



Application for a licence amendment

Division 3, Part V *Environmental Protection Act 1986*

Licence number	L6001/1989/15
Licence holder	V & V Walsh Pty Ltd
ACN	009 070 624
File number	DER2013/003631
Premises	V & V Walsh Abattoir Lot 1 Rawling Road DAVENPORT WA 6230 Legal description - Lot 1 on Diagram 12060 and Lot 5 on Diagram 50137 and part Lot 1050 on Plan 33291
Date of report	16 September 2020
Decision	Amendment granted

Amendment description

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the existing licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is hereby given under section 59B(9) of the EP Act.

This amendment is limited to changes regarding management of wastewater on the existing licence L6001/1989/15.

In completing the assessment documented in this report, the department has considered and given due regard to its regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/one-stop-shop> - Industry Regulation.

Purpose and scope of assessment

V & V Walsh Pty Ltd (licence holder) is seeking approval to increase the authorised area for disposal of treated wastewater on the premises. An application has been submitted to increase the approved irrigation area from 32 to 40.6 hectares.

Background

The licence holder operates a dual-species abattoir in Davenport, on the outskirts of Bunbury. Current average daily slaughter rates are in the order of 400 cattle and 5,000 sheep and lambs.

The abattoir is located on the Swan Coastal Plain and immediately adjacent to the Preston River. Over the years light industry has been allowed to encroach within 300 m of the premises, and residential development to within 1 km.

A major constraint to operations has been the management of wastewater produced from abattoir operations, due initially to deficient wastewater treatment and storage infrastructure and a lack of available land for the discharge of treated wastewater.

Following consistent issues with high nutrient loading rates, the licence holder established a turf farm on the premises in 2005, which covers around 13 hectares and is managed by a third party. The turf farm accepts the majority of treated wastewater during the spring and summer months, and is used to assist in the export of nutrients from the premises. During other times, treated wastewater is managed through irrigation of on-site paddocks.

Despite operation of the turf farm and other significant upgrades to the wastewater treatment system and irrigation management practices, there continues to be ongoing and significant exceedances of the licensed nutrient loading limits. In 2019, the annual total nitrogen loadings for the turf farm and on-site irrigation areas, in addition to reactive phosphorus for the on-site irrigation areas, were nearly double the licence limit.

The licence holder advises it is actively seeking to improve the quality of irrigation water, including improving the performance of the solids screening and dissolved air flotation unit to remove additional solids from the wastewater and desludging of Pond 0, to assist with reducing the nutrient concentrations in wastewater leaving Pond 0. In addition, the licence holder is investigating improved aeration and recirculation infrastructure, the introduction of carbon to increase biological activity, and refining ferric coagulation of phosphorus.

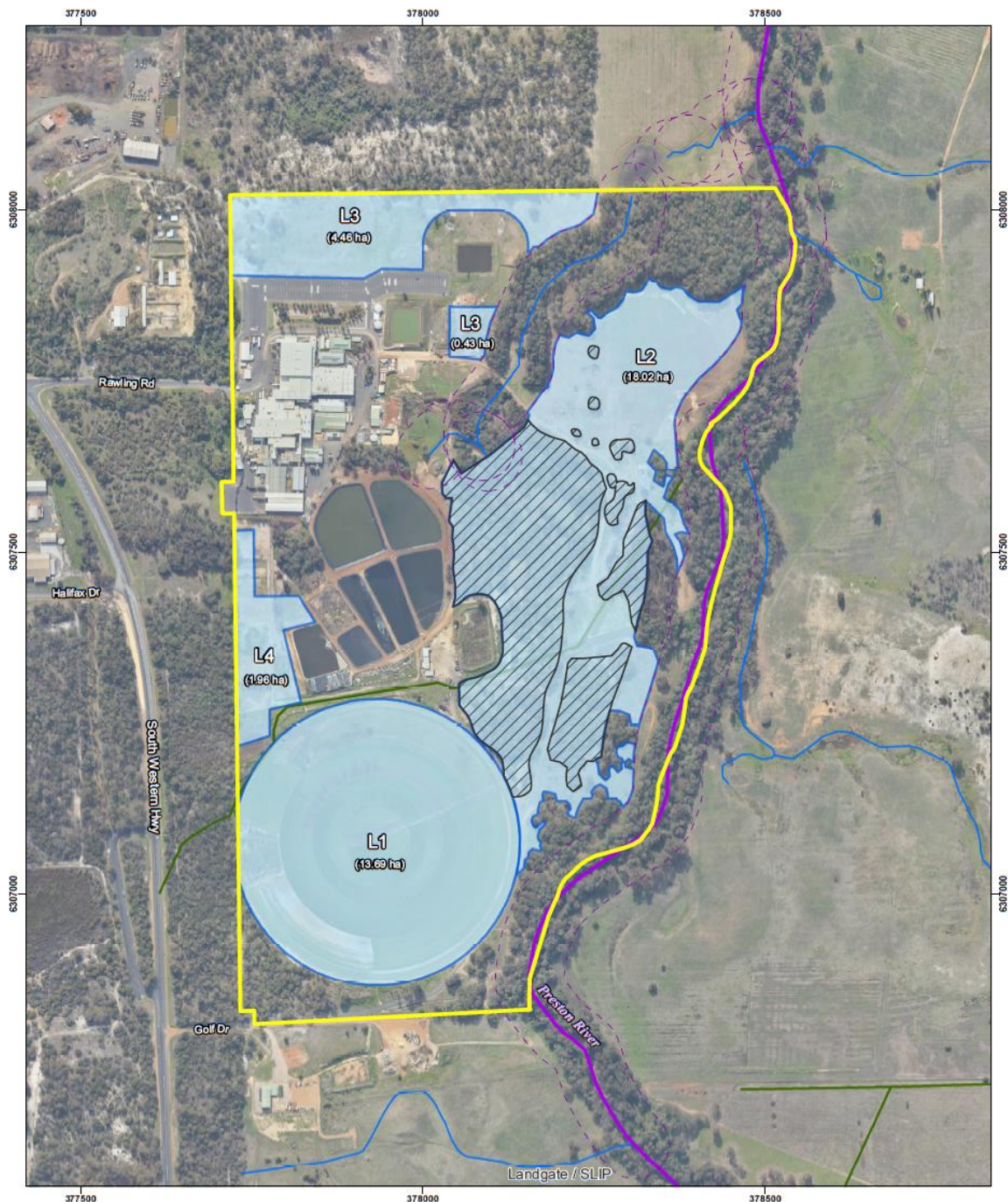
Proposed amendment

The licence holder proposes to increase the size of irrigation areas on the premises in an effort to reduce the current nutrient loadings being applied.

The licence holder currently disposes treated wastewater across 4 separate areas on the premises. The below table indicates the size of current and proposed irrigation areas, illustrated in the below map.

Irrigation area	Current area	Proposed area	Change
L1 – turf farm	13.0 ha	13.7 ha	+ 0.7 ha
L2 – pasture, tree lots and native vegetation	12.6 ha	19.9 ha	+ 7.3 ha
L3 – cleared paddocks	4.4 ha	5.0 ha	+ 0.6 ha
L4 – seasonal outdoor holding yards	2.0 ha	2.0 ha	No change
Total	32.0 ha	40.6 ha	+ 8.6 ha

The licence holder considers the proposed increases will provide an additional 8.6 ha of land, which comprises both cleared land and native vegetation. The inclusion of native vegetation is consistent with a fertigation scheme approved under clearing permit CPS8301/1 (see below), therefore the licence holder has requested the current restriction on the licence be removed for irrigating native vegetation.



Description of irrigation areas

The turf farm (L1) is located south of the existing wastewater ponds and consists of an established centre pivot irrigation area for the commercial cultivation of turf/grass. The application proposes an increase from 13 ha to a maximum area of 13.69 ha.

Irrigation area L2 is located between the existing wastewater ponds and abuts the Preston River to the east. It comprises cleared paddock, tree lots and native vegetation, and includes a large constructed drainage channel that runs from east to west.

An assessment of vegetation proposed to be fertigated within irrigation area L2 (Cape Life 2018) determined the majority of vegetation to be degraded to completely degraded, except for the wetland areas between L2 and L3, which were considered to be in good condition.

Whilst most of L2 is dominated by native tree species, there is no native understorey or mid-storey species present, most likely from historical grazing practices. A large area within L2 consists of a plantation of introduced Eucalyptus species, except for the wetland areas.

Irrigation area L3 is located in the north-west corner of the premises, immediately north of the abattoir buildings and existing car park. It comprises cleared paddock and excludes the area within 50 m of a dam that collects surface runoff from hardstand areas within the premises.

Irrigation area L4 is located south of the existing abattoir buildings, along the western boundary of the premises. The licence holder advises this area is used as an overflow area for holding animals during the peak summer period, when formal lairage areas are at capacity and irrigation only occurs during late autumn. The surface of the holding yard consists of sand over the natural ground.

Other approvals

Clearing of native vegetation

A clearing permit has been granted to the licence holder for the fertigation of treated wastewater over 11.36 ha of native vegetation on the premises (CPS8310/1).

The original clearing application included two areas to the south of the turf farm, however these were identified as Commonwealth listed threatened ecological community (TEC) Banksia dominated woodland of the Swan Coastal Plain IBRA Region, and were subsequently withdrawn by the licence holder. A small strip of land above the wastewater treatment ponds was also withdrawn by the licence holder.

The granted clearing permit only permits the fertigation of vegetation within irrigation area L2, and excludes riparian vegetation within 100 m of the Preston River, an environmentally sensitive area (ESA). The clearing permit only permits fertigation, and does not permit the physical clearing of native vegetation.

The Department of Biodiversity, Conservation and Attractions (DBCA) advised the area to the south of the premises outside of the irrigation area comprises *Banksia attenuate*, which are known to be highly sensitive to high levels of phosphorus. The granted clearing permit requires the licence holder to avoid, minimise and reduce impacts and the extent of fertigation on environmental values.

Key findings:

1. A clearing permit has been granted for the fertigation of wastewater to specified areas containing native vegetation, which excludes native vegetation within 50 m of riparian vegetation of the Preston River.
2. Irrigation of wastewater will need to be managed to ensure it does not adversely impact on environmental values, such as *Banksia* spp., which are known to be highly sensitive to phosphorus.

To ensure consistency with clearing permit CPS8310/1, the delegated officer has excluded the irrigation of native vegetation in areas that have not been approved under the clearing permit.

Nutrient application rates

According to water balance calculations provided by the licence holder, around 360,000 kL of wastewater is produced per year, of which around 230,000 kL is disposed via on-site irrigation practices. Based on 2019 monitoring data, annual irrigation volumes to the turf farm (L1) and other on-site irrigation areas are estimated around 136,000 kL and 95,000 kL, respectively.

The below table provides an overview of nutrient application rates compared to licence limits for the current and proposed irrigation areas. The annual tonnage (kg/yr) for each nutrient is based on 2019 monitoring data and has been determined by multiplying the average concentration (mg/L) by the volume of wastewater irrigated to that area (litres), divided by 10⁶.

Irrigation area	Parameter	Licence limit (kg/ha/yr)	2019 average (kg/yr)	Current loading		Proposed loading	
				Area (ha)	Loading (kg/ha/yr)	Area (ha)	Loading (kg/ha/yr)
L1	TN	600	12,712	13.0	978	13.7	928
	TP	180	1,402		108		102
L2 – L4	TIN	180	7,823	19.0	412	26.9	291
	TRP	20	870		46		32

Note: shaded results are those exceeding licence loading limits.

DWER & DPIRD technical review

DWER and the Department of Primary Industries and Regional Development (DPIRD) has reviewed the existing and proposed nutrient application rates and notes that nutrient loadings are nearly double the licence limit for all parameters at current irrigation areas, with the exception of total phosphorus at the turf farm, and that even with the proposed increase to irrigation areas, licence loading limits will still be exceeded:

- L1 – turf farm: the current application rate for nitrogen per hectare is 73% above the licence limit, and with the proposed increase in area, the amount of nitrogen applied per hectare would be reduced by about 5%. The area would need to be increased from the proposed 13.7 ha to 22.5 ha or the amount of nitrogen in wastewater must be reduced to ensure the applied nitrogen does not exceed the licence loading limit. The amount of phosphorus applied per hectare is below the licence limit, however further reductions would be beneficial;
- L2, L3 & L4 – on-site irrigation areas: the current application rate for nitrogen per hectare is 118% above the licence limit, and with the proposed increase in area, the amount of nitrogen applied per hectare would be reduced by about 21%. The area would need to be increased from the proposed 40.56 ha to 69.8 ha or the amount of nitrogen in wastewater must be reduced to ensure the applied nitrogen does not exceed the licence loading limit.

The amount of phosphorus applied per hectare is 121% above the licence limit, and with the proposed increase in area, the amount of phosphorus applied per hectare would be reduced by about 21%. The area would need to be increased from the proposed 40.56 ha to 70.8 ha or the amount of phosphorus in wastewater must be reduced to ensure the applied nitrogen does not exceed the licence loading limit.

Whilst it is important to address these issues as part of continuous improvement, given the proposal will result in a reduction of current nutrient application rates at the premises, the current proposal is not considered to materially increase the risk to human health or the surrounding environment. DWER intends to work through these and other identified issues with the licence holder as part of a licence review, separate to this application.

The only additional areas available for irrigation are outside of the premises. DPIRD can provide advice on the adjoining properties and specific areas that are suited for this purpose.

Key findings:

1. The proposal to increase the size of existing irrigation areas at the premises is expected to reduce existing nutrient application rates by about 20%. Although this reduction is not expected to bring the licence holder into compliance with existing licence loading limits, it is unlikely to result in a material change to the overall risk profile of the site.
2. The licence holder has calculated the updated irrigation areas total 40.6 ha (as proposed in the application), which provides an additional 8.6 ha. Taking into consideration existing restrictions, i.e. separation to defined watercourses and drains and no irrigation of native vegetation within environmentally sensitive areas (ESAs), DWER's calculation of the revised the irrigation areas totals 37.0 ha, which only provides an additional 5.0 ha. It is therefore likely the updated nutrient application rates have been underestimated.
3. The licence holder has submitted an updated NIMP (360 Environmental, 2019), which provides an overview of current wastewater management and irrigation practices. DWER has identified some issues that require further analysis or clarification. DWER will work through these issues with the licence holder separate to this application, as part of a licence review for the site.

Consultation

The City of Bunbury advises the abattoir land is situated within two special control areas (bushland area and flood prone area) under the City of Bunbury Local Planning Scheme No.8, where any proposed development must comply with the relevant provisions. The proposed irrigation infrastructure (works) is not exempt from requiring development approval, therefore a development application will be required to be submitted to the City for consideration for any proposed new additional irrigation infrastructure.

DPIRD advises it does not object to an expansion of the wastewater irrigation area, however notes the current licensed nutrient application rates for the turf farm and onsite irrigation areas are too high and should not be increased.

Risk assessment

The table below describes the risk events associated with the amendments consistent with the *Guidance Statement: Risk Assessments* (DER 2017). The table identifies whether the risk events are acceptable and tolerated, or unacceptable and not tolerated, and the appropriate treatment and degree of regulatory control, where required.

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls
Source/ Activities	Potential emissions	Potential receptors, pathway and impact	Licence holder controls					
PROPOSED AMENDMENT								
Increase to the approved irrigation area for L1, L2 & L3	On-site irrigation of treated abattoir wastewater (nutrient-rich wastewater)	Overland runoff to Preston River and on-site wetland, causing contamination of surface water systems Pooling and subsequent infiltration to shallow groundwater, causing groundwater contamination (nutrients)	Continue to monitor wastewater volumes and nutrient concentrations being irrigated and record monthly irrigation and nutrient loading rates against licence limits Increase capacity of Pond 6 to provide further storage Avoid irrigation on waterlogged land or when rainfall is forecast Complete ongoing groundwater and surface water monitoring program to detect impacts to the environment Continue to investigate leasing additional land from neighbouring properties to irrigate wastewater Harvest additional turf from the turf farm Continue to reduce nutrient content of wastewater prior to entering the pond system Complete desludging of Pond 0	High level on-site impacts Mid-level off-site impacts Major	Risk event could occur Possible	High Acceptable, subject to multiple regulatory controls	The proposal to increase the size of existing irrigation areas on the premises is expected to result in a 20% reduction in current nutrient application rates. Although this reduction is not expected to bring the licence holder into immediate compliance with licence limits, it is expected to result in minor improvements to current nutrient application rates, whilst the licence holder continues to investigate alternative options. Descriptions of authorised irrigation areas have been amended based on DWER's determination of the additional areas, which total 37.0 ha (i.e. 5.0 ha increase). As the expected reductions have been based on an 8.6 ha increase, these are likely to have been underestimated. The nutrient application rates therefore need to be revised in the NIMP. Existing controls on the licence are considered adequate for regulating the management of wastewater and irrigation practices on the premises. Additional modifications have been made to allow the irrigation of native vegetation consistent with CPS8310/1. Additional monitoring requirements have been added, including an additional surface water monitoring point in the Preston River (downstream), and the installation of a new monitoring bore located downgradient of the ponds.	Existing waste processing conditions (condition 6) Existing emissions to land conditions (condition 10), updated to reflect increase irrigation areas Addition of major ions and metals and metalloids to wastewater monitoring (condition 16) Records to be kept of turf harvested from the turf farm (condition 17) Additional surface water monitoring point in the Preston River, to be sampled monthly whilst irrigating to L2 (condition 18) Monitoring of all forms of the nitrogen cycle, and metals and metalloids in groundwater (condition 18) Installation of new monitoring bore (conditions 19 & 20) Map of authorised irrigation areas modified, to reflect increased area. Includes separation to watercourses and drains, and no irrigation of native vegetation within 50 m of the Preston River. Total area specified in the map (37.0 ha).

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Decision

The delegated officer has determined the proposal to increase the size of existing irrigation areas is unlikely to result in a material change to the overall risk profile of the site. This determination is based on the following:

- the proposal does not involve an increase in production throughput or the volume of wastewater being irrigated at the premises;
- a clearing permit has been obtained for the fertigation of specified areas of native vegetation within irrigation area L2;
- the increased areas have been modified to ensure they do not encroach within 50 m of defined watercourses or drains, or within environmentally sensitive areas; and
- the increase is likely to result in minor improvements to current nutrient application rates, whilst the licence holder continues to investigate other options for becoming compliant with existing licence loading limits.

To address the potential for immediate impacts to surface water and groundwater that may result from the proposal, and to enable proactive management to protect downgradient surface water and groundwater receptors, the following controls have been added to the existing licence:

- an additional surface water monitoring point has been added (WQ3), downstream of the premises within the Preston River. The frequency of monitoring within the river has been increased to monthly whilst irrigation is occurring within L2, and quarterly whilst irrigating the turf farm (L1);
- the requirement to install an additional groundwater monitoring bore, located downgradient of the existing wastewater ponds, by 18 October 2020. This bore has been added to enable collaboration between surface water monitoring data at WQ3 and groundwater data;
- analysis of all parameters relevant to the nitrogen cycle has been added to the groundwater monitoring suite, including metals and metalloids that are likely to be present within abattoir wastewater; and
- major ions and metals and metalloids that are likely to be present within abattoir wastewater have been added to the wastewater monitoring suite.

Key decision points:

1. An increase in the authorised irrigation areas on the premises is unlikely to result in a material change to the overall risk profile of the site, providing that existing licence controls regarding irrigation practices are adhered to.
2. The above risk assessment (of increasing the size of authorised irrigation areas) has not considered the overall risk profile of the site, such as whether or not current wastewater management practices are acceptable and sustainable. This will form part of a detailed full risk assessment of irrigation at the site.
3. DWER intends to work with the licence holder to progress an environmental risk assessment of the site, which will include a review of wastewater management practices, and DWER input into the scope of any further work (such as reviewing the recent nutrient and irrigation management plan).

Consolidation

As part of this amendment the delegated officer has consolidated the licence by incorporating changes made under previous amendment notices. No additional assessment has been conducted as part of this consolidation. Decisions relating to the consolidated licence are published in previous amendment notices, and in accordance with section 59(1) of the EP Act, incorporating these changes into a single amended licence is not appealable.

In amending the licence, the delegated officer has also:

- updated the format and appearance of the licence;
- deleted the redundant AACR form set out in schedule 1 of the previous licence;
- revised condition numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency; and
- corrected clerical mistakes and unintentional errors.

The decision report for the previous licence will remain on the DWER website for future reference and will act as a record of DWER's decision making.

Consultation

The licence holder was provided with a first draft of the revised licence and amendment report on 10 June 2020 and responded with a number of comments, which are summarised along with DWER's response as an attachment to this report.

A meeting was held between the licence holder and delegated officer on 28 July 2020 to discuss a number of concerns with the drafts. The delegated officer determined that it would be more appropriate to work through a number of significant changes proposed within the drafts separate to this application, as part of a full environmental risk assessment of the site.

The licence holder was provided with updated drafts of the revised licence and this report on 14 August 2020 and responded with a number of additional comments, which are summarised along with DWER's response as an addendum to the attachment to this report.

Conclusion

Based on this assessment, it has been determined to amend the existing licence, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Summary of amendments

The below table provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the revised works approval as part of the amendment process.

Condition no.	Proposed amendments
Cover page	Restructured to clearly indicate what prescribed activities have been risk assessed.
Introduction	Deleted, consistent with current DWER template. This guidance is now available in DWER's Guide to Licensing (June 2019).
Interpretation	Inserted, consistent with current DWER template. Supersedes previous conditions 1.1.3, 1.1.4 & 1.1.5.
History	Updated, consistent with current DWER template.
Condition 4 – Table 1	'Save all' added to infrastructure table. 'Paunch pad' renamed to 'sealed paunch trailer'. 'Skin shed' renamed to 'fellmongering/skin shed'. Requirement for all salt waste to be removed off-site. Requirement that blood must not be discharged to the WWTS.
Condition 5 – Table 2	New table added to specify operational requirements for key site infrastructure, including wastewater treatment ponds, fellmongering/skin shed, biofilter and roofed lairage yard. Incorporates previous condition 1.3.3.
Condition 6 – Table 3	'Livestock holding yards and paunch pad' removed from table that requires wastewater to be directed to the WWTS through the DAF and

	<p>Save all.</p> <p>Irrigation areas specified as L1, L2, L3 & L4.</p> <p>Requirement to maintain healthy vegetation cover over irrigation areas required only whilst irrigating to those areas.</p> <p>Irrigation of bare ground not permitted.</p>
1.3.3	Condition incorporated into new Table 2.
2.2.1	Deleted, redundant condition.
Condition 10 – Table 4	<p>Description of turf farm updated to 13.7 ha.</p> <p>Description of L2 updated to 18.02 ha. Reference to 'trickle irrigation' removed, reference to 'drip irrigation' of native vegetation added.</p> <p>Description of L3 updated to 4.56 ha.</p> <p>Description of L4 updated to 1.96 ha.</p> <p>Reference to 'irrigation of native vegetation with wastewater is not permitted' removed.</p>
Condition 11 – Table 5	<p>Reference of qualifier 'annual period' added to limit description.</p> <p>Averaging period changed from annual to quarterly.</p>
Condition 13	Description of 'annual' monitoring added.
Condition 16 – Table 6	<p>'5 day BOD' replaced with 'COD'.</p> <p>Annual monitoring of 'major ions' and 'metals and metalloids' added.</p>
Condition 17 – Table 7	<p>Frequency of monitoring rendering plant input/output changed to 'daily production' instead of 'each load entering the rendering plant'.</p> <p>Monitoring of solid wastes removed from the premises added, including paunch, manure and pond sludge (each load).</p> <p>Monitoring of turf harvested from the turf farm added (each harvesting campaign).</p>
Condition 18 – Table 8	<p>WQ3 added as an additional surface water monitoring point in the Preston River.</p> <p>'5 day BOD' replaced with 'COD'.</p> <p>Frequency of surface water monitoring changed to 'monthly whilst irrigating to L2 & L3' and 'quarterly whilst irrigating to L1'.</p> <p>Footnote relating to 'sampling upstream if sampling location is dry' removed.</p>
Condition 18 – Table 9	<p>Monitoring of new groundwater bore GQ5 added (sampling to commence once installed).</p> <p>Analysis of nitrogen cycle and metals and metalloids added to monitoring suite.</p> <p>Frequency of monitoring increased to quarterly from six-monthly.</p>
Conditions 19 & 20	New conditions requiring installation of a new groundwater monitoring bore. Location and construction requirements specified.
4.1.1	Deleted, redundant condition.
5.1.2	Deleted, redundant condition.
Condition 22	AACR condition updated consistent with current DWER template.
Condition 24	Annual record keeping requirements inserted, consistent with current DWER template.
Condition 25 – Table 10	<p>Form or format deleted from table, as considered redundant. Forms accessed at www.der.wa.gov.au.</p> <p>Table updated to reflect new changes. Individual parameters replaced with name of relevant table.</p>

5.2.3	Non-annual reporting requirements deleted, as considered to duplicate the legislation.
5.3.1	Notification requirements deleted, as considered to duplicate the legislation.
Definitions	Definitions deleted: 'usual working day' – conditions which contained these references have been removed, consistent with current DWER template, as part of this amendment.
	Definitions added: 'COD', 'condition', 'DAF', 'Department', 'discharge', 'emission', 'Minimum construction requirements for water bores in Australia', 'prescribed premises', 'Save all', 'TDS', 'treated wastewater', 'TSS', 'wastewater treatment pond', 'WQPN #30', 'WWTS'.
	Definitions replaced: 'Act' replaced with 'EP Act', 'Compliance Report' replaced with 'AACR', 'Licensee' replaced with 'licence holder'.
	Definitions modified: 'CEO', 'licence', 'premises'.
Schedule 1: Maps	Premises map updated to more recent aerial photo.
	Map of containment infrastructure updated.
	Map of irrigation areas updated. New areas L3 & L4 added. L2 updated, consistent with clearing permit and other buffer restrictions. Total areas for each site specified.
	Map of monitoring locations updated to reflect additional monitoring points, including location of new monitoring bore.
Schedule 2: Reporting and notification forms	Deleted, redundant attachments.

Amine Fisher
A/MANAGER, PROCESS INDUSTRIES
REGULATORY SERVICES

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

References

1. Department of Environment Regulation (DER) 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
2. Department of Water (DoW) 2010, *Water quality protection note 33: Nutrient and irrigation management plans*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2019, *Guideline: Decision Making*, Perth, Western Australia.
4. Cape Life 2018, *Vegetation Assessment Report*. Report prepared by Cape Life Environmental Services for V & V Walsh. May 2018.
5. 360 Environmental 2019, *Nutrient and irrigation management plan – V & V Walsh – Bunbury Meat Processing Facility*. Prepared by 360 Environmental Pty Ltd for V & V Walsh Pty Ltd. November 2018.

Summary of licence holder's comments on risk assessment and draft conditions

Document reference	Pg	Information requirements	Licence holder comment	DWER response
Licence holder comments – 3 July 2020				
Prescribed categories	Pg 1	Removal of Category 55: Livestock saleyard	The livestock sale yard is an integral component of the business operations. The removal of this category from the prescribed premises will significantly impact the operation of the business. There is no explanation within the Draft Amendment Report or Draft Licence detailing the reason for removing this Category. V & V Walsh would like to continue with the activities defined under this category and rejects the removal of Category 55 from the licence.	The delegated officer considers emissions relating to formal lairage areas on the premises can be adequately regulated under the existing provisions of category 15: abattoir, and that reference to category 55 is not required. The presence of category 55 on the licence does not provide any implied authorisation for the holding of animals outside of formal lairage areas on the premises.
Table 1	Pg 4	Update to containment infrastructure details	Amend wording to Row 7: <ul style="list-style-type: none"> Reword the containment point reference from 'Paunch Pad' to 'Sealed paunch trailer'. Amend the infrastructure operational requirement to "Stored in a sealed trailer parked on concrete hardstand area capable of preventing surface run-off of leachate and with a drainage system that can return leachate to the WWTS." All Paunch waste is discharged through the primary and secondary screening system in the 'save all', and further treated through the DAF. 	Table amended as per licence holder request.
			Amend wording in Row 8: <ul style="list-style-type: none"> Removal of any reference to 'brine sump' and 'brine waste' from the licence. V & V Walsh do not have a brine tank. The fellmongering which occurs on site is a dry process undertaken using dry salt in dedicated agitators. Waste salt is removed from site in waste receptacles to a licenced waste facility. The infrastructure requirement is to state "Enclosed building with concrete flooring. All salt waste is removed offsite for disposal." 	Noted. Table amended as per licence holder request.
Condition 2 and Table 2	Pg 4/5	Infrastructure and equipment requirements	V & V Walsh accepts Table 2 and Condition 2 with the following amendments: Row 2 - V & V Walsh request this row to be remove. This infrastructure type is not present on site (as detailed above) therefore there are no operational requirements.	Noted – "fellmongering brine sump" removed.
			Row 3 - Remove the second dot point in the operational requirement column for the fellmongering/skin shed. The dry salt used in the fellmongering processes is delivered in pallets in waterproof wrapping and is stored outside until required.	Noted – changed to require storage of dry salt in a manner that is not likely to contaminat stormwater, and no salt contaminated water to be directed to the wastewater system.
			Row 4 - There is one Biofilter present on site located to the east of the Rendering shed (Figure 2). The second dot point of operation requirements is to read "To be maintained in good working order according to best practice." As V & V Walsh constructed the biofilter on site, there is no manufacturer instructions.	The delegated officer proposes to request further information be provided on the design and operational aspects of the biofilter, for consideration as part of the full licence review.
			Row 5 - Amend the first dot point of operational requirement to read "Manure to be removed from the lairage fortnightly for off-site disposal". In accordance with correct Animal Welfare Practices, manure cannot be removed daily.	The delegated officer proposes to request further information be provided on current manure handling practices, for consideration as part of the full licence review.
			Row 6 - Seasonal Outdoor Holding Yards: <ul style="list-style-type: none"> The location of the seasonal outdoor holding yards is shown in Figure 2. It should be noted that this area is seasonally used as a holding yard during peak season in summer. This holding yard is currently not utilised at full capacity, therefore the operational requirements stated are not currently warranted. This area is used for overflow of livestock when lairage is at capacity and animals are not kept for greater than 48 hours. V & V Walsh acknowledge that upgrades will be required to use this area as a permanent holding yard year-round. Irrigation is only undertaken within this area during late autumn. This area is cultivated and used as fodder in spring, therefore this area is kept as pasture for part of the year. Irrigation is also utilised as a dust suppression method. The surface of the holding yard consists of sand over the natural ground. V & V Walsh acknowledge that to optimise this area as a full-time holding yard in the future, a series of upgrades are required. Proposed operations and upgrades will be detailed through an improvement plan provided to the Department separate to the current licence amendment. Due to the seasonal use of the area as an outdoor holding yard, the financial implications of implementing the proposed operational requirements are not commercially viable and will be business inhibitive. V & V Walsh propose the following operational requirements to be implemented in the current licence amendment for the outdoor holding yards: <ul style="list-style-type: none"> When in use as a holding yard, manure is to be removed fortnightly for off-site disposal. Irrigation will be undertaken in autumn when the area is not used as a holding yard. No irrigation will be undertaken in winter or after rainfall when standing water may be present. 	The delegated officer does not object in principle to holding animals within the seasonal outdoor holding yards, however the licence holder must apply for a licence amendment to include this activity. The application must be supported by an updated and current NIMP for the premises, which clearly demonstrates that all nutrient imports and exports have been accounted for.

Table 3	Pg 5/6	Waste processing	<p>V & V Walsh accepts Table 3 with the following amendments:</p> <ul style="list-style-type: none"> Row 1 - Blood is collected on site and exported off site via a licenced vehicle for processing at a licenced facility. Row 2- The waste type described in the first column, is to be amended removing reference to the holding yards and paunch pad. V & V Walsh confirm that wastewater is directed to the onsite wastewater treatment system via the 'Save All' and DAF. <p>With respect to the process of irrigation, the following response to the fifth dot point in the process limits is as follows (Row 3).</p> <p>The irrigation of wastewater has been undertaken for several years across the site and has not resulted in the death of any vegetation (native or non-native).</p> <p>A Native Vegetation Clearing Permit (8310/1) was attained under the advice of the Department to facilitate the fertigation to native vegetation. Clearing Permit 8310/1 granted under <i>section 51E of the Environmental Protection Act 1986</i> is a separate and standalone approval, allowing the fertigation to native vegetation on site. Irrigation will only be undertaken in areas with vegetation cover (pasture, plantations, or native vegetation).</p> <p>The inclusion of 'healthy' vegetation is deemed subjective and is requested to be <u>removed</u> from the process limit wording. Furthermore, according to a vegetation survey undertaken by Cape Life (2018) the only vegetation onsite containing any <i>Banksia</i> species is within the south east portion of the Site. This area is not within any of the proposed irrigation areas.</p> <p>Additionally, these <i>Banksia</i> species are present in vegetation upstream of all proposed irrigation areas and are considered unlikely to be impacted by the fertigation. In addition, representatives from the Parks and Wildlife, a branch of the Department of Biodiversity, Conservation and Attractions (DBCA) investigated the site for significant vegetation during 2019.</p> <p>The only <i>Banksia</i> species identified during the site visit was within the south western portion of the site, south west of the turf farm. The fertigation on site, is not considered to warrant a significant impact to any <i>Banksia</i> species present on site.</p>	<p>New row added to table to reference management of blood.</p> <p>New row added to table to reference management of leachate from paunch pad.</p> <p>The delegated officer considers that irrigation must only take place within areas that contain vegetation (pasture, crops, trees or turf) that is growing and able to uptake nutrients, as per WQPN#22 <i>Irrigation with nutrient-rich wastewater</i> (DoW 2008). It is considered essential that a healthy vegetation cover be maintained over all areas being irrigated, in order to control the potential for surface water runoff, erosion and to minimise the leaching of nutrients, etc.</p>
Table 4	Pg 7	Emissions to land	<p>V & V Walsh proposes to construct a bund along the surface water drain and at the boundary of native vegetation located within 50m of the Preston River. No native vegetation is proposed to be irrigated to within the 50m buffer. The total proposed irrigation area is 40.4 ha. A detailed breakdown includes:</p> <ul style="list-style-type: none"> L1: Central pivot irrigation of 13.7 ha of the turf farm L2: Sprinkler irrigation of pasture and drip irrigation to tree plantations totalling 19.3 ha. L3: Sprinkler irrigation of 5.4 ha of pasture L4: Sprinkler irrigation of 2 ha of pasture areas. <p>L4 is seasonally used as a holding yard during peak season in summer. Irrigation is undertaken only in late autumn. Following winter, this area is cultivated and used as fodder in spring, therefore this area is considered pasture for part of the year.</p> <p>According to Cape Life's report, and investigation by DBCA, <i>Banksia</i> species are not present within any proposed irrigation areas. As detailed above the irrigation is not considered to impact these species.</p> <p>V & V Walsh object to the amendment stating, 'no stock to be held in any irrigation area'. Irrigation of treated wastewater to land and subsequent grazing of pasture following recommended stock exclusion period (two weeks from time of irrigation) from when wastewater is irrigated is a recommended agricultural practice.</p> <p>Grazing of the area by sheep keeps the pasture cover low and reduces the fire risk. Alternatively, slashing of the grass will be required which is not a sensible option given the area contains trees and scrub.</p>	<p>The delegated officer has calculated the proposed irrigation areas to be 37.0 ha, which excludes areas within 50 m of the Preston River and on-site drainage channel, and fertigation of native vegetation within the ESA buffer (i.e. within 100 m of the Preston River). Irrigation management practices should therefore be amended to reflect this change.</p> <p>The delegated officer does not object in principle to holding animals within the seasonal outdoor holding yards, however the licence holder must apply for a licence amendment to include this activity. The application must be supported by an updated and current NIMP for the premises, which clearly demonstrates that all nutrient imports and exports have been accounted for.</p>
Table 5	Pg 7/8	Emission limits to land	<p>V & V Walsh accepts the emission to land limits detailed in Table 5, with the following amendment. V & V Walsh propose that the averaging period be undertaken on a quarterly basis to remain consistent with other monitoring frequencies/averaging periods that are currently being undertaken.</p>	<p>No changes proposed as part of this amendment. To be reconsidered as part of full licence review.</p>
Condition 12	Pg 8	Monitoring frequencies	<p>V & V Walsh propose that all other monitoring be undertaken on a quarterly basis to remain consistent with other monitoring currently being undertaken.</p>	<p>No changes proposed as part of this amendment. To be reconsidered as part of a licence review.</p>
Table 6	Pg 8/9	Monitoring of emissions to land	<p>V & V Walsh accepts Table 6 with the following amendment. V & V Walsh proposes the frequency of monitoring be amended to quarterly to remain consistent with other monitoring frequencies that are currently being undertaken. The additional time and resources required for increased monitoring will be constraint to other operational processes.</p>	<p>No changes proposed as part of this amendment. To be reconsidered as part of a licence review.</p>
New conditions 1 & 2, Table 7	Pg 10	Construction of new groundwater monitoring bore	<p>A new groundwater monitoring bore (GQ5) will be constructed within the conditions specified in Table 7. The location of the bore is to be confirmed by DWER. The location stated in Column 2 of Table 7 states "Within the yellow circle area shown on the Emissions Points and Monitoring Map in Schedule 1", however no yellow circle is present. In addition, the wording of New Condition 2 references 'MW12' instead of GQ5. V & V Walsh request this is amended to correctly identify the new groundwater bore as GQ5.</p>	<p>Noted – corrections made to condition.</p>
New condition 3, Table 8	Pg 12	Soil monitoring	<p>V & V Walsh does not accept new condition 3 and the parameters in Table 8. V & V Walsh is prepared to complete a soil sampling program which is appropriate to the site, the scale of operation and that aligns with soil sampling best practice. Sampling every hectare is not in accordance with any Australian standards, industry best</p>	<p>Draft condition removed. To be reconsidered as part of a licence review.</p>

			<p>practice or state policies. Sampling undertaken on every hectare of the irrigation areas is considered excessive and will not provide any additional information than a program completed at a larger scale.</p> <p>The standard agricultural practice – which has been scientifically proven by the Department of Primary Industries and Regional Development (https://www.agric.wa.gov.au/high-rainfall-pastures/soil-sampling-high-rainfall-pastureswestern-australia) and is supported by the Fertiliser Industry of Australia – is to collect a composite sample consisting of 30 soil cores in each paddock and for each soil core to be at least 30m apart. The minimum size of agricultural lots is generally 10 ha.</p> <p>In addition, applied nutrients particularly phosphorus will generally concentrate in the top 30cm of the soil profile, even after several years of applying nutrients. To detect the leaching of nutrients the top 10cm must be sampled separately, the sampling of the soil profile at 0-20, 20-40, 40-70 cm etc intervals is an ineffective use of time and resources. Sampling at both prescribed depths and within major soil horizons is conflicting. Depending on the intent of the soil sampling program, one definitive approach should be undertaken. As the intent of the soil sampling program is to detect the leaching of nutrients through the soil profile, sampling at regular intervals at all soil sampling locations is better than sampling soil horizons. Sampling soil horizons will result in soil samples being taken at varying depths of the soil profile at each soil sampling location and irrigation area, the depth of any leaching will not be detected accurately. Additionally, it is almost impossible to collect accurate soil samples using a stainless steel hand auger when sampling to a depth of 1 m. It is also impossible to see the soil horizon and accurately sample the soil at specified depth intervals. For example, if the site is sandy, the soil falls out of the auger, if the site contains clay it is impossible to collect samples until the ground is damp.</p> <p>The sampling methodology (column 3) in Table 8 should read:</p> <ul style="list-style-type: none"> • For each Irrigation Area: • Take one composite sample consisting of 30 soil cores collected at a depth of 0-10cm and • Dig two 1 m test pits and sample at the following intervals or until the duplex clay layer is encountered: <ul style="list-style-type: none"> - 0–10, 10–30, 30–60 and 60–100 cm increments. <p>This approach has been developed to meet the industry standard. V & V Walsh considers this a reasonable approach to detect the leaching of nutrients through the soil profile whilst not resulting in restrictive financial and resourcing constraints.</p>	
Table 9	Pg 12	Monitoring of inputs and outputs	<p>V & V Walsh accepts the specifications in Table 9 with the following amendments:</p> <ul style="list-style-type: none"> • V & V Walsh proposes the averaging period be amended to quarterly to remain consistent with other monitoring frequencies that are currently being undertaken. The additional time and resources required for increased monitoring will be constraint to other operational processes. • The frequency of the third row (animal waste material rendered) is to read 'Daily production of the rendering plant'. Using the daily production value will allow tonnage of raw waste to be calculated as the calculation of each load is too difficult to currently tabulate. • The units of the fourth row (solid wastes) is to read 'estimated tonnes/m3'. As the waste is trucked to a nearby facility for processing, the weight is not easily measured, and are instead estimated in terms of truck load. As the loads are variable dependent on season, an estimation for each truck load can be provided. 	Table amended as per licence holder request.
Condition 17, Table 10	Pg 12	Water sampling and monitoring of ambient surface water quality	<p>V & V Walsh accepts condition 17 and Table 10 with the following amendments:</p> <ul style="list-style-type: none"> • The surface water quality monitoring should continue a quarterly basis, to be consistent with the groundwater monitoring requirements. As this work is to be completed by an independent scientist it will be an expensive exercise to have the surface water monitoring completed monthly in addition to quarterly groundwater sampling and extensive annual soil sampling and laboratory analysis. • The monitoring of surface water currently occurs quarterly and is reported on in the annual compliance report. This reporting has not detected elevated nutrient concentrations to warrant an increase in the frequency of this sampling. V & V Walsh accepts the addition of WQ3 (Preston River downstream). The proposed location of WQ3 is shown in Figure 1 with the following coordinates (Projection GDA94 MGA50): <ul style="list-style-type: none"> - 6307902.7 mN - 0378534.2 mE 	<p>The delegated officer considers monitoring of water quality within the Preston River is critical for determining background water quality. Given the proximity of proposed irrigation to the river and absence of downstream monitoring on the existing licence, monthly monitoring is required until a suitable database has been attained, to allow for seasonal variations.</p> <p>No changes are proposed to the draft table.</p>
Table 11	Pg 12	Monitoring of ambient groundwater quality	V & V Walsh accepts the amendments to Table 11.	Noted.
New conditions 4 & 5	Pg 13/14	Winter irrigation management plan	<p>V & V Walsh accepts new condition 4 with the following amendment:</p> <p>Condition 4 should read: 'The Licence Holder must submit to the CEO by 28 February 2021, a Winter Irrigation Management Plan.</p> <p>Depending on the outcomes, the Winter Irrigation Management Plan is to include a strategy and timeline for scheduling and managing winter irrigation.</p>	Condition has been removed. To be reconsidered as part of a licence review.

			<p>V & V Walsh rejects new condition 5 and requests the Condition is removed. The outcomes of completing new Condition 4 (preparing a Winter Irrigation Management Plan) are required prior to predicting what future work will be needed including that listed in the proposed new Condition 5.</p> <p>A reasonable timeframe to cost, budget and plan any possible upgrades to the wastewater management system are required. The financial implications of implementing New Condition 5 without further detailed evaluations is considered excessive and does not allow a reasonable timeframe to meet the proposed requirements of the new condition.</p> <p>Implementing the Winter Irrigation Management Plan will be determined independently of this current licence amendment.</p>	
New condition 6	Pg 14	Records and reporting	<p>V & V Walsh rejects the addition of New Conditions 6.</p> <p>V & V Walsh currently operates according to their operating licence. V & V Walsh requests DWER explain the reason for requesting this additional information. The operating licence is required to enforce management practices which are in line with current state legislation, guidance, and best practice.</p> <p>There are currently no DWER guidelines or Australian standards which outline how to complete many of the tasks requested. Providing this information within 3 months of the licence amendment is impossible, the laboratory analysis alone for New Condition 3 takes 12 weeks to receive and then the investigations and reports need to be written.</p> <p>V & V Walsh is willing to prepare a soil investigation report which will provide information of use going forward, however is not willing to complete an expensive research program which is not consistent with the requirements at other prescribed premises.</p>	Condition has been removed. To be reconsidered as part of a licence review.
Conditions 20-23	Pg 14/15	Records and reporting	<p>The acceptance of condition 20 will be dependent on the outcomes of the above requested with respect to the amendments to conditions 15, new condition 3 and 17 of the draft licence.</p> <p>V & V Walsh accepts conditions 21, 22 and 23.</p>	Noted.
Condition 24, Table 13	Pg 16	Annual Environmental Report	<p>V & V Walsh accepts Table 13 with the following amendments:</p> <ul style="list-style-type: none"> • The amendments for Table 5 detailed above are accepted. • The amendments for Table 8 detailed above are accepted. • The condition for calculation the nitrogen balance for each irrigation area (the fifth row of conditions) is to be removed. The measurement of nitrogen balance is highly variable and inaccurate, as nitrogen readily changes form. V & V Walsh are actively undertaking methods to reduce their nutrient loading of nitrogen and phosphorus efficiently and effectively across the site. The method to evaluate nitrogen balance is not considered to be cost effective or beneficial. • The amendments for Table 10 detailed above are accepted. 	Condition has been removed. To be reconsidered as part of a licence review.
Table 14	Pg 17/18	Definitions	<p>V & V Walsh accept the definitions detailed in Table 14 with the following amendment:</p> <ul style="list-style-type: none"> • The definition of quarterly be updated to state 'quarterly: means once per three calendar months at least 45 days apart'. 	Noted – definition corrected to 45 days.
Schedule 1	Pg 19-21	Maps	<p>The Map of Emission Points and Monitoring Locations has been updated to include the following information:</p> <ul style="list-style-type: none"> • Location of WQ1, WQ2 and Proposed WQ3 (Projection GDA94 MGA50: 6307902.7 mN, 0378534.2 mE) • Inclusion of the Preston River and Surface Water Drain • Removal of irrigation areas which intersect 50m of the Preston River regardless of the absence of native vegetation • Removal of non-vegetated areas of L2 (north of the evaporation ponds) <p>The Map does not include irrigation areas to be clipped by 50m from the surface water drain and the Preston River, instead a bund is proposed to be constructed to ensure runoff is avoided.</p> <p>The Map of Storage Locations has been updated (Figure 2) to include the requested in Table 1 below:</p> <ul style="list-style-type: none"> • The Save All • Abattoir animal waste trailer • Blood containment tanker • Seasonal Outdoor Holding Yards (excluding lairage) 	<p>Noted – maps have been updated.</p> <p>The delegated officer is unclear what is meant by "a bund is proposed to be constructed to ensure runoff is avoided". The 50 m separation is a <u>minimum requirement</u> and will remain on the licence.</p>
Licence holder comments – 1 September 2020				
Table 3	Pg 4-5	Process limits of waste processing	<p>V & V Walsh accepts the parameters in Table 3 except for:</p> <ul style="list-style-type: none"> • Amend (j) to state 'Irrigation will not be undertaken in non-vegetated areas.' <p>Following the meeting on the 28th of July, the use of the word healthy is deemed to be subjective. As vegetation such as annual grasses by nature die off during summer months, the limitation of 'healthy' vegetation does not accurately reflect the lifecycle of all plant species present. V & V Walsh acknowledges that irrigation should only occur to areas that are vegetated to avoid pooling, excess runoff, and erosion; therefore V&V Walsh commits to not irrigate to bare ground.</p>	<p>This is an existing requirement on the licence given the proximity of wastewater irrigation areas and risk of impacts to a sensitive water resource (regionally significant major watercourse/Conservation Category Wetland/environmentally sensitive area).</p> <p>The delegated officer considers it critical that wastewater irrigation practices at the premises match the seasonal soil moisture levels, vegetation growth needs, soil and groundwater concentrations, and the soil infiltration and nutrient retention capacity of the soil, i.e. irrigation is not just solely for the purpose of wastewater disposal.</p>

				<p>The delegated officer does not consider it acceptable to irrigate wastewater to bare ground, or vegetation that is not 'healthy', i.e. active or alive, given the risk of impacts to surface water and groundwater resources.</p> <p>In order to further clarify this requirement, qualifier (j) has been amended to specify that healthy vegetation cover is required only whilst irrigating those specific areas.</p> <p>The delegated officer therefore considers it appropriate to retain on the licence the requirement that wastewater must only be applied to 'healthy' vegetation. Due consideration should be given to sowing other types of vegetation/pasture species that are better matched to growing during the time of year in which wastewater will be applied to those areas, such as perennial grasses.</p>
			<ul style="list-style-type: none"> • Amend (k) to state "Irrigation will not occur within 50 metres of any defined watercourse". <p>It is noted that the Department uses the term 'drain' interchangeably within the document i.e. In the Premise Map (p.14 of Attachment C) the watercourse in the northern portion is described as a minor watercourse however in the Map of irrigation areas (p.16 of Attachment C) it is referred to as a drain.</p> <p>There is one major drain considered present on site (Figure 1) which runs adjacent to the turf farm and is not considered analogous with the minor watercourse. As per the current licence conditions V & V Walsh does not irrigate within 50 m to watercourses. There are two watercourses relevant to site being the Preston River – a major watercourse – running along the eastern boundary of the premises and the minor watercourse located in the centre of the northern half of the premise. This is consistent with the WALGA Hydrography, linear layer and the Landgate spatial information. Irrigation will not occur within 50 m of these two defined water courses, other than the area approved by the clearing permit.</p>	<p>Noted – maps have been updated to reflect the most recent DWER-31 Hydrography Linear shapefile. Reference to the minor watercourse located in the northern half of the premises updated. Major drain also updated.</p> <p>Term "or drain" removed from table qualifier (k).</p>
Table 4	Pg 6	Emissions to land	<p>V & V Walsh accepts that irrigation cannot be undertaken within 50 m of the Preston River and that irrigation cannot be undertaken to native vegetation within an ESA, as reflected by the clearing permit (8310/1). However, V & V Walsh proposes to irrigate to areas of pasture that occur within the ESA boundary as these areas contain no environmental significance. The ESA mapping is an arbitrary line that does not adequately reflect the environmental value of the area. There are no conditions within the clearing permit restricting irrigation to pasture within the ESA. It is understood that no irrigation to native vegetation will be undertaken other than that specified in the clearing permit.</p> <p>With the above amendments the total irrigation area (emissions to land area) is 38.56 ha and is detailed below:</p> <ul style="list-style-type: none"> • L1: Central pivot irrigation of 13.69 ha of turf farm. • L2: Sprinkler irrigation of pasture and drip irrigation to tree plantations total 18.02 ha. • L3: Sprinkler irrigation of 4.89 ha of pasture. • L4: Sprinkler irrigation of 1.96 ha of pasture. <p>It is acknowledged that irrigation should not occur to bare ground. Based on the requirements to not irrigate to bare ground, irrigation area L4 will be seeded to provide fodder.</p>	<p>The delegated officer acknowledges the licence permits irrigation of pasture within the ESA, however notes the obscure shape of some of the areas proposed to be irrigated along the Preston River within L2, and questions how irrigation of these areas can be done in a manner that does not result in overland runoff or impacts on adjacent native vegetation.</p> <p>DWER has recalculated the irrigation areas based on the updated shapefiles for the minor watercourse located in the northern half of the premises, and notes there is still some discrepancies with L3. DWER's calculation removes some overlap over the carpark area, and also excludes the extended limestone carpark area in the north-west corner, that is not being irrigated. DWER's calculation of this area is 4.13 ha, totalling 4.56 ha for L3. This gives a total irrigation area of 24.5 ha for irrigation areas L2, L3 & L4 (the delegated officer notes that several areas within L2 should not be considered within the total area for irrigation, such as internal roads, lay down areas, etc. This will require on-ground verification and will be done as part of a full licence review).</p> <p>The delegated officer notes that L4 will be seeded to provide fodder, however advises this area must not be irrigated with wastewater until there is sufficient vegetative cover.</p>
Table 8	Pg 8	Monitoring of ambient surface water quality	<p>V & V Walsh requests the amendment to Table 8:</p> <ul style="list-style-type: none"> • Following the meeting on the 28th of July, V & V Walsh request all monitoring continue to be undertaken on a quarterly basis. This is to keep the surface water quality monitoring consistent with the groundwater monitoring requirements. The monitoring of surface water currently occurs quarterly and is reported in the annual compliance report. This reporting has not detected elevated nutrient concentrations to warrant an increase in the frequency of this sampling. 	<p>The delegated officer reiterates previous position on this matter provided in response to 3 July 2020.</p> <p>The delegated officer considers monitoring of water quality within the Preston River is critical for determining background water quality. Given the proximity of proposed irrigation to the river and absence of downstream monitoring on the existing licence, monthly monitoring is required until a suitable database has been attained, to allow for seasonal variations.</p> <p>Additionally, existing surface water monitoring records cannot be used to establish whether or not activities on the premises are impacting on the river, as these records are upstream (i.e. background) of the premises.</p>
Condition 19	Pg 11	Installation of monitoring bores	<p>V & V Walsh request that condition 19 be reworded to state:</p> <ul style="list-style-type: none"> • "The licence holder must, within one month from the issue date of the licence, install a new groundwater monitoring bore in the vicinity of the following location (Projection: GDA94: MGA50)" <ul style="list-style-type: none"> □ 6307864 mN; and □ 378453 mE. 	<p>The delegated officer ensures the date in condition 19 will be one month from the date of amendment.</p>

			The request is to allow an appropriate time frame for the works to be commissioned acknowledging the Department will take time to assess the draft licence before issuing.	
Schedule 1 maps	-	Premises maps	<p>V & V Walsh requests the following changes to the Premise Map:</p> <ul style="list-style-type: none"> • Include the parking lot located on the eastern boundary as per the boundary to be consistent with the premise's details and maps. The premise boundary includes a small portion of Lot 1050 shown on the previously provided Figure 1. The coordinates were provided upon request to the Department at the revision of the first draft. 	Noted – map updated.
			<ul style="list-style-type: none"> • Remove the layer for minor watercourses from this map. It is noted that the spatial file used in this figure is out of date. This layer – “Hydrography – Inland Waters – Waterlines” – provided by the Department on 11 August 2020 is no longer publicly available and is not considered current. <p>This layer is also considered to be historical as the ‘watercourse’ mapped across the turf farm is not accurate and has been amended in the most recent hydrography layers as a Major Drain (Figure 1) (Hydrography Linear DWER-31). This is also consistent with WALGA mapping provided by Landgate.</p>	Noted – map updated. Waterlines shape replaced with DWER-31.
	-	Map of containment infrastructure	<p>V & V Walsh requests the following changes to the Premise Map:</p> <ul style="list-style-type: none"> • Include the parking lot located on the eastern boundary as per the boundary to be consistent with the premise's details and maps. The premise boundary includes a small portion of Lot 1050 shown on the previously provided Figure 1. The coordinates were provided upon request to the Department at the revision of the first draft. 	Noted – map updated.
	-	Map of irrigation areas	<p>Please find attached Figure 1 for the updated irrigation map.</p> <p>The following changes have been made:</p> <ul style="list-style-type: none"> • The most recent, publicly available hydrography layer has been used (Hydrography Linear DWER-31). • The irrigation areas include pasture within the ESA. There is no reference in the clearing permit that pasture cannot be irrigated too. The ESA is to protect native vegetation that is not present in the pasture. • Irrigation does not occur within 50 m of the Preston River – Hydrography Linear DWER-31 this used for these calculations. 	Noted – map updated. DWER has recalculated the irrigation areas based on the updated shapefiles for the minor watercourse located in the northern half of the premises, and notes there is still some discrepancies with L3. DWER's calculation removes some overlap over the carpark area, and also excludes the extended limestone carpark area in the north-west corner, that clearly is not being irrigated. DWER's calculation of this area is 4.13 ha, totalling 4.56 ha for L3. This gives a total irrigation area of 24.5 ha for irrigation areas L2, L3 & L4 (the delegated officer notes that several areas within L2 should not be considered within the total area for irrigation, such as internal roads, lay down areas, etc. This will require on-ground verification and will done as part of a full licence review).
	-	Map of monitoring locations	<p>V & V Walsh requests the following changes to the Premise Map:</p> <ul style="list-style-type: none"> • Include the parking lot located on the eastern boundary as per the boundary to be consistent with the premise's details and maps. The premise boundary includes a small portion of Lot 1050 shown on the previously provided Figure 1. The coordinates were provided upon request to the Department at the revision of the first draft. 	Noted – map updated.