



Licence Number	L9132/2018/1
Licence Holder	The Beer Farm Pty Ltd
ACN	606 046 306
Registered business address	177 Gale Road METRICUP WA 6280
File Number	DER2018/000586
Duration	01/11/2018 to 31/10/2038
Date of issue	01/11/2018
Date of amendment	13/05/2019
Prescribed Premises	Category 25: Alcoholic Beverage Manufacturing
Premises	The Beer Farm 133 Gale Road, METRICUP WA 6280 Lot 131 on Deposited Plan 32067 Certificate of Title Volume 2223 Folio 345

This amended Licence is granted to the Licence Holder, subject to the following conditions, on 13/05/2019, by:

MANAGER, PROCESS INDUSTRIES

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

Explanatory notes

These explanatory notes do not form part of this Licence.

Defined terms

Definition of terms used in this Licence can be found at the start of this Licence. Terms which are defined have the first letter of each word capitalised throughout this Licence.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences, takes enforcement action and develops and implements licensing and industry regulation policy.

Licence

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased, or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered, or permitted to be altered, from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Licence does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007*;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Licence Holder to ensure that any action or activity referred to in this Licence is permitted by, and is carried out in compliance with, other statutory requirements.

The Licence Holder must comply with the Licence. Contravening a Licence Condition is an offence under s.58 of the EP Act.

Responsibilities of a Licence Holder

Separate to the requirements of this Licence, general obligations of Licence Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Licence Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under section 61; and
- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a works approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Licence Holder has a duty to report to DWER all discharges of waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences, including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)*.
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA)*.

Section 53 of the EP Act provides that a Licence Holder commits an offence if Emissions are caused, or altered from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a Closure Notice or an Environmental Protection Notice.

Defences to certain offences may be available to a Licence Holder and these are set out in the EP Act. Section 74A(b)(iv) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Licence Holder can prove that an Emission or Discharge occurred in accordance with a Licence.

This Licence specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of Specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The Specified and General Emissions and Discharges from Primary Activities conducted on the Prescribed Premises are authorised to be conducted in accordance with the Conditions of this Licence.

Emissions and Discharges caused from other activities not related to the Primary Activities at the Premises have not been Conditioned in this Licence. Emissions and Discharges from other activities at the Premises are subject to the general provisions of the EP Act.

Amendment of licence

The Licence Holder can apply to amend the Conditions of this Licence under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Licence at any time on the initiative of the CEO without an application being made.

Amendment Notices constitute written notice of the amendment in accordance with s.59B(9) of the EP Act.

Duration of Licence

The Licence will remain in force for the duration set out on the first page of this Licence or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

[Suspension or revocation](#)

The CEO may suspend or revoke this Licence in accordance with s.59A of the EP Act.

[Fees](#)

The Licence Holder must pay an annual licence fee. Late payment of annual licence fees may result in the licence ceasing to have effect.

Late fees are a component of annual licence fees and should a Licence Holder fail to pay late fees within the time specified the licence will similarly cease to have effect.

Definitions and interpretation

Definitions

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

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Alcoholic Beverage	means the final fermented beverage ready for packaging.
Anniversary Date	means 31 December of each year.
Annual Period	means a 12-month period commencing from 1 January until 31 December.
AS/NZS 4482.1-2005	means Australian Standard AS4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil – Non-volatile and semi volatile compounds.
AS/NZS 5667.1-1998	means the Australian Standard AS/NZS 5667.1-1998 Water quality - Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
AS/NZS 5667.4:1998	means AS/NZS 5667.4:1998. Water quality – Sampling. Part 4: Guidance on sampling from lakes, natural and man-made.
AS/NZS 5667.10-1998	means the Australian/New Zealand Standard AS/NZS 5667.10-1998 Water quality – Sampling – Guidance on sampling of waste waters.
AS/NZS 5667.11-1998	means the current version of Australian/New Zealand Standard AS/NZS 5667.11-1998 Water quality – Sampling – Guidance on sampling of groundwaters.
Beverage	means for the purpose of this licence, beer and cider only.
BOD ₅	means the amount of dissolved oxygen consumed in five days by biological processes breaking down organic matter.
Books	has the same meaning given to that term under the EP Act.
Certified Professional Soil Scientist	A member of Soil Science Australia with a professional accreditation within the field of soil science through the Certified Professional Soil Scientist (CPSS) accreditation scheme.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10, Joondalup DC, WA 6919 info@dwer.wa.gov.au

Term	Definition
Collection Sump	A hollow or a depression on the floor into which liquids can drain off to and get collected. The sump provides a collection point from which to recover liquid, using a pump or other means.
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Department's website).
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
Continuous	Means a data recovery rate of at least 90%
Department	means the department established under s.35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: (a) compliance with the EP Act or this Licence; (b) the Books or other sources of information maintained in accordance with this Licence; or (c) the Books or other sources of information relating to Emissions from the Premises.
Discharge	has the same meaning given to that term under the EP Act.
dS/m	means deciSiemens per metre
DWER	Department of Water and Environmental Regulation.
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Harvested	means the cutting and removal off site of paddock grasses in the form of hay or silage.
Independent Third Party Suitability Qualified Expert	means an independent third party geotechnical or structural engineer.
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.

Term	Definition
Irrigation area	as defined by the coordinates in Table 13 in Schedule 1
kL	means kiloliter
Licence	refers to this document, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions.
Licence Holder	refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.
Licensed Plumbing Contractor	Is a person who holds a plumbing contractor's licence under the Plumbers Licensing and Plumbing Standards Regulations 2000
Material Change	means a change to the activities carried out on the Premises as described by the Primary Activities set out in Schedule 2 that may result in an increased risk to public health, amenity or the environment.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
mg/L	means milligrams per litre
Monthly Period	a one-month period commencing from the first day of a month until first day of the immediately following month.
Na+	means sodium ion
Nitrate N	means Nitrate nitrogen
K+	means potassium ion
Ca ²⁺	means calcium ion
Mg ²⁺	means magnesium ion
Cl-	means chloride ion
SO ₄ ²⁻	means sulfate ion
HCO ₃ ⁻	means bicarbonate ion
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
Prescribed Premises	has the same meaning given to that term under the EP Act.

Term	Definition
Primary Activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
PVC	Polyvinyl chloride
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Suitably Qualified Driller	means a driller who possesses the appropriate experience and holds a Class 1 licence as per the Drillers' Classification System outlined in <i>Minimum Construction Requirements for Water Bores in Australia</i> (AIH 2012).
Treated wastewater	means wastewater that is discharged from the wastewater treatment system after it has passed through treatment processes to reduce its nutrient and bio-chemical load
TDS	means total dissolved solids
TSS	means total suspended solids
Total N	means Total nitrogen
Total P	means Total phosphorus
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.
WWS	means the brewery wastewater system consisting of a 1800mm (3,657 litre) precast concrete septic tank to 1520mm (1,933 litre) precast concrete septic tank to a 15kL settling tank to 50kL blending tank (with underflow to 2 x geo-bags) to 7kL aeration tank to 4kL clarifier tank to a 50kL balance/settling tank (with underflow to 2 x geobags) to a 50kL balance/settling tank.

Interpretation

In this Licence:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Licence means the version of the standard, guideline or code of practice in force at the time of granting of this Licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Licence; and

- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Emissions

2. The licence holder must not cause any Emissions from the Primary Activities on the Premises except for specified Emissions and general Emissions described in Column 1 of Table 2 subject to the exclusions, limitations or requirements specified in Column 2 of Table 2.

Table 2: Authorised Emissions table

Emission type	Exclusions/Limitations/Requirements
Specified Emissions	
Disposal of treated wastewater via irrigation to land	Subject to compliance with Conditions 14, 15, 16, 17, and 18
General Emissions (excluding Specified Emissions)	
Emissions which arise from the Primary Activities set out in Schedule 2.	Emissions excluded from General Emissions are: • Unreasonable Emissions; or • Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or • Discharges of Waste in circumstances likely to cause Pollution; or • Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy; or • Emissions or Discharges which do not comply with a prescribed standard; or • Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.

Alcoholic Beverage Production Limit

3. The licence holder must not produce greater than 1,040 kilolitres of Beverage per Annual Period.

Specified Actions

Soil Survey

4. The licence holder must undertake a soil survey of each irrigation area as defined in Map 4 at the Premises to determine key physical features of soil materials. The soil survey must:
- (a) be undertaken within 60 days of the licence issue date;
 - (b) be undertaken by a Certified Professional Soil Scientist (or equivalent);
 - (c) be carried out in accordance with methodologies indicated in the Australian Soil and Land Survey Handbook;
 - (d) use a sampling intensity of 100 x 100 metre grid cored or test pits in each irrigation area as defined in Map 4; and
 - (e) determine in each soil sampling site, the texture and structure of each horizon in the soil profile, the depth of the top soil, the depth to drainage or root impeding barriers, water infiltration rates, and soil water holding capacities.

Detailed Soil Investigations

5. The licence holder must undertake detailed soil investigations of each irrigation area as defined in Map 4 at the Premises to determine the soil characteristics. The detailed soil investigation must:
- (a) be undertaken within 60 days of the licence issue date;
 - (b) be undertaken by a Certified Professional Soil Scientist (or equivalent);
 - (c) include the methodology used in undertaking the detailed soil investigation;
 - (d) use a sampling intensity of 100 x 100 metre grid cored or test pits in each irrigation area as defined in Map 4; and
 - (e) identify the soil properties in each horizon in the soil profile in each irrigation area as defined in Map 4, and as shown in Table 3 below.
6. The licence holder must provide written confirmation to the CEO, including a report by a Certified Professional Soil Scientist (or equivalent), which presents the results of the soil survey and detailed soil investigation and meets the requirements in conditions 4 and 5 no later than 08 July 2019.

Table 3: Soil Assessment – Characteristics of Soil

Property	
Exchangeable sodium percentage (0–40 cm)	Available water capacity
Exchangeable sodium percentage (40–100 cm)	Soil pH _{CaCl2} (surface layer)
Salinity measured as electrical conductivity (at 0–70 cm)	Effective cation exchange capacity (+)/kg, average 0–40 cm
Salinity measured as electrical conductivity (at 70–100 cm)	Emerson aggregate test (0–100cm)
Depth to top of seasonal high water table	Phosphorus sorption (at total 0–100 cm)
Saturated hydraulic conductivity (Ks, 0-100 cm)	Depth to bedrock or hardpan (metres)

Works

7. The licence holder must construct and/or install the infrastructure and or equipment listed in Table 14, in accordance with;
 - (a) the corresponding design and construction requirement / installation requirement; and
 - (b) at the corresponding infrastructure location; and
 - (c) within the corresponding timeframe,as set out in Table 14 in Schedule 2.
8. The licence holder must within 30 days of each item of infrastructure required by condition 7 being constructed:
 - (a) undertake an audit of their compliance with the requirements of condition 7; and
 - (b) prepare and submit to the CEO an audit report on that compliance.
9. The report required by condition 8, must:
 - (a) be certified by a Licensed Plumbing Contractor that each item of infrastructure or equipment specified in Rows 1, 2, 3, 4, 5, 6, 8, 9, and 10 of Table 14 meets the corresponding specifications and at the locations set out in Table 14 and has been constructed with no material defects;
 - (b) be certified by an Independent Third Party Suitability Qualified Expert that each item of infrastructure or equipment specified in Row 7 of Table 14 meets the corresponding specifications and at the locations set out in Table 14 and has been constructed with no material defects;
 - (c) be certified by a Suitably Qualified Driller that each item of infrastructure or equipment specified in Row 11 of Table 14 meets the corresponding specifications and at the locations set out in Table 14 and has been constructed with no material defects; and
 - (d) be signed by a person authorised to represent the licence holder and contains the printed name and position of that person within the company.
10. Along with the requirements of condition 8, the licence holder must submit to the CEO copies of the bore logs recorded at the time of installation of each groundwater monitoring bore, which include the following:
 - (a) GPS coordinates of bore location;
 - (b) Start and finish dates of installation;
 - (c) Type of drilling method used;
 - (d) Diameters and depth of hole drilled;
 - (e) Complete strata details to include:
 - i. well completion diagram;
 - ii. lithological description, including strata depths;
 - iii. standing water level; and
 - iv. drilling penetration rates.
 - (f) Casing details to include:
 - i. type and diameter;
 - ii. class of pipe and/or wall thickness; and
 - iii. position within the hole and how it is secured and sealed.
 - (g) Slotted screening details to include:
 - i. length of slotted section and location;
 - ii. screen type, dimensions and location; and
 - iii. the gravel pack material and size.

- (h) Bore development procedure and record, including total drilled depth; and
 - (i) Surveyed height (AHD) of each bore.
- 11.** The licence holder must not depart from the requirements specified in the design and construction requirement / installation requirement of Table 14 except:
- (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions in this Licence are still satisfied.
- 12.** Where a departure from the requirements specified in the design and construction requirement / installation requirement of Table 14 occurs and is of a type allowed by Condition 11 the licence holder must provide to the CEO a description of, and explanation for the departure along with the certification required by Condition 8.

Infrastructure and Equipment – Operational Controls

- 13.** The licence holder must ensure that the site infrastructure and equipment listed in Table 15 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 15 in Schedule 2.

Operational Controls (Irrigation)

- 14.** The licence holder shall not irrigate wastewater to land before:
- (a) the soil survey and detailed soil investigations specified in conditions 4 and 5 are completed to the requirements outlined in conditions 4 and 5;
 - (b) submission of the written confirmation and report under condition 6 relating to the soil survey and detailed soil investigations under conditions 4 and 5; and
 - (c) a response is provided by the CEO to the licence holder relating to the report submission under condition 6.
- 15.** Subject to condition 14, the licence holder must ensure that all emissions specified in Table 4, are discharged to land only from the corresponding discharge point and only at the corresponding discharge point location and in accordance with the corresponding requirements.

Table 4: Authorised discharge points

Emission	Discharge point	Discharge location	Discharge via irrigation requirements
Treated wastewater	Irrigation pipeline M1 as shown in Map 3 in Schedule 1	As defined by the coordinates in Schedule 1 and as shown in Map 4 of Schedule 1: Areas A(1), A(2) and B	Irrigation via a low pressure transportable pod sprinkler system. Applied only during the months of January, February, March, April, May, November, and December, each year in accordance with Condition 16.

- 16.** The licence holder must ensure that when irrigating treated wastewater in accordance with condition 15 that:
- (a) only treated wastewater from the final two balance/settling tanks in the WWS is irrigated;

- (b) no irrigation generated runoff, spray drift or discharge occurs beyond the boundary of irrigation areas A(1), A(2) and B;
- (c) irrigation does not occur on land that is waterlogged;
- (d) irrigation is not undertaken when rainfall is imminent, during or immediately after a rainfall event;
- (e) wastewater is evenly distributed over the irrigation area;
- (f) no soil erosion occurs;
- (g) vegetative cover is maintained over the irrigation area;
- (h) vegetation in the irrigation area is Harvested at least every 12 months;
- (i) plantation trees are coppiced at least every 5-7 years;
- (j) irrigation does not occur over leach drains or areas receiving stormwater drainage;
- (k) weekly checks of the irrigation area; and
- (l) movement of the transportable irrigation system on a weekly basis.

Monitoring – Wastewater Emissions to Land

17. The licence holder must monitor emissions:

- (a) from each discharge point;
 - (b) for the corresponding parameter;
 - (c) at the corresponding frequency;
 - (d) for the corresponding averaging period;
 - (e) in the corresponding unit; and
 - (f) using the corresponding method,
- as set out in Table 5.

Table 5: Brewery treated wastewater discharge monitoring table

Discharge point	Parameter	Frequency	Averaging period	Unit	Method
M2 as shown in Map 3 in Schedule 1 (Outflow from the final storage tanks (Balance/settling tanks) which holds treated wastewater from WWS)	Volumetric flow rate	Continuous when discharging	Spot sample	m ³ /day	AS/NZS 5667.1-1998 and AS/NZS 5667.10-1998
M1 as shown in Map 3 in Schedule 1 (Outflow from the final storage tanks (Balance/settling tanks) which holds	Volume of treated wastewater discharged	Each monthly period		m ³	
	pH ¹			-	
	Total nitrogen			mg/L	

Discharge point	Parameter	Frequency	Averaging period	Unit	Method
treated wastewater from WWS)	Total phosphorus				
	TDS				
	TSS				
	BOD ₅				

Wastewater Emissions to Land Loading Limits

18. The licence holder must ensure that emissions from the discharge point listed in Table 4 for the corresponding parameters do not exceed the corresponding limit when monitored in accordance with condition 17.

Table 6: Irrigation emission limits

Parameter	Loading limit
Total N	< 1.5 kg/ha/month
Total P	< 0.2 kg/ha/month
BOD ₅	< 30 kg/ha/day

Waste Containment and Disposal

19. The licence holder must ensure that wastes produced on the premises, specified in Table 7, are contained only in the corresponding containment infrastructure and only disposed of with the corresponding disposal strategy and in accordance with the corresponding requirements.

Table 7: Waste containment and disposal specifications

Waste type	Containment	Disposal strategy	Specified requirements
Brewery wastewater not irrigated to land in accordance with condition 15	WWS	Disposal offsite the Premises	Must be removed off-site via a licensed controlled waste carrier and disposed of at a facility authorised to accept liquid waste The licence holder must record on a daily basis, the volume (in kilolitres) of brewery wastewater removed from the Premises via a licensed controlled waste contractor

Waste type	Containment	Disposal strategy	Specified requirements
		Stored onsite	Stored in a tank/s located within a dedicated hardstand area that: (a) has bunding and is constructed to achieve a hydraulic conductivity of less than 1×10^{-9} m/s; (b) is graded with a fall that prevents pooling; (c) directs all leachate, liquid waste and contaminated stormwater runoff to a dedicated Collection Sump. Stored in a tank/s designed and installed to contain the wastes stored or treated therein without failing, collapsing, or rupturing. Installed with an operational high level alarm, that is set to trigger when at 95% of the tank volume. Located at least 90 meters from surface waters. Capable to provide visual and audible indicators and mobile alerts of fault conditions.
Spent grain and sediment from brewing activities	Temporary storage in plastic drums and/or intermediate bulk container/s	Disposal as cattle feed on the Premises	Must be stored in contained vessels within the brewery hardstand area for no more than 24 hours
		Offsite disposal if unable to use as cattle feed on the Premises	Must be removed by a licensed waste contractor and disposed at an authorised facility
Wastewater treatment sludge's	WWS	Disposal offsite the Premises	Must not be applied to land on the Premises Must be removed from the Premises via a licensed controlled waste contractor Spills or discharges outside the WWS infrastructure must be immediately recovered

Soil Monitoring

20. The licence holder must monitor the soil for concentrations of the parameters listed in Table 8:

- (a) at the corresponding monitoring location;
 - (b) in the corresponding unit;
 - (c) at no less that the corresponding frequency;
 - (d) at the corresponding soil profile and for the corresponding number of core samples; and
 - (e) using the corresponding method,
- as set out in Table 8.

Table 8: Monitoring of ambient soil concentrations

Parameter	Monitoring location	Unit	Frequency	Number of core samples	Soil Profile	Number of core samples	Soil Profile	Sampling Method
				Composite Surface Soil Sample		Composite Deep Soil Sample		
pH	Within each irrigation area shown in Map 4 in Schedule 1	-	Annually for the first three years and thereafter, once every three years	40	0-10cm	5	0–20cm, 20–40cm, 40–70cm and 70–100 cm depth increments ^{1,2}	AS/NZS 4482.1-2005
Electrical conductivity		dS/m						
Nitrate-N		mg/L						
Total N								
Available P								
Total P								
Exchangeable sodium percentage								
Heavy metals and pesticides								
P sorption capacity		kg/ha						

Notes: 1. Positioned within major soil horizons or layers

2. Within a 5 metre diameter plot

Groundwater Bore Monitoring

21. The licence holder must monitor the groundwater for concentrations of the parameter listed in Table 9:

- (a) at the corresponding monitoring location;
 - (b) in the corresponding unit;
 - (c) at no less that the corresponding frequency;
 - (d) for the corresponding averaging period; and
 - (e) using the corresponding method,
- as set out in Table 9.

Table 9: Monitoring of ambient groundwater concentrations

Parameter	Monitoring location	Unit	Frequency	Sample	Method
Standing water level ¹		m(AHD) mBGL	Annually in the month of October	In-field measurement	AS/NZS 5667.1-1998 AS/NZS 5667.11-1998
pH ¹	MB1, MB2, MB3 and MB4 as shown in Map 5 in Schedule 1	-		Spot sample	
Electrical conductivity ¹		dS/m			
Total Dissolved Solids (TDS)		mg/L			
Na ⁺					
K ⁺					
Ca ²⁺					
Mg ²⁺					
Cl ⁻					
SO ₄ ²⁻					
HCO ₃ ⁻					
Total N					
Ammonium nitrogen					
Nitrate N					
Total P					

Note: 1. Condition 24 does not apply to pH or electrical conductivity

Surface Water Monitoring

22. The licence holder must monitor the surface water for concentrations of the parameter listed in Table 10:

- (a) at the corresponding monitoring location;
 - (b) in the corresponding unit;
 - (c) at no less that the corresponding frequency;
 - (d) for the corresponding averaging period; and
 - (e) using the corresponding method,
- as set out in Table 10.

Table 10: Monitoring of ambient surface water concentrations

Parameter	Monitoring location	Unit	Frequency	Sample	Method
pH ¹	SW1 and SW2 as shown in Map 6 in Schedule 1	-	Annually in the month of October – on the same day as groundwater monitoring as per condition 21	In-field measurement	AS/NZS 5667.1:1998 and AS/NZS5667.4:1998
Electrical conductivity ¹		dS/m		Spot sample	
Total Dissolved Solids (TDS)		mg/L			
Na ⁺					
K ⁺					
Ca ²⁺					
Mg ²⁺					
Cl ⁻					
SO ₄ ²⁻					
HCO ₃ ⁻					
Total N					
Ammonium nitrogen					
Nitrate N					
Total P					

Note: 1. Condition 24 does not apply to pH or electrical conductivity

Monitoring Requirements

- 23.** The licence holder must ensure that:
- (a) monitoring is undertaken in each monthly period such that there are at least 15 days in between the days on which samples are taken in successive months; and
 - (b) monitoring is undertaken in each annual period such that there are at least 9 months in between the days on which samples are taken in successive years.
- 24.** The licence holder must ensure that all samples required for collection by Conditions 17, 20, 21, and 22 are submitted to and tested by a laboratory with current NATA Accreditation for the parameters being measured unless indicated otherwise in the relevant table.
- 25.** The licence holder must record the results of all monitoring activity required by conditions 17, 20, 21, and 22.

Record-keeping

- 26.** The licence holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:
- (a) the calculation of fees payable in respect of this Licence;
 - (b) the works conducted in accordance with Condition 7 of this Licence;

- (c) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 13 of this Licence; and
- (d) complaints received under Condition 27 of this Licence.

In addition, the Books must:

- (e) be legible;
 - (f) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;
 - (g) be retained for at least 3 years from the date the Books were made; and
 - (h) be available to be produced to an Inspector or the CEO.
- 27.** The licence holder must record the number and details of any complaints received by the licence holder relating to its obligations under this Licence and its compliance with Part V of the EP Act at the Premises. Details of complaints must include:
- (a) an accurate record of the concerns or issues raised, for example a copy of any written complaint or a written note of any verbal complaints made;
 - (b) the name and contact details of the complainant, if provided by the complainant;
 - (c) the date of the complaint; and
 - (d) the details and dates of the actions taken by the licence holder in response to the complaints.

Reporting

- 28.** The licence holder must submit to the CEO by no later than 7 days after the end of each monthly period during which irrigation to land has occurred, a report for the previous monthly period for the conditions listed in Table 11, and which provides information in accordance with the corresponding requirement set out in Table 11.

Table 11: Monthly Reporting

Condition	Requirement
17,18	(a) Tabulated treated wastewater monitoring data showing the calculation of the monthly loads of N, P and BOD to each irrigation area defined in Map 4. (b) Comparison of the monthly loads to the limits specified in Table 6.

- 29.** The licence holder must submit to the CEO by no later than 30 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 12, and which provides information in accordance with the corresponding requirement set out in Table 12.

Table 12: Annual Environmental Report

Condition	Requirement
3	Tabulated monthly volumes in kL of brewery inputs (water, fruit juice etc) and the outputs (alcoholic beverage produced)
17	Tabulated treated wastewater monitoring data showing the volume of wastewater irrigated to each irrigation area defined in Map 4.
17	(a) Laboratory data sheets for monthly monitoring in accordance with Table 5. (b) A tabulated data summary of monitoring results. (c) An interpretation of monitoring data results including comparison to historical

	trends.
17,18	Summary of tabulated treated wastewater monitoring data showing the monthly loads of N, P and BOD to each irrigation area defined in Map 4.
19	(a) Tabulated treated wastewater monitoring data showing the volume of wastewater removed offsite in accordance with Table 7. (b) Copies of receipts from the controlled waste contractor for the removal and disposal of wastewater. (c) Copies of receipts from the controlled waste contractor for the removal and disposal of sludges.
19	Tabulated treated wastewater monitoring data showing the volume of wastewater stored onsite in accordance with Table 7.
20	Tabulated soil monitoring data results and time series graphs for each irrigation area showing concentrations of all parameters.
21	Tabulated groundwater monitoring data results and time series graphs for each monitoring well showing concentrations of all parameters.
22	Tabulated surface water monitoring data results and time series graphs for each surface water sampling site showing concentrations of all parameters.
27	Summary of complaints

- 30.** The licence holder must:
- (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and
 - (b) prepare and submit to the CEO by no later than 30 days after the end of that annual period an Annual Audit Compliance Report in the approved form.
- 31.** The licence holder must comply with a Department Request, within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

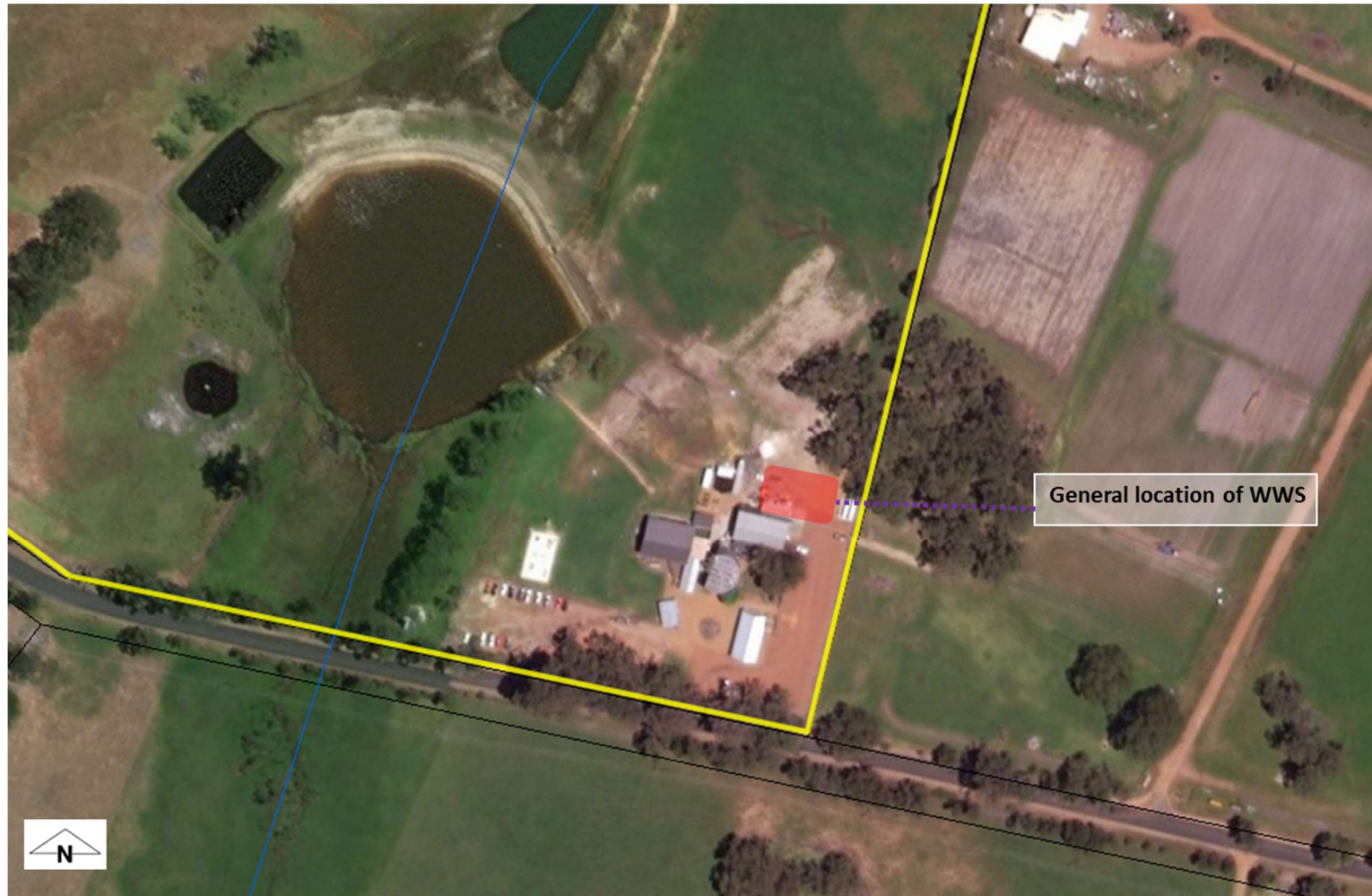
Schedule 1: Maps

Map 1 - Premises Map

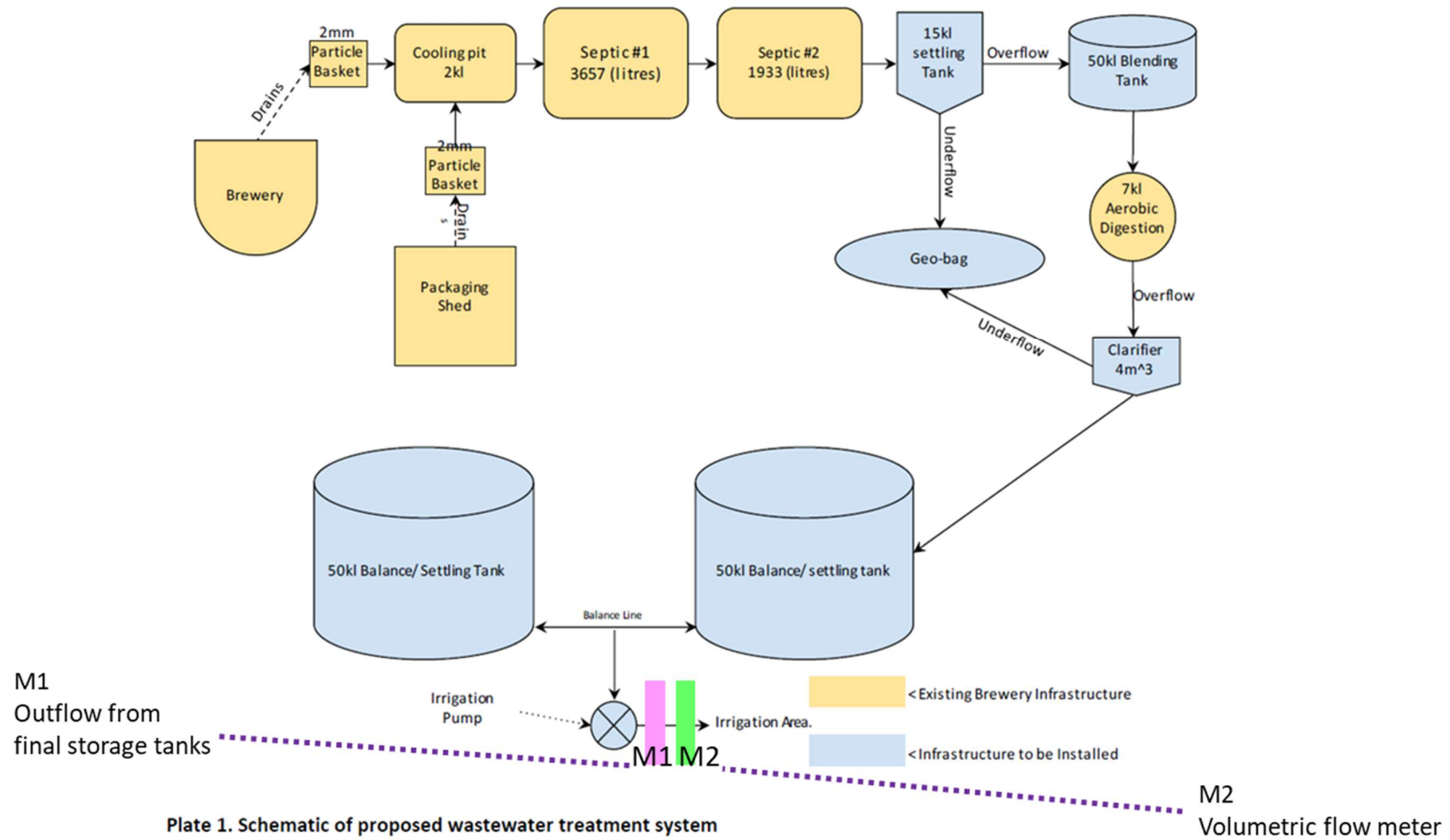
The Premises are shown in the map below. The yellow line depicts the premises boundary being Lot 131.



Map 2 – Site Plan Showing Infrastructure Layout

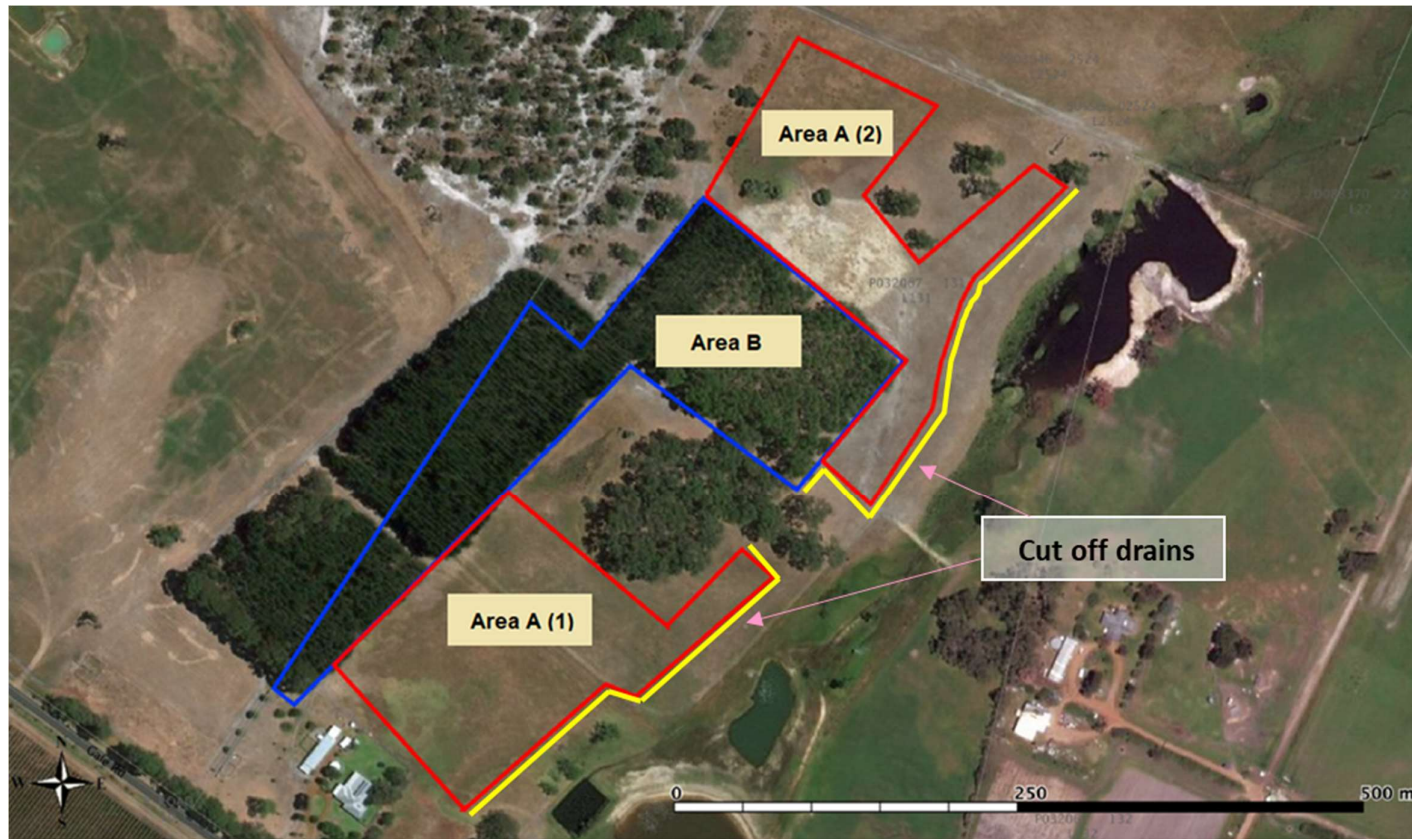


Map 3 – Wastewater Schematic



Map 4 – Irrigation Areas

Irrigation area made up of Area A(1), A(2) and B. Total size of 10ha



PROJECT **Lot 131 Gale Road, Metricup (The Beer Farm)**
 DRAWING TITLE **Figure 4- Revised Irrigation Areas**
 CLIENT **The Beer Farm**

Legend — **Cut off drains**
 Irrigation Area A
 Irrigation Area B

accendo
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Project Number	Drawing Number	Revision
1709	FIG 4	B
Designed KMT	Checked	Date 28-11-2018
Drawn JPH	Approved	Sheet 1 of 1
Local Authority City of Busselton		

Irrigation Area Boundary

The irrigation area boundary is defined by the coordinates in Table 4.

Table 13: Irrigation area boundary coordinates

Easting	Northing
Area A(1) - 3.062 ha	
115.14486	-33.78419
115.14589	-33.78513
115.14699	-33.78431
115.14722	-33.78439
115.14830	-33.78361
115.14805	-33.78343
115.14747	-33.78394
115.14623	-33.78306
Area A(2) - 2.872 ha	
115.14868	-33.78286
115.14906	-33.78314
115.14954	-33.78252
115.14960	-33.78223
115.14977	-33.78182
115.14986	-33.78167
115.15058	-33.78108
115.15034	-33.78094
115.14943	-33.78157
115.14901	-33.78114
115.14957	-33.78056
115.14849	-33.78012
115.14777	-33.78114

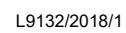
115.14934	-33.78220
Area B - 4.061 ha	
115.14439	-33.78434
115.14456	-33.78445
115.14718	-33.78224
115.14848	-33.78305
115.14931	-33.78220
115.14774	-33.78115
115.14679	-33.78211
115.14640	-33.78183

Map 5 – Groundwater monitoring bore locations

Locations of monitoring bores to be installed in the wastewater irrigation areas



Locations of surface water sampling



Schedule 2:

Works: Design and construction requirements

Table 14: Design and construction requirements

	Infrastructure and / or equipment	Design and Construction requirement / Installation Requirement	Infrastructure location	Completion timeframe
1	15kL settling tank	Designed and installed to contain the wastes stored or treated therein without failing, collapsing, or rupturing.	As shown in Map 2 and 3 in Schedule 1	Before 08/08/2019
2	50kL blending tank	Installed with an operational high level alarm, that is set to trigger when at 95% of the tank volume.		
3	4kL clarifier tank			
4	50kL balance/settling tank (1)	50kL balance/settling tanks shall have a sampling point capable of retrieving wastewater samples.		
5	50kL balance/settling tank (2)	Piping, pumps and associated infrastructure shall be capable of transferring wastewater and be structurally sound. Located at least 90 meters from surface waters. Capable to provide visual and audible indicators and mobile alerts of fault conditions.		
6	7kL aeration tank	Installed with an operational high level alarm, that is set to trigger when at 95% of the tank volume.		
7	Geo-bag x 2	Located within a dedicated hardstand area that: (d) has bunding and is constructed to achieve a hydraulic conductivity of less than 1×10^{-9} m/s; (e) is graded with a fall that prevents pooling; (f) directs all leachate, liquid waste and contaminated stormwater runoff to a dedicated Collection Sump. The Collection Sump within the geo-bag dedicated bunded hardstand area must: (g) be constructed to achieve a hydraulic conductivity of less than 1×10^{-9} m/s; (h) be able to drain via gravity to the collection sump or it must be fitted with a pump that directs all leachate, liquid waste and contaminated stormwater to the Wastewater		

	Infrastructure and / or equipment	Design and Construction Requirement / Installation	Infrastructure location	Completion timeframe
		Collection Sump (cooling pit) as defined in Map 3 in Schedule 1; and (i) be fitted with a high level alarm that is set to trigger when at 95% of the Collection Sump volume. Located at least 90 meters from surface waters.		
8	Irrigation pump	Capable of pumping wastewater to the irrigation area/s.		Before 08/08/2019
9	Volumetric flow meter	Installed on the pipeline that transports wastewater from the irrigation pump to the irrigation area/s. Capable of monitoring the volume of wastewater discharged from the WWS via the irrigation pump to the irrigation area/s.		
10	Irrigation system and area/s	Transportable pod sprinkler irrigation system capable of delivering wastewater to irrigation areas, Area A(1), Area A(2) and Area B as defined in Map 4. Cut off drains around the boundaries of the irrigation areas defined in Map 4 to contain wastewater and contaminated stormwater flows from exiting the irrigation areas.	As shown in Map 4 in Schedule 1	
10.1		Planting and establishment of pasture grasses in the irrigation areas, Area A(1), Area A(2) as defined in Map 4.		
11	Groundwater monitoring bores	Total of 4 bores installed at each of the locations MB1, MB2, MB3, and MB4 Each bore shall: (a) have screened intervals that extend 3-6 metres below the water table; and (b) surveyed to allow the ground level (to Australian Height Datum) at each location to be accurately determined. Installed to meet the requirements of <i>Minimum Construction Requirements for Water Bores in Australia</i> (AIH 2012). Each bore installed by a Suitably Qualified Driller.	As shown in Map 5 in Schedule 1	

Infrastructure and Equipment – Operational Controls

Table 15: Infrastructure and equipment controls

	Premises infrastructure and equipment	Operational requirements	Infrastructure location
1	Manufacturing and production area (includes the brewery, production and shed hardstand area)	All plant and equipment used for the production and packaging of beer/cider (excluding water tanks) must be installed within purpose built enclosed structures. Uncontaminated stormwater must not enter the manufacturing and processing area. All liquid waste from the beer/cider manufacturing and production area must be collected by a grated drainage system and directed to a concrete collection sump.	As shown in Map 1 in Schedule 1
2	Wastewater collection sump (cooling pit) connected via drainage to the brewery and packaging shed– 2,000L	Receive all wastewater from brewery operations. Maintained in good working condition.	As shown in Map 2 in Schedule 1
3	1800mm precast concrete septic tank (3,657L)		
4	1520mm precast concrete septic tank (1,933L)		
5	15kL settling tank (following the installation required by Condition 7)	Maintained with a good working operational high level alarm, that is set to trigger when at 95% of the tank volume to avoid overtopping. Sludge in the 15kL settling tank and clarifier monitored weekly. Tanks must be maintained and routinely inspected to check for rupture or leaks.	
6	50kL blending tank (following the installation required by Condition 7)		
7	7kL aeration tank		
8	4kL clarifier tank (following the installation required by Condition 7)		
9	50kL balance/settling tank (1) (following the installation required by Condition 7)		
10	50kL balance/settling tank (2) (following the installation required by Condition 7)		

	Premises infrastructure and equipment	Operational requirements	Infrastructure location
11	Geo-bags and hardstand (following the installation required by Condition 7)	Geo-bags located within a dedicated bunded hardstand area. Hardstand and Collection Sump achieves a hydraulic conductivity of less than 1×10^{-9} m/s. Hardstand graded with a fall that prevents pooling. Directs all leachate, liquid waste and contaminated stormwater runoff to a dedicated Collection Sump. Collection Sump capable of directing all leachate, liquid waste and contaminated stormwater to the Wastewater Collection Sump (cooling pit) as defined in Map 3 of Schedule 1; Collection Sump maintained a high level alarm that is set to trigger when at 95% of the Collection Sump volume.	As shown in Map 2 in Schedule 1
12	Piping, pumps and associated infrastructure (following the installation required by Condition 7)	Maintained in good working condition. All pumps, pipelines and other fittings must be maintained and routinely inspected to check for rupture or leaks.	
13	Irrigation pump (following the installation required by Condition 7)	Capable of pumping wastewater to the irrigation area/s. Maintained in good working condition.	
14	Flow meter (following the installation required by Condition 7)	Capable of accurately monitoring the volume of wastewater discharged from the WWS (as specified in Map 3 in Schedule 1) to the irrigation areas as defined in Map 4 in Schedule 1.	
15	Groundwater monitoring bores (following the installation required by Condition 7)	Maintained to allow access to groundwater for measuring its level, physical and chemical properties; and allow groundwater samples to be withdrawn for laboratory analysis.	As shown in Map 5 in Schedule 1

Primary Activities

At the time of assessment, Emissions and Discharges from the following Primary Activities were considered in the determination of the risk and related Conditions for the Premises.

The Primary Activities are listed in Table 16:

Table 16: Primary Activities

Primary Activity	Premises production or design capacity
Category 25 – Alcoholic beverage manufacturing: premises on which an alcoholic beverage is manufactured and from which liquid waste is or is to be discharged onto land or into waters.	< 1,040kL of beverage produced per year

Site layout

The infrastructure and equipment are set out on the Premises in accordance with the site layout specified on the Premises map in Schedule 1.

Infrastructure and equipment

The infrastructure and equipment situated on the Premises is listed in Table 17.

Table 17: Infrastructure and equipment

	Infrastructure	Site Plan Reference
	Prescribed Activity Category 25	
Existing		
Brewing of Beer		
1	Brewery building – 15m diameter enclosed cylindrical steel fabricated building with concrete floor and blockwork wall around the base (approximately 1m height).	Map 1 and Map 2
2	Steel Mash Turn – 2,000L	
3	Steel Lauter Turn – 2,000L	
4	Heat Exchanger	
5	Steel Cold Liquor Storage tank	
6	Steel fermenter/conditioning tanks (1x500L, 2x 2,500L, 2x6000L, 3x10,000L)	
7	Grated wastewater collection drain	
8	Concrete hardstand area between brewery and production shed with stormwater collection drain	
9	Water supply storage tanks (1 x 14,000L and 1 x 9,000L enclosed PVC tanks)	
Packaging of Beer		
1	Production shed - 15m by 20m steel fabricated enclosed shed with concrete floor	Map 1
2	Bright Beer tanks (1x10,000L and 1x6,000L)	
3	Grated wastewater collection drain	
4	Malt mill – for milling barley	
5	Canning line	
Existing		
Wastewater treatment, transfer and disposal		
1	Below ground wastewater collection sump connected via drainage to the brewery and packaging shed– 2,000L	Map 2
2	Brewery wastewater system consisting of: 1800mm precast concrete septic tank (3,657L)	

	Infrastructure	Site Plan Reference
	1520mm precast concrete septic tank (1,933L) 7kL concrete tank (with connecting pipelines and/or fittings)	
Proposed		
1	Infrastructure and connecting HDPE pipelines and/or fittings for: •1520mm septic tank to 15kL settling tank (polyvinyl chloride (PVC)) •15kL settling tank (PVC) to 2 x Geo-bag •15kL settling tank (PVC) to 50kL blending tank (PVC) •50kL blending tank (PVC) to 7kL concrete aeration tank •4kL clarifier tank (PVC) to 2 x 50kL balance/settling tanks (PVC) •Balance line between 50kL balance/settling tanks (PVC) to the irrigation pump then pipelines to irrigation areas	Map 2 and Map 3
2	Irrigation system over 10 hectares (ha) of pasture (consisting of Areas A(1) and A(2)) and plantation trees (consisting of Area B). K-Line effluent system (low pressure transportable pod sprinkler system) to irrigate Areas A(1), A(2) and B	Map 4