Management Plan</i> , version 5, September 2019
prescribed premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Amendment Report applies, as specified at the front of this Amendment Report.
RENOIR	means removal of nitrogen for irrigation pond
Risk Event	as described in Guidance Statement: Risk Assessment

## 2. Amendment Description

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend Licence L6395/1993/16 granted to Harvey Industries Group Pty Ltd (the Licence Holder) for its Harvey Beef Abattoir facility (the Premises).

## 3. Purpose and scope of assessment

An application was received from the Licence Holder on 19 August 2019 to amend Existing Licence L6395/1993/16 to increase the production capacity of category 55: livestock saleyard or holding pen (premises on which live animals are held pending their sale, shipment or slaughter) from 170,000 to 250,000 beef cattle per year.

The increase is proposed to occur progressively over a few years with the Licence Holder estimating that it will be achieved by the year 2024. No change is proposed to the production capacity for categories 15 (abattoir) or 16 (rendering operations) as, at a production capacity of 250,000 beef cattle (category 55) the equivalent hot standard carcass weight (and the amount of animal material rendered) will remain under the existing assessed production capacity (see Table 3).

No construction or modifications to the Premises are proposed for the increase in the number of beef cattle held pending slaughter. The increase will be achieved through extended kill shifts and operation over a 6-day week rather than the existing operation over 5 days.

The increase in the livestock holding capacity (pending slaughter) through the existing approved lairage/livestock holding yards is considered by the Delegated Officer to not present a significant change to the risk profile of emissions and discharges from the Premises.

The Licence Holder has not applied to hold cattle outside the approved lairage/holding yards or in the wastewater irrigation paddocks, therefore this activity is not being assessed or approved through this amendment application.

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
Licence Amendment Application form and supporting information (DWERDT190881)	19 August 2019
Response to request for further information and revised licence amendment application form (DWERDT195800)	30 August 2019
Nutrient and Irrigation Management Plan, version 5, September 2019 (DWERDT195804)	3 September 2019

Administrative changes and changes regarding the increase to category 55 have been made to the conditions of the Existing Licence as summarised in sections 9 and 11.1 of this report.

## 4. Premises Information

### 4.1. Background

The Licence Holder hold Licence, L6395/1993/16, for abattoir and rendering facilities at the Premises with processing facilities located approximately 2 km west of Harvey on the Swan Coastal Plan, approximately 120 km south of Perth.

Beef cattle are transported by truck to the property via an entrance on Eighth Street, unloaded in the stockyards and held in lairage yards or holding paddocks before slaughter. The Existing Licence approves 170,000 beef cattle per year to be held on the premises pending slaughter. The Licence Holder intends to take advantage of market opportunities and have applied to

increase the throughput of category 55 to 250,000 beef cattle per year. No infrastructure changes are proposed with the increase in throughput and no other animal species are proposed.

Table 3 below outlines the proposed changes to the Licence.

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

Category	Description	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
15	Abattoir: premises on which animals are slaughtered	Not more than 220,000 tonnes (hot standard carcass weight) of beef cattle slaughtered per annual period	No change	Not applicable
16	Rendering operations: premises on which substances from animal material are processed or extracted.	Not more than 120,000 tonnes of animal material rendered per annual period	No change	Not applicable
55	Livestock saleyard of holding pen: premises on which live animals are held pending their sale, shipment or slaughter.	Not more than 170,000 animals per annual period	Not more than 250,000 beef cattle per annual period	Licence Holder initiated amendment to increase the throughput capacity

## 4.2. Existing operational aspects

Beef cattle are transported by truck to the property via an entrance on Eighth Street, Harvey, and unloaded in the stockyards and held in lairage yards before slaughter.

Most of the lairage yards are concrete based; however, 7 of the lairage yards are sand based for holding cattle with “soft feet” following extended travel. Livestock are held in the lairage yards up to 24 hours before processing. Manure is removed from the lairage yards on a weekly basis using a dry sweeper. Removed manure is stored in bins prior to disposal offsite.

Mortality is either processed within the rendering plant or denatured prior to transport to a licenced landfill facility.

Animals are slaughtered and processed in the abattoir building. The slaughter and boning floors operate 5 days a week all year round; however, this can reduce or increase depending on seasonal variation. The slaughter floor runs one shift per day and the boning room runs two shifts per day. Each shift can operate 8.5 to 12 hours.

Blood is collected in a dedicated sump prior to transfer to the rendering area. Paunch (undigested stomach contents) and hides are taken off site for disposal or further processing.

All renderable materials including offal and blood from the abattoir, and renderable material sourced from offsite, are processed in the rendering plant at the Premises. The processing rate of renderable material is highly dependent on the drying rate of the products introduced to the cooker with dry products being processed faster than wetter products. The combined (wet and dry) rendering operations can process up to approximately 18 tonnes per hour (15 t/hr of dry products and 3 t/hr of wet (blood) products). Process water is sourced from the Harvey Pipeline Scheme. Rendering plant operations include the drying of blood; cooking, screening, pressing and milling raw material to produce meat bone meal; screening, polishing and settling material to produce tallow and cooking and decanting material from the kill floor to produce other products.

Extracted air (odour) emissions from the rendering facility is directed through ducting at low flows into the base of one of two biofilters where the air is diffused through wood chip filter media. Moisture content within the biofilters is maintained using scheme water to sustain microbial activity. The treated air is then released from the surface of the biofilters (i.e. not through a stack).

Wastewater generated from the slaughter floor, boning room and rendering plant, along with some contribution from cleaning of chilling and freezing areas within the abattoir, is directed through primary (solids removal) and secondary (anaerobic) and RENOIR ponds for treatment of the wastewater. Potentially contaminated stormwater from the lairage yards is directed to the yard pond with wastewater then directed to the anaerobic pond. Treated wastewater is then stored in evaporation ponds until it is used to irrigate pastures and crops on the Premises as part of the Licence Holder's cropping program.

Sludge wastes are removed from the RENOIR pond via a submersed suction fitted to a sludge pump and directed to Geobags for dewatering and drying located NW of the RENOIR pond. The geobags are stored on a HDPE liner with leachate being directed back to the wastewater ponds.

Sludge wastes from ponds 3, 4, 5 and 6 are removed on an as needed basis using a long arm excavator with primary focus on limiting sludge excavation to at most 0.5 m above the base of the pond so as not to compromise the compacted clay pond base liner. Sludge from the yard pond are also removed on an as needed basis using a long arm excavator. If sludges are spadeable they will be placed directly into a truck for disposal offsite; otherwise sludges may be dried onsite prior to removal offsite. Licence Holder to note that additional approvals may be required for the construction of a drying bed.

## 5. Part V of the EP Act

### 5.1. Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations. The guidance statements which inform this assessment are listed in Appendix 1.

### 5.2. Works approval and licence history

Table 4 summarises the works approval and licence history for the Premises since September 2015.

**Table 4: Licence amendments**

Instrument	Issued	Amendment
L6395/1993/16	10/09/2015	Licence renewal
L6395/1993/16	29/04/2016	Notice of Amendment of Licence Expiry Dates – extended Licence expiry date to 14 September 2030
L6395/1993/16	10/11/2016	Amendment Notice 1 Licence amendment to amend conditions relating to the management of treated wastewater within the irrigation area, nutrient loading rates, management of wastewater storage ponds, notification requirements, administrative changes, and update plan of Premises.
L6395/1993/16	5/04/2019	Licence Amendment Licence amendment to include an additional irrigation area, administrative changes, update to new format licence and consolidate changes made in Notice of Amendment of Licence Expiry Dates and Amendment Notice 1.
W6291/2019/1	10/02/2020	Works Approval for the construction of a covered anaerobic lagoon

L6395/1993/16	08/04/2020	Licence amendment application to increase throughput capacity of category 55: livestock saleyard or holding pen from 170,000 to 250,000 beef cattle per annual period.
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## 6. Location and receptors

### 6.1. Siting context

The Premises is located on the Swan Coastal Plain approximately 2 km west of Harvey and 120 km south of Perth. The land is zoned as intensive farming under the Shire of Harvey's Town Planning Scheme No. 1 (District Scheme) and includes restricted use area 6 (abattoir) and restricted use area 4 (abattoir and holding paddocks with 30 m of dense native vegetation between the buildings and Uduc Rd and around the wastewater lagoons). The surrounding land is zoned as intensive farming and includes land uses such as stock grazing, farm stay accommodation, fruit trees, viticulture and intensive horticulture.

### 6.2. Residential and sensitive premises

Table 5 below lists the closest sensitive land uses to the prescribed premises which may be receptors relevant to the proposed amendment.

**Table 5: Receptors and distance**

Sensitive Land Uses	Distance from prescribed premises
Residential premises (rural)	Approximately 30 residential premises located within approximately 1.5 km of the livestock holding yards. The closest being approximately 540 m SSE, 570 m SE, 660 m and 700 m E.
Residential area	Residential area located approximately 1.5 km east of the livestock holding yards.

### 6.3. Specified ecosystems, groundwater and water sources

Specified ecosystems are areas of high conservation value and special significance that may be impacted as a result of activities at or emissions and discharges from the Premises. The distances to specified ecosystems are shown in Table 6. Table 6 also identifies the distances to other relevant ecosystem values which do not fit the definition of a specified ecosystem and groundwater and water sources.

**Table 6: Environmental Values**

Specified ecosystems and other environmental receptors	Distance from the premises
Geomorphic wetlands Swan Coastal Plain (management)	Premises located within: Swan Coastal Plain – Semeniuk, Palusplain (seasonally waterlogged), flat, multiple use.
<i>Environmental Protection (Peel Inlet – Harvey Estuary) Policy 1992 (EPP)</i>	The Premises is located approximately 550 m south of the area protected under the EPP.
Surface water	The Premises is located within the Harvey Irrigation District proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> . The Harvey Dam is located 4.8 km east and the Harvey Main Drain located 2.3

	<p>km NE of the Premises. The Harvey Diversion Drain is located 1.9 km S of the livestock holding yards.</p> <p>Existing agricultural drainage networks are located adjacent and through the Premises, along Seventh St, Uduc Rd and Government Rd (Wellesley River diversion drain). These drainage networks flow to the Harvey River Diversion Drain discharging into the ocean near Myalup, approximately 19 km downstream.</p> <p>Resource enhancement (sumpland and dampland) wetlands are located approximately 4.8 km west of the irrigation area.</p>
Groundwater	<p>The South West Coastal Groundwater Area, proclaimed under the <i>Rights in Water and Irrigation Act 1914</i>, is located 4.7 km west of the Premises boundary.</p> <p>The Licence Holder has a production bore onsite; however, it is rarely used due to unsuitable water quality for processing purposes. The Licence Holder has advised that there are approximately 50 groundwater bores within a 3 km radius, most of which are for production purposes associated with livestock and domestic requirements.</p> <p>The nearest licence to take groundwater, for the Harvey Golf Club, is located approximately 5.8 km west of the Premises boundary.</p> <p>The Licence Holder has advised that depth to groundwater at the Premises is at least 1.5 m below ground level (based on a 1.5 m deep drainage ditch running along one of the irrigation areas showing no surface expression of groundwater).</p> <p>Information gathered by DWER in 2015 (DoW 2015) shows that depth to groundwater at the proposed irrigation area ranges from 1 to 2 metres below ground level.</p> <p>A groundwater monitoring bore, owned by DWER and located 500 m west of the irrigation area, shows the maximum groundwater table to be approximately 1 m below ground level. It is noted that, according to the DoW 2015 information, this bore is located adjacent to an area that was found to have a depth to groundwater of 0.6 – 1 m below ground level.</p> <p>The Perth Groundwater Map shows that the groundwater salinity at the Premises is 1,500 – 3,000 mg/L, which is considered brackish to saline.</p>

## 6.4. Soil type

Table 7 details soil types and characteristics relevant to the assessment.

**Table 7: Soil and sub-soil characteristics**

Soil and sub-soil characteristics	Description
Soil type classification	The Licence Holder has provided, with their application, a NIMP that includes information on soil type of the Premises. Soils at the Premises are described as very gently undulating alluvial terraces and fans. Moderate to moderately well drained uniform brown loams or well-structured gradational brown earths. And flat to very gently undulating with deep, imperfect to poorly drained acidic gradational yellow or grey-brown earths and mottled yellow duplex soils, with loam to clay loam surface horizons (NIMP, 2019).
Acid sulfate soil risk	Moderate to low acid sulfate soil disturbance risk (<3 m from surface)

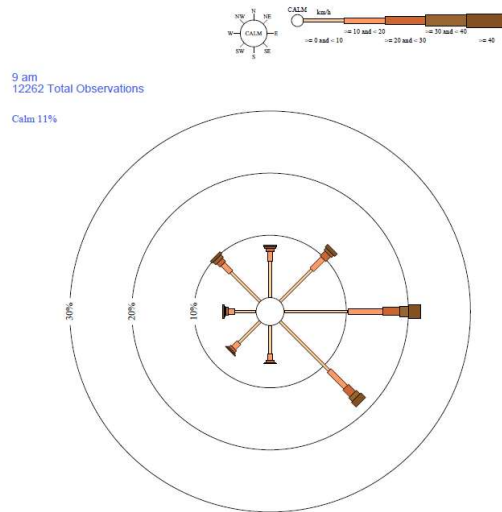
## 7. Meteorology

The region experiences cool, wet winters and warm to hot, dry summers. The nearest Bureau of Meteorology site is Wokalup (site number 009642), located approximately 5.8 km SSE of the Premises.

### 7.1. Wind

Figure 1 shows the wind direction and strength for 9am at Wokalup.

Rose of Wind direction versus Wind speed in km/h (01 Jan 1965 to 31 Oct 2000)  
 Custom times selected, refer to attached note for details  
**WOKALUP**  
 Site No: 009642 • Opened Jan 1961 • DRI Open • Latitude: -33.1328° • Longitude: 115.8794° • Elevation 30m  
 An asterisk (\*) indicates that calm is less than 0.5%.  
 Other important info about this analysis is available in the accompanying notes.



Copyright © Commonwealth of Australia 2019. Prepared on 11 Aug 2019  
 Prepared by the Bureau of Meteorology  
 Contact us by phone on (03) 9669 4000, by fax on (03) 9669 4515, or by email on [climatedata@bom.gov.au](mailto:climatedata@bom.gov.au)  
 We have taken all due care but cannot provide any warranty nor accept any liability for this information.

**Figure 1: Wind direction and strength for 9am at Wokalup (site no. 009642)**

It is important to note that the wind rose (shown in Figure 1) show historical wind speed and wind direction data (1 January 1965 to 31 October 2000) for Wokalup weather station and should not be used to predict future data.

## 7.2. Rainfall and temperature

Figure 2 shows the average monthly maximum temperature and the average monthly rainfall for Wokalup and is based on data from 1951 to 2019.

The average minimum temperatures range between 7.9°C and 16.1°C while the average maximum temperatures range between 16.7°C and 31°C. The total annual average rainfall is 966.5 mm.

Rainfall exceeds pan evaporation for 4 months of the year (May to August).



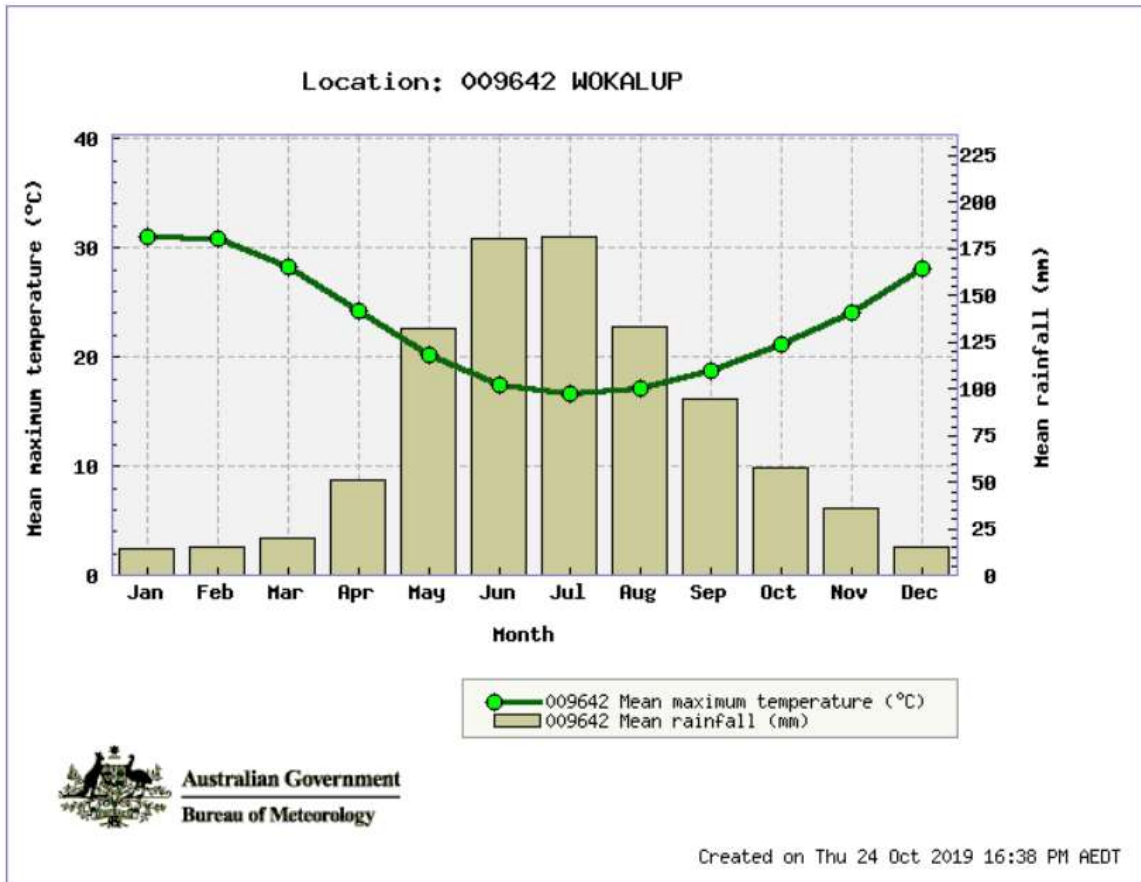


Figure 2: Average monthly maximum temperature and average monthly rainfall

Table 8: Mean rainfall and mean evapotranspiration

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm) <sup>1</sup>	14.5	15.3	20.5	51	132.8	180.4	181.6	133.7	95.1	57.3	35.7	15.3
Mean daily evapotranspiration (mm) <sup>1</sup>	9	8.6	6.8	4.4	2.7	2.1	2.3	2.5	3.2	4.4	5.9	7.9
Mean monthly evapotranspiration (mm) <sup>2</sup>	279	240.8	210.8	132	83.7	63	71.3	77.5	96	136.4	177	244.9

Note 1: Sourced from Bureau of Meteorology ([www.bom.gov.au](http://www.bom.gov.au)), Wokalup (site number 009642)

Note 2: Calculated from number of days in each month multiplied by the mean daily evapotranspiration

## 8. Risk assessment

Table 9 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. The table identifies whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 9: Risk assessment for proposed amendments during operation**

Risk Event				Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
Increase in the number of beef cattle held pending their slaughter at the onsite abattoir	Increase in fugitive dust from cattle movement	<p>The increase in the number of beef cattle held at the livestock holding yards has the potential to cause an increase in fugitive dust, odour and noise which may adversely impact upon nearby sensitive premises. The amount of solid waste (manure) will also increase.</p> <p>The closest residential premises (rural) are located approximately 540 to 700 m SE and E of existing livestock holding yards.</p> <p>Wind at 9am at the site is easterly or south-easterly for the majority of the year (see section 7.1), which would direct odours away from the closest residential premises.</p>	<p>The unloading and truck turn-around area is compacted gravel with the livestock holding yards concrete based.</p> <p>The lairage yards are concrete based except for 7 yards that are sand based for holding cattle with "soft feet" following extended travel.</p> <p>All potentially contaminated stormwater from the livestock holding yards is directed to the yard pond.</p> <p>Manure is removed from the livestock holding yards on a regular basis and stored in bins prior to removal offsite.</p>	Slight	Unlikely	Low	<p>The Delegated Officer considers that the separation distance between the source and potential receptors is sufficient noting that fugitive odour from the increase in the number of beef cattle held is expected to be insignificant compared to abattoir and rendering operations onsite and the treatment of wastewater in the onsite wastewater treatment pond system.</p> <p>There have been no complaints received by DWER in relation to odour in at least the last 4 years.</p> <p>No further assessment required.</p>	<p>Existing conditions include:</p> <ul style="list-style-type: none"> <li>for the holding pens (lairage yards) to be located on a hardstand area ;</li> <li>for potentially contaminated stormwater to be directed to the yard pond; and</li> <li>solid waste (manure) from the lairage yards to be stored in impermeable bins located on a hardstand prior to removal offsite. The Licence Holder must also report the amount of solid waste (manure) removed from the premises in each monthly period.</li> </ul> <p>An additional condition, processing limits, has been added to the licence. See section 9 for further information.</p>
	Increase in odour from manure							
	Increase in noise from bellowing cattle and increased vehicle movements/unloading							
	Solid waste (manure)							

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)

## 9. Decision

1. The Delegated Officer has determined that the proposed increase to category 55 from 170,000 to 250,000 beef cattle held per year will be included in the Amended Licence. There is no change to the assessed production capacity of category 15 (abattoir) or 16 (rendering operations). The Delegated Officer considers that this is largely an administrative change to align the throughput of category 55 (holding animals pending their slaughter) with the previously assessed throughput of category 15 (220,000 tonnes (hot standard carcass weight) and category 16 (120,000 tonnes).

The Delegated Officer has determined that an additional condition will be added to the licence to limit the Licence Holder to these assessed capacities. The existing licence included a condition that limited the production capacity of category 16. This has been transferred to the new condition. If any future increases are required, the Licence Holder can apply for an amendment to the licence.

The Delegated Officer has made amendments to infrastructure and operational requirements for the livestock holding pens (lairage yards). This includes that contaminated stormwater from the lairage yards to be directed to the yard pond, uncontaminated stormwater to be prevented from entering the lairage yards and details on the wastewater transfer infrastructure from the lairage yards to the yard pond.

It has come to the Delegated Officer's attention that cattle are being held outside of the lairage yards (within irrigated paddocks) on the Premises. DWER has not assessed nor authorised this activity (holding of cattle outside of the approved lairage yards) and has a number of concerns that include, but are not limited to:

- (a) unknown amount of nutrients, particularly nitrogen and phosphorus, being applied to irrigated paddocks from the manure of grazing cattle. This manure has not been taken into account in the Licence Holder's Nutrient and Irrigation Management Plan; and
- (b) potential biosecurity issues with unknown withholding times between flood irrigation of paddocks with abattoir effluent and the grazing of livestock.

The Licence Holder has indicated that they will be updating their NIMP and applying for a further licence amendment to have this activity added to the licence. Therefore in the interim the Delegated Officer has added solid wastes (such as manure) to the nutrient loading limits specified on the licence. This means the Licence Holder will be required to estimate tonnages (in kg of cubic metres) of manure applied to each irrigation area based on the number and duration of stock accessing the irrigation areas. This will be required to be reported in the Annual Environmental Report.

2. Administrative amendments relating to the groundwater monitoring bores have been made to the licence. This includes the removal of conditions 2, 3 and 4 as the groundwater monitoring bores have been installed and the required reports have been submitted to the Department.

Table 12 has been amended to remove the wording that groundwater monitoring is to commence within 30 days of bore installation. The groundwater monitoring bores were installed on 2 May 2019 with groundwater monitoring commencing on 9 May 2019.

The map, Groundwater monitoring bore locations, was added to Schedule 1: Maps of the Licence to show the locations of the three groundwater monitoring bores.

3. An administrative amendment has been made to condition 19 to match the submission date of the Annual Audit Compliance Report to the submission date of the Annual Environmental Report. Both reports must be submitted by the 31 March each year.
4. An administrative amendment has been made to move the details of the prescribed premises activities from Schedule 2 to the front page of the licence. Subsequently the

definition of Primary Activities has been updated and any references to Primary Activities or Schedule 2 have been amended.

5. Other administrative type amendments include:
  - (a) the addition of the definition for freeboard as it is used in Table 3 of the Licence;
  - (b) removal of the word treated throughout the licence in regards to wastewater;
  - (c) addition of infrastructure location column to Table 3;
  - (d) added the maximum hours that waste material may be stored on the premises (odour and fly breeding);
  - (e) clarification of Condition 5, Table 4 regarding renderable material acceptance; and
  - (f) inclusion of geobags as sludge storage in Table 7.

Further administrative amendments are detailed in Table 10 of section 11.1.

## 10. Consultation

The application was provided to the Shire of Harvey for comment on 24 September 2019. No comments were received.

## 11. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a licence amendment will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

### 11.1. Summary of amendments

Table 10 provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the Amended Licence as part of the amendment process. The numbering of other conditions (not amended) may have changed but are not detailed below.

**Table 10: Licence amendments**

Condition No.		Proposed amendments
Existing Licence	Amended Licence	
Front page	Front page	Amended to include the prescribed premises category descriptions and assessed production capacities.
Definitions	Definitions	Added the definition for freeboard, as the term freeboard is used in Table 3 of the Licence. Removal of the word <i>treated</i> in regards to wastewater. Amended the definition for Primary Activities to refer to the front page (rather than Schedule 2) of the Licence.
Table 2	Table 2	Removal of the words <i>treated</i> and <i>set out in Schedule 2</i> .
Condition 2, including Table 3	-	Removal of these conditions.
Condition 3	-	
Condition 4	-	
Table 4	Table 3	Administrative change to the title of column 2. Removal of duplicated condition (rendering facility). Removal of the word <i>treated</i> in regards to wastewater. Rendering facility – amended (c) to include <i>enclosed</i>

Condition No.		Proposed amendments
Existing Licence	Amended Licence	
		<p><i>building that enables</i>, removal of the word <i>exhaust</i>, and include the words <i>generated</i>, <i>captured</i> and <i>operational</i>.</p> <p>RENOIR pond – removal of <i>the Licence Holder shall direct all treated</i> and the addition of <i>to only be directed</i>.</p> <p>Anaerobic pond, RENOIR pond and storage ponds 3, 4, 5 and 6 – addition of the word minimum in section (p).</p> <p>Livestock holding pens (lairage yards) - amended existing conditions to clarify conditions and added conditions regarding uncontaminated stormwater and how wastewater is transferred from the pens to the yard pond.</p> <p>Added condition to clarify that the yard pond only receives wastewater from the livestock holding pens and that the freeboard is a minimum.</p> <p>Added infrastructure location column.</p>
-	Condition 3 and Table 4	Addition of this condition to include processing limits on the licence.
Condition 6 and Table 5	Condition 4 and Table 5	Amended condition to clarify the intention of condition.
Table 7	Table 7	<p>Added maximum hours that waste material may be stored on the premises.</p> <p>Removal of the word <i>treated</i> in regards to wastewater.</p> <p>Included existing geobags as a storage of sludge waste.</p>
Condition 10	Condition 8	<p>Removal of the word <i>treated</i> in regards to wastewater.</p> <p>Addition of <i>and solid wastes (including manure)</i>.</p>
Table 10	Table 10	Removal of the word <i>treated</i> in regards to wastewater.
Table 12	Table 12	Amended to remove the wording <i>commencing within 30 days of bore installation</i> .
Condition 17(b)	-	Removal of this condition as works have been completed.
Condition 19(b)	Condition 17(b)	Amended to remove 28 February and insert 31 March.
Table 13	Table 13	<p>Addition of the condition that the Annual Environmental Report must contain an estimate of tonnages (in kg or cubic metres) of manure applied to each irrigation area, based on the number and duration of stock accessing the irrigation areas.</p> <p>Removal of the word <i>treated</i>.</p>
Monitoring Locations and Main Site Features	Monitoring Locations and Main Site Features	Updated this map to include the location of the lairage yards (including location of sand based pens and hardstand base) and geobags.
-	Groundwater monitoring bore locations	Addition of this map to show the location of groundwater monitoring bores, MW01, MW02 and MW03.
Schedule 2: Primary Activities, Table 14	Schedule 2: Primary Activities, Table 15	Deletion of text and table as this information has been transferred to the front page.

**Caron Goodbourn**

Manager, Process Industries

*An officer delegated by the CEO under section 20 of the EP Act*

## Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Licence L6395/1993/16 – Harvey Beef Abattoir	Existing Licence	Accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2.	Perth Groundwater Map		Accessed at <a href="https://maps.water.wa.gov.au">https://maps.water.wa.gov.au</a>
3.	Water Information Reporting		Accessed at <a href="http://wir.water.wa.gov.au">http://wir.water.wa.gov.au</a>
4.	Depth to groundwater geographical information system layer as part of the Myalup Water for Food project, Department of Water, 2015	DoW 2015	Personnel communication – Robert Gibbs, Hydrogeologist, Department of Water and Environmental Regulation
5.	Perth Groundwater Map		accessed at <a href="https://maps.water.wa.gov.au">https://maps.water.wa.gov.au</a>
6.	Water Information Reporting		accessed at <a href="http://wor.water.wa.gov.au">http://wor.water.wa.gov.au</a>
7.	Bureau of Meteorology – Climate data online		accessed at <a href="http://www.bom.gov.au">www.bom.gov.au</a>
8.	DWER, July 2015. <i>Guideline Statement: Regulatory Principles</i> . Department of Water and Environmental Regulation, Perth.		accessed at <a href="https://dwer.wa.gov.au/regulatory-documents">https://dwer.wa.gov.au/regulatory-documents</a>
9.	DWER, October 2015. <i>Guidance Statement: Setting Conditions</i> . Department of Water and Environmental Regulation, Perth.		
10.	DWER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Water and Environmental Regulation, Perth.		
11.	DWER, June 2019. <i>Guideline: Decision Making</i> . Department of Water and Environmental Regulation, Perth.		
12.	DWER, November 2016. <i>Guidance Statement: Environmental Siting</i> . Department of Water and Environmental Regulation, Perth.		
13.	DWER, June 2019. <i>Guide to Licensing</i> Department of Water and Environmental Regulation, Perth.		

## Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Report on 4 March 2020 for review and comment. The Licence Holder responded on 27 March 2020. The Licence Holder was then provided with a revised draft Amendment Report and draft Amended Licence on 1 April 2020 for review and comment. The Licence Holder responded on 6 April 2020. The tables below summarise the Licence Holder comments and DWERs response.

Licence Holder comments received 27 March 2020	
Summary of Licence Holder comments	DWER response
<p>The Licence Holder provided/clarified information on the following:</p> <ul style="list-style-type: none"> <li>- amount of animal material rendered with the increase for category 55;</li> <li>- livestock held in the lairage yards and wastewater irrigation paddocks;</li> <li>- removal of sludge wastes from ponds; and</li> <li>- management of wastewater from the lairage yards to the yard pond.</li> </ul>	<p>Information provided by the Licence Holder has been added to relevant sections of the Amendment Report and considered for relevant conditions of the Amended Licence.</p> <p>Should the Licence Holder wish to formalise the holding of cattle outside of the approved lairage yards (as shown in Schedule 1: Maps, Monitoring Locations and Main Site Features in the Amended Licence) they can apply for an amendment to the licence.</p> <p>Licence Holder will need to include the nutrient loading applied to the irrigation area through the application of manure from grazing cattle.</p>
<p>Condition 2, Table 3 – Most lairage pens have hardstand base; however, there are 7 sand pens to accommodate stock with “soft feet”.</p>	<p>The Delegated Officer has considered the Licence Holder’s comments and has amended the condition from “holding pens to have a hardstand base” to state that holding pens are “to have a hardstand base to enable waste and contaminated stormwater to drain to concrete box drains or to the yard pond”.</p>
<p>Condition 6, Table 7 – While the Licence Holder considers that the risk of odours from the storage of manure and paunch, which is demonstrated by the Licence Holder’s performance to date, is very low, the Licence Holder cannot currently meet limitation to remove manure and paunch offsite within 24 hours. This is due to some waste being onsite over the weekend, from Friday to Monday. However, the Licence Holder will work towards ensuring covers are installed on the bins.</p> <p>Hides are held in a covered area and are required to be dispatched in less than 24 hours to maintain product quality. Whilst the bins are not covered, there is minimal odour. The bins are solid steel bins and are leak proof.</p> <p>Renderable materials, including blood, are currently stored in impermeable bins or tanks and are covered.</p>	<p>The Delegated Officer has considered the Licence Holder’s comments and has amended the conditions to state that waste (manure and paunch) may be stored in impermeable bins for no longer than 72 hours.</p>



<b>Licence Holder comments received 1 April 2020</b>	
<b>Summary of Licence Holder comments</b>	<b>DWER response</b>
<p>The Licence Holder made comments in relation to holding cattle outside of the lairage yards, which included the following:</p> <ul style="list-style-type: none"> <li>- immediate removal or relocation of cattle currently grazing on the Premises is not logistically possible;</li> <li>- temporary holding of cattle on the premises following delivery and prior to slaughter has been a standard practice since at least 1993;</li> <li>- stock grazing is a standard practice across all beef abattoirs nationally and globally and is necessary for the logistical and human management of stock that have been transported over significant distances to the premises;</li> <li>- mixed farm practices (i.e. combination of grazing over rotated cropping systems) optimise the pre-slaughter condition of cattle and improve the area prior to the next crop rotation; and</li> <li>- cattle manure / urine add a natural source of nutrients thereby reducing the amount of fertilisers that are required to supplement those remaining in the soils.</li> </ul> <p>The Licence Holder have committed to the following:</p> <ul style="list-style-type: none"> <li>- undertake an assessment of the potential impact of continued cattle grazing by estimating the gross and net nutrient input from the activity relative to current licence limits;</li> <li>- the assessment will aim to confirm the numbers and locations of temporary stockholding that can occur on the Premises;</li> <li>- the outcome of the assessment will be reflected in an updated NIMP and submitted to DWER; and</li> <li>- the assessment will be completed within 12 months of issue of the amended licence so as to capture all seasonal aspects of stocking as well as nutrient uptake responses by crops and grazed pastureland.</li> </ul>	<p>The Delegated Officer has considered the Licence Holder's comments and reiterates that DWER has not assessed nor authorised the holding of cattle outside of the approved lairage yards. Should the Licence Holder wish to formalise the holding of cattle outside of the approved lairage yards (as shown in Schedule 1: Maps, Monitoring Locations and Main Site Features in the Amended Licence) they can apply for an amendment to the licence.</p>
<p>The Licence Holder also:</p> <ul style="list-style-type: none"> <li>- confirmed that the geobags are stored on a HDPE liner;</li> <li>- noted that additional approval may be required for the construction of a drying bed;</li> <li>- provided an updated map showing the location of the sand based lairage yards along with the hardstand base yards.</li> </ul>	<p>Relevant sections of the Amendment Report and Amended Licence have been updated.</p>