Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Licence

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L2883/2025/1
Applicant	Passchendaele Ridge Pty Ltd
ACN	085 067 394
Premises	Forest Hill Winery 1564 South Coast Highway Legal description - LOT 421 ON DEPOSITED PLAN 230727
Date of report	06/08/2025
Decision	Licence granted

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an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Purpose and scope of assessment

Passchendaele Ridge Pty Ltd (the applicant) is an existing winery (Forest Hill Winery) in the Denmark area along the South Coast of Western Australia.

On the 26 February 2025, the applicant applied for a Licence under Division 3 Part V of the Environmental Protection Act 1986 (EP Act) as their wine production capability has increased to 350kL or more of wine per year, thus triggering the requirement to hold a licence under Category 25: Alcoholic Beverage Manufacturing.

This report sets out the delegated officer's assessment of potential risk events arising from emissions and discharges that will be generated from the prescribed activities on the premises.

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/regulatory-documents.

2. Application review

2.1 Overview

Forest Hill Winery is situated approximately 3.5 kms West of the Denmark townsite along the South Coast highway and was established in 2002. The winery's vineyard is situated off site in Mount Barker, with harvest taking place between February and April. After harvesting, the

grapes are transported to the site where they are processed by either destemming and crushing or gently whole bunch pressing. Currently a mobile contractor attends site for bottling, with wastewater from this already being directed to the wastewater treatment system (WWTS).

Currently, the winery has approximately 750kL of fermentation/storage capabilities, spread across 57 tanks. As part of a project, to be partially funded through the DPIRD Value Add Grant, the winery will be removing 390kL of redundant storage, which will provide more space to build a cold storage room and relocate dry and finished goods storage from Mount Barker to Denmark. Therefore, once these tanks have been removed, the maximum fermentation/storage capability, and what DWER has deemed the design capacity of the winery to be, is 350kL/year.

Since 2014, an average of 317 tonnes of grapes have been processed on site annually, or approximately 220kL in wine production. Currently winery wastewater is treated and disposed of via drip irrigation to a 1.13 Ha disposal area consisting of grass under mature Karri trees.

The applicant plans to expand winery production to 350kL per year and install a permanent onsite bottling line. A supporting Wastewater Management Plan (WMP) outlines site conditions, wastewater systems, and the disposal area's capacity to absorb nutrients.

The department will assess the anticipated emissions and discharges from the crushing of grapes and producing up to 350kL of wine per year.

2.2 Land use and sensitive receptors

The property is zoned rural, and the adjoining properties consist of homesteads to the north, farming properties to the south and east, and a chalet development to the west. The closest homestead is approximately 75 meters north of the wastewater disposal boundary.

A non-perennial creek runs north to south through the property, flowing into the neighboring properties dam to the South, before ultimately discharging into the Wilson Inlet. This creek line is situated approximately 200m West of the wastewater irrigation area.

Both Carnaby’s and Baudin’s Cockatoos have been recorded in the local area. This proposal is not expected to impact them, as no clearing of vegetation is proposed.

2.3 Wastewater treatment system

Winery liquid waste is collected in a system of open drains located under the roofed area of the winery and conveyed to an underground concrete collection sump through a network of buried conduits. It is then automatically transferred to the Wastewater Treatment System (WWTS) by a pair of submersible pumps.

The WWTS consists of a rotary screen to remove gross solids. After solids are removed, the wastewater is pumped to 2 x 27kL concrete storage tanks and held for up to 24 hours. During this time, aeration and oxidation are used to initiate aerobic decomposition of the BOD. Flocculent is then used in the treatment unit to settle remaining solids. The resulting water undergoes pH adjustment via an automatic dosing pump and liquid lime.

The wastewater then flows by gravity into a series of three settling tanks and a final holding tank. The applicant is also installing two 50kL poly tanks for treated wastewater storage.

Solids removed by the rotary screen are stored in a bin and then mixed with marc to be removed offsite. Any excess solids and sludge built up in the bottom of the settlement tanks is removed as necessary by a licensed operator.

2.4 Wastewater suitability for irrigation

Wastewater was last sampled in 2014 by the applicant. The WMP used the results from this single wastewater sampling event to determine the nutrient uptake capability of the vegetation in the disposal area. The sample results were compared to the Department of Primary Industries

and Regional Development's (DPIRD) 2024 Agribusiness Development Guideline: Suitability of Liquid Waste for Irrigation (Table 1) to give an indication of the wastewater quality.

Table 1. Wastewater results compared to DPIRD's 2024 guideline

Parameter	2014 Wastewater sampling result	DPIRD's "Ideal" recommended level	DPIRD's rating of wastewater
pH	5.1	7.5	Needs attention
Salinity (mg/L)	928	0-600	High
BOD (mg/L)	8460	0	Needs attention
Total Nitrogen (mg/L)	59	15-35	High
Total Phosphorus (mg/L)	20.3	1.5-4	Needs Attention

Using DPIRD's recommendations, the parameters that need attention to help prevent any negative effects of irrigating wastewater are pH, salinity, BOD and Total Phosphorus.

To help improve the wastewater quality, the applicant has installed:

1. A new blower unit to provide better and more consistent oxygen delivery to the aeration basin, improving the efficiency of biological treatment processes such as nitrification and organic matter breakdown. They have also started using bacterial supplements for system seeding and repopulating healthy bacteria for more efficient waste breakdown. This should help lower BOD limits.
2. A new automatic pH dosing which will ensure the pH level of wastewater stays within the desired range.

Delegated Officer Summary: Although wastewater nutrient levels for TN and TP are high when compared to DPIRD's ideal limits, this is only an issue if the crops planted in the disposal area cannot uptake enough of these nutrients.

The salinity levels of the wastewater is considered high. Continual irrigation of water with high salinity may lead to salt accumulation within the soils which will impair plant growth. High salt levels can also contribute to the degradation of the soil structure and leach into the water table, causing contamination.

It is noted that new equipment has been installed on the wastewater treatment system to address the BOD and pH issues. However, without further testing, its effectiveness is unknown. This assessment relies on a 2014 single-sample data so results may be inconsistent and not a current accurate reflection of the wastewater quality. It is reasonable to assume that the new installations have improved the quality of wastewater.

To gain a full overview of the WWTP's wastewater quality and to better monitor the wastewater, monthly monitoring when irrigating will be required under the Licence to ensure water quality stability and suitability.

2.5 Solid waste disposal

Solid waste generated from winery operations includes grape marc, stalks, filter earth, and solids from the liquid waste treatment process. The total solid waste output typically represents

approximately 20% of the annual grape crush. For a 500-tonne crush, this equates to an estimated 100 tonnes of solid waste.

Marc is collected directly into a trailer on a covered concrete hardstand and transported offsite immediately to nearby farmland. Untreated solids screened from the wastewater treatment system (WWTS) are also combined with the marc prior to off-site transport. No solid waste is stored onsite.

2.6 Wastewater disposal (irrigation) area

The irrigation area comprises a hill crest, peaking at 85m ADH and is aligned centrally along the northern boundary of the eastern half of the area. The slope of the irrigation area is between 8 and 9%. The disposal area is 1.13ha and is covered with ~20-year-old Karri trees, with Kikuyu grass between the tree rows. The Karri trees appear to be planted in a uniform pattern, with the canopy now being thick and casting shade over the area. Wastewater is irrigated through a three-station drip irrigation system using 8L/hr emitters at 0.3m spacings. Wastewater has been irrigated over this same irrigation area since 2005.

Soils (from application)

A 2002 study of soils within the irrigation area concluded that the surface soils are slightly acidic, varying between pH 4.5 and pH 5 and that the soils of the study area are generally grey- brown sandy loams overlying mottled yellow-brown and red-brown sandy clays. The surface soils of the areas tested are of low salinity and pH, have relatively strong phosphorus absorption, high moisture absorption and a low potential for sodicity.

Groundwater

The property sits within the unproclaimed Karri groundwater area. The applicant has estimated that groundwater levels sit around 13 mBGL in summer months using information gathered when their two on site production bores were drilled. No information was provided in the application regarding groundwater levels beneath the wastewater irrigation area during winter.

Delegated Officer Summary: Soil sampling shows slightly acidic soil conditions on site. This can reduce microbial activity and nutrient availability (e.g., calcium, magnesium, phosphorus), potentially impacting plant growth and yields. However, similar to wastewater sampling, soil sample results used in the WMP are over 20 years old (taken in 2002), so they may not reflect current conditions.

Soil sampling will be required to ensure soil health stays at acceptable levels and no buildup of nutrient and salinity is occurring.

2.7 Nutrient loading rates

The WMP and the expected nutrient uptake rates (Table 2) is based off the anticipated nutrient uptake and biomass removal of the Kikuyu grass only. It is noted that there are established (20 years old) Karri trees present in the wastewater disposal area which may aid in some uptake of nutrients, but this would be limited.

The applicant estimated the coverage of kikuyu to be 50% of the proposed area and accounted for this reduction in their nutrient uptake figures. They used *Pastures from Space* to determine the pasture yields for the site and propose to mechanically harvest the crop to export nutrients from the area. They estimate that they will be able to harvest 4992kg of dry matter per year. The WMP shows that there is a nutrient deficit of 99.84 (kg/ha/year) Nitrogen and 14.98 (kg/ha/year) Phosphorus with the proposed uptake of nutrients from the Kikuyu biomass being harvested.

Table 2. Estimated loading rates from the WMP and loading limits applied to licence

	Nutrients In (wastewater irrigation)	Nutrients Out (Kikuyu harvest from WMP calculations)	Loading limit applied to Licence (30% shade reduction buffer)	Nutrient Balance after 30% buffer applied
Nitrogen (kg/ha/year)	28.32	99.84	**70**	-41.68
Phosphorus (kg/ha/year)	8.85	14.98	**10.5**	-1.65

Delegated Officer Summary: Although the presence of established Karri trees within the irrigation area may assist with some nutrient uptake, the Delegated Officer cannot and has not included any nutrients the Karri trees may uptake due to the unquantifiable nature of harvest/off take.

The Karri tree's canopy could also inhibit the growth of Kikuyu grass by shading the area. Tools such as *Pastures from Space* do not account for canopy cover and assume crops are growing in open paddocks. Shade can reduce growth rates, lead to shallower root systems, and ultimately result in lower-than-expected nutrient uptake. Additionally, Kikuyu is classified as a C4 grass, which means it is most efficient in high light conditions and performs best in full sun. C4 grasses also exhibit slower growth during the colder winter months.

A buffer of 30% for the unknown shade conditions and effects it may have has been applied to the nutrient loading rates to give a loading rate limit on the Licence (Table 2). Even with this buffer, the nutrient balance remains negative.

2.8 Hydraulic Loading and Winter Irrigation Controls

The WMP uses a soil water balance model, using the Karri Tree predicted root zone and based on EPA Victoria (2022) and FAO (1998) guidelines that show that while winter rainfall exceeds evapotranspiration, limited irrigation can generally be managed within the soil profile in rainfall years that are not within the 90th percentile for total rainfall. The model shows that in a 90th percentile rainfall year deep percolation of water below the root zone can occur in July, August and September. To avoid seepage of wastewater to below the root zone of the grass and to groundwater, no irrigation of wastewater should occur during these 3 months. The applicant proposes that 3mm of irrigation can occur outside of these 90th percentile years and that they will keep a rainfall log to identify these high rainfall years.

In the event of a 90th percentile rainfall year, the applicant estimated that 76kL of storage is required to hold wastewater when irrigation cannot occur, using their estimated wastewater production volumes detailed in Table 3. The calculated 76kL of storage may also be a miscalculation, as only 2 months or storage has been accounted for, but the WMP data shows 3 months of storage required, being July, August and September. If the applicant produces 38kL of wastewater during July, August and September, that would equate to 114kL of storage required. The applicant has committed to installing 2 x 50kL wastewater storage tanks, giving a total of 123 kL of storage, when you include the existing 23kL storage tank.

To reduce the volume of water entering the wastewater treatment system (WWTS), and the amount subsequently required to be stored during restricted periods, the applicant has committed to installing a diversion valve on the site's main drainage line. This valve will be opened during periods of high rainfall when winery operations are not occurring, allowing stormwater runoff to be redirected away from the WWTS. The diverted water will be directed

into an existing HDPE-lined dam on site

Table 3. Monthly Averages of rainfall, pan-evaporation, max rain days and wastewater production

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pan evaporation average[1]	191.5	163.6	131.9	82.2	64.8	37	56.0	63.9	92.7	133.2	154.8	181.2
Average Rainfall (mm)[2]	23	21	48	78	103	132	156	163	104	66	44	25
Max amount of rain days[2]	13	10	18	24	27	28	29	29	26	23	16	11
Wastewater production volume (kL)	57	132	189	170	38	38	38	38	38	76	76	57

1- Data taken from 2022-2025 (DPIRD weather stations: Site DM001)
2 - Data taken from 2013-2025 (DPIRD weather stations: Site DM001)

Delegated Officer Summary:

The delegated officer identifies limitations in permitting Winter irrigation based solely on the applicant's monitoring of high rainfall years. Without a defined monthly rainfall threshold to trigger a stop of irrigation, it is unclear how a high rainfall year can be reliably determined. Isolated wet or dry periods, such as a single month or weeks do not accurately indicate overall annual rainfall trends, as future rainfall cannot be predicted with certainty.

The soil water retention modelling used to justify Winter irrigation assumes a root depth of 2.5 meters based on the Karri trees present in the irrigation area. However, this is inconsistent with the nutrient balance in the WMP, which is based on Kikuyu grass and excludes the Karri trees. Kikuyu has a significantly shallower root system, typically between 30 to 100 cm, with the active root zone in the upper portion. This shallower depth should have been used in the modelling. Applying the 100 cm root depth reduces the soil's water retention capacity and would extend the irrigation exclusion period from the end of May through October.

Without a dedicated monitoring bore, water table depth and separation in the irrigation area cannot be determined, and therefore the use of rainfall and pan evaporation data must be used in determining Winter irrigation restrictions.

The modelling presented in the WMP indicates that site soils are wet during Winter, which is supported by data showing rainfall exceeding pan-evaporation from May to September. Combined with high total rainfall and a high frequency of rainfall days (Table 3), this suggests that Winter irrigation would be both highly restricted and variable from year to year. Furthermore, irrigation during these periods is unnecessary and potentially harmful.

Saturated soil conditions reduce oxygen availability in the root zone, causing root stress, poor nutrient uptake, and increased vulnerability to diseases such as root rot. This leads to stunted plant growth and lower crop yields. Excess irrigation under these conditions further accelerates nutrient losses through leaching and denitrification, particularly nitrogen, and increases the risk of surface runoff and contamination of nearby water bodies. It is therefore essential to avoid irrigation when soil moisture is at or near capacity, as additional water can drive nutrient-rich wastewater below the root zone and into the water table, contributing to off-site nutrient transport.

Assuming the site soils would be less saturated and have more holding capacity in May after the Summer and Autumn period, the delegated officer sees it reasonable to restrict irrigation from June-September.

3. Other Approvals

The Shire of Denmark (shire) has approved the development of enclosing the bottling line and making it permanent on site.

4. Consultation

The application referred to the Shire and was advertised for public comment on the department's website during April 2025. No submissions were received by the department.

The applicant was provided a draft Licence on 30th June, with their comments detailed in Appendix 1.

5. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk Assessments* (DWER 2020). To establish a risk event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

5.1 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and considers potential source-pathway and receptor linkages.

Where the applicant has proposed mitigation measures/controls, these have been considered when determining the final risk rating. Where the delegated officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the Licence as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 5.

Licence L2883/2025/1 that accompanies this decision report authorises emissions associated with the operation of the premises.

The conditions in the issued licence, as outlined in Table 5 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015)

Table 4: Risk assessment of potential emissions and discharges from the premises during operation.

Risk Event					Risk rating[1] C = consequence L = likelihood	Regulatory controls conditioned in licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**			
Operations							
Wine and beverage manufacturing, bottling and packaging	Nutrient and chemical laden wastewater generated from processing and cleaning of the alcoholic beverage manufacturing equipment and packaging	Infiltration through soils contaminating ground and surface water bodies. Overland runoff potentially causing ecosystem disturbance or impacting surface water quality.	Stream running through property into neighboring dam and eventually into Wilson Inlet. Groundwater.	Captured on hardstand areas that drain to the WWTS. Areas of manufacturing are under cover to reduce stormwater runoff.	C = Minor L = Unlikely **Medium Risk** **Acceptable, subject to regulatory controls**	Applicants' controls applied	The applicants' controls were assessed and considered sufficient to mitigate the risk of wastewater impacting on the environment causing contamination. The delegated officer will regulate the licence holder's controls, to ensure the risk event is maintained at an acceptable level.
	Nutrient laden solids and leachate from marc/lees prior to removal offsite.			No marc stored on site. Marc output directly onto a trailer, which sits upon a hardstand and is immediately transported off site.	C = Minor L = Unlikely **Medium Risk** **Acceptable, subject to regulatory controls**	Applicants' controls applied	The applicants' controls were assessed and considered sufficient to mitigate the risk of wastewater impacting on the environment causing contamination. The delegated officer will regulate the licence holder's controls, to ensure the risk event is maintained at an acceptable level.
Management of alcohol manufacturing wastewater	Odour from wastewater processing and storage.	Air/windborne pathway causing impacts to health and amenity	Rural residences 190m from WWTS	Tanks of WWTS are covered and sealed. 2 Aeration tanks present.	C = Slight L = Possible **Low Risk** **Acceptable, applicants controls regulated.**	Applicants' controls applied	The delegated officer assessed the risk as low and does not reasonably foresee off site receptors being impacted by odour from the brewery operations. The delegated officer will regulate the licence holder's controls, to ensure the risk event is maintained at an acceptable level.
	Spills, leaks and overtopping of wastewater containments with nutrient laden wastewater and sludge processed through the WWTP	Infiltration through soils contaminating ground and surface water bodies. Overland runoff potentially causing ecosystem disturbance or impacting surface water quality.	Stream running through property into neighboring dam and eventually into Wilson Inlet. Groundwater. Rural residences 75m from disposal area	2x 50kL poly tanks to be installed for storage. Current tanks have high-level alarms on. Stormwater diversion valve to be installed on main drainage line before the WWTS to reduce hydraulic loading.	C = Moderate L = Possible **Medium Risk** **Acceptable, subject to regulatory controls**	All tanks, and interconnecting pipes must be kept in good working order and routinely visually inspected for any seepage or leakage of wastewater Must have a visual overflow alarm installed on new poly tanks to prevent any over topping. Rotary screen must have a maximum aperture of 5mm. Sludge must be removed from the system and disposed of off-site in a lawfully manner	Routine inspections allow issues or malfunctions to be identified and fixed before they become harmful to the environment. A visual overflow alarm will ensure overtopping of the tank will not occur. Removing coarse solids early in the process allows subsequent treatment stages (like biological or chemical treatment) to operate more effectively, since they deal primarily with smaller, more treatable particles. Screening at this aperture size helps avoid blockages in pipelines and reduces the risk of system overflows or failures.
Onsite disposal of wastewater via irrigation to land 1.13 ha	Nutrient rich wastewater to land	Infiltration through soils contaminating ground and surface water bodies. Overland runoff potentially causing ecosystem disturbance or impacting surface water quality. Irrigation spray drift through the air/windborne pathway causing impacts to health and amenity		Reduce wastewater production between June and September. Maintenance of a rainfall log to identify high rainfall years (>85th percentile year) A maximum of 38 kL of wastewater can be irrigated in June, July, August and September if rainfall is below 85th percentile. Monitoring	. C = Moderate L = Possible **Medium Risk** **Acceptable, subject to regulatory controls**	*Emissions and Discharge limits* TN = 70 kg/ha/annual period TP = 10.5 kg/ha/annual period *Monitoring* Monthly wastewater sampling when irrigating for pH, EC, TDS. TSS, BOD, SAR when irrigating. Three yearly soil sampling for pH, EC, TN, TP, Phosphorus adsorption, Sodicity / Exchangeable sodium percentage (ECP), Sodium adsorption ration (SAR) A photograph at the end of each month must be taken of the flow meter read (FM1).	*Emissions and Discharge limits* Limits for TP and TN are below initial loading limits stated in WMP by 30% to account for the unknown shade factor as described in section 2.7. *Monitoring* The delegated officer will increase wastewater monitoring beyond the applicants proposed twice a year. Monitoring wastewater is crucial to prevent environmental harm by ensuring it stays within the acceptable limits stated on the Licence. Sampling only twice a year risks undetected issues for up to five months, allowing harmful irrigation during that time. The Delegated Officer also has no way of knowing currently if the wastewater quality is stable or has high fluctuations throughout the year due to the results being presented only being from one sample, in 2014. Soil sampling is essential when irrigating with wastewater to ensure proper nutrient uptake, prevent soil structure damage from salts, and avoid nutrient buildup. Regular testing helps maintain soil health and sustainable irrigation practices. The delegated officer has placed the following regular monitoring of wastewater and soils to ensure the WTS is working effectively and to monitor the accumulative environmental impact the irrigation may be having: • Monthly wastewater sampling when irrigating for pH, EC, TDS. TSS, BOD, SAR

Risk Event					Risk rating[1] C = consequence L = likelihood	Regulatory controls conditioned in licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**			
				wastewater and groundwater twice a year. No irrigation during and 24 hours after a rainfall event greater than 3 mm. 100kL of storage for when rainfall cannot occur. Wastewater to be irrigated through drippers reducing any spray.			• Three yearly soil sampling for pH, EC, total nitrogen (TN), total phosphorus (TP), phosphorus adsorption, sodicity / exchangeable sodium percentage (ESP). A photographic record ensures that flow meter readings are accurately documented and creates a verifiable audit trail that helps prove compliance with Winter irrigation restrictions.
	Wastewater to land with excessive hydraulic loading				C = Moderate L = Possible **Medium Risk** **Acceptable, subject to regulatory controls**	No irrigation can occur during the months of June, July, August and September. Wastewater in excess to storage capacity must be removed for off-site disposal to a licensed liquid waste facility if irrigation cannot occur.	See section 2.8. Excess wastewater is to be taken off site by a licenced contractor so it can be disposed of legally and also tracked. The delegated officer notes that with Winter irrigation restricted, the current storage levels will not be able to hold the predicted produced wastewater when the winery is operating at capacity.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DWER 2020).

6. Decision

Based on the assessment in this decision report, the delegated officer has determined that a licence **will be granted**, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Barnes, P, Wilson, BR, Reid, N, Bayerlein, L, Koen, TB & Olupot, G 2014, Examining the impact of shade on above-ground biomass and normalized difference vegetation index of C_3 and C_4 grass species in North-Western NSW, Australia, *Grass and Forage Science*.
2. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
4. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
5. Department of Primary Industries and Regional Development (DPIRD) 2024, *Agribusiness Development Guidelines: Suitability of Liquid Waste for Irrigation.*
6. Passchendaele Ridge Pty Ltd 2025, Application for a licence: Part V Division 3, Attachment 8A Forest Hill Wines, Western Australia.

Appendix 1: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
8	To reduce operating costs, the applicant has enquired if the frequency of the wastewater testing can be reduced or more targeted, after results have shown a consistent result for 12 months.	The department acknowledges the applicant's request to reduce or target specific periods of wastewater testing following a consistent 12-month result period. The department sees wastewater sampling as the key component in monitoring for any environmental impacts. The department is open to reviewing the sampling frequency in the future, provided there is continued consistency in wastewater performance supported by the appropriate evidence.
5	To reduce the amount of wastewater needing to be stored, the applicant would like the Winter irrigation restrictions to be shortened at the start and end as they have observed the soils being dry and no pooling ever occurring during these times.	The winter irrigation period can be adjusted but must be based on a control and not just estimates ie. Irrigation to cease when the groundwater is within 1m of the surface. The applicant is welcome to determine a control and submit it to the department in a licence amendment.