



Licence number	L8983/2016/1
Licence holder	T & J.J Nominees Pty Ltd
ACN	165 696 908
Registered business address	Unit 5, 213 Walcott Street NORTH PERTH WA 6006
DWER file number	DER2016/001332
Duration	12/12/2016 to 11/12/2036
Date of amendment	26 October 2020
Premises details	White Lakes Brewing Lot 71 on Diagram 90934 and section of road reserve as defined by coordinates in Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production throughput
Category 25: Alcoholic beverage manufacturing: premises on which an alcoholic beverage is manufactured and from which liquid waste is or to be discharged onto land or into waters.	Not more than 1,000 kL of beer and cider produced per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 26 October 2020 by:

**MANAGER, PROCESS INDUSTRIES
REGULATORY SERVICES**

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

Licence history

Date	Reference number	Summary of changes
06/12/2016	L8983/2016/1	Licence granted.
26/10/2020	L8983/2016/1	Amendment application to increase authorised irrigation area. CEO initiated amendments to convert licence into the 2020 format and other administrative corrections and updates.

Interpretation

In this licence:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (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:
 - (i) if dated, refers to that particular version; and
 - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Conditions

Infrastructure and Equipment

1. The Licence Holder must ensure that the infrastructure and equipment specified in column 1 of Table 1 and located at the corresponding infrastructure location in column 3 are maintained and operated in accordance with the requirements specified in column 2 of Table 1.

Table 1: Infrastructure Requirements

Column 1	Column 2	Column 3
Site infrastructure and equipment	Operational Requirement	Infrastructure location
<p>Brewery building, containing:</p> <ul style="list-style-type: none"> • Lauter tun (2,500 L) • Kettle (2,500 L) • Whirlpool tank (2,500 L) • Brewing water and glycol storage tanks • Fermenter tanks (10 x 5,000L) • Bright beer tanks (4 x 2,000L tanks) and filtration unit • HDPE, stackable spent grain bins • Vapour condensing unit (receives steam from the kettle) 	<ul style="list-style-type: none"> • All plant and equipment used for the production and packaging of alcohol (excluding water tanks) must be maintained within the brewery building; • Gases released through the brewing process must be directed through a vapour condensing unit; • All process water and wash down water from the beer manufacturing and processing area must be directed to the wastewater treatment plant (WWTP) via the subsurface collection sump and pumped discharge pipeline. 	<p>Map 3 in Schedule 1, shown as:</p> <ul style="list-style-type: none"> • Microbrewery <p>Map 4 in Schedule 1, shown as:</p> <ul style="list-style-type: none"> • Lauter tun • Kettle • Whirlpool • Brewing water tank • Glycol tank • Fermenting vats • Bright beer tanks
<p>WWTP with a maximum treatment design capacity of 15 kL/day, comprised of:</p> <ul style="list-style-type: none"> • Moving Bed Bioreactor Wastewater Treatment Unit • Raw wastewater tanks (2 x 25,000 L) • HDPE below ground wastewater collection sump (3,000L) • HDPE treated effluent storage tank (25,000L) • HDPE sludge storage container (1,200 L) • HDPE phosphorus reduction reagent storage container (100L) 	<ul style="list-style-type: none"> • All wastewater must be stored in enclosed tanks on bitumen hardstand; • The four centrifugal pumps, two peristaltic diaphragm pumps, and one air blower must be contained within the sea container unit to mitigate noise emissions; • Treated wastewater must be disposed on-site by irrigation or removed from the premises to a facility authorised to accept treated wastewater; • All sludge waste removed from the WWTP must be stored in an enclosed HDPE container prior to off-site disposal; • The sea container and concrete pad containing the WWTP must be maintained to prevent any leaks or spills of untreated or partially treated wastewater discharging to the environment; and • Tap located behind the raw water tank to be maintained in good working order to enable collection of monthly samples. 	<p>Map 2 in Schedule 1, shown as:</p> <ul style="list-style-type: none"> • MBBR • Untreated wastewater tanks • Treated water tank • Sludge tank • Product tank

Irrigation areas L1a and L1b (0.296 ha) and L2 (0.1025 ha), including pipes and pop-up sprinklers	<ul style="list-style-type: none"> Only water from the treated wastewater tank of the WWTP is to be discharged to the irrigation areas; Sprinkler irrigation system maintained to ensure no blockages, even and effective spray and functionality of stopping and cut-off mechanisms; Flow meter capable of accurately monitoring the daily volume of wastewater discharge from the WWTP to each irrigation area (L1a, L1b and L2 as defined in Map 3, Schedule 1); No irrigation generated runoff, spray drift or discharge occurs beyond the boundary of the irrigation areas; Treated wastewater is evenly distributed over the irrigation areas; No soil erosion occurs; Healthy grass cover is maintained over the irrigation areas; Irrigation does not occur on land that is waterlogged; and Irrigation is not undertaken when rain is imminent, falling or immediately after a rain event. 	<p>Map 3 in Schedule 1 and shown as:</p> <ul style="list-style-type: none"> L1a L1b L2
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Treated Wastewater Storage and Disposal

- The Licence Holder must ensure treated wastewater from the WWTP is discharged to land only at locations specified in column 1 of Table 2 and defined in Map 3 in Schedule 1 and in accordance with the requirements specified in column 3 of Table 2.

Table 2: Authorised treated wastewater emissions to land locations

Column 1	Column 2	Column 3
Emission point reference on Map 3 in Schedule 1	Description	Specified requirements
L1a, L1b and L2	Discharge of treated wastewater from WWTP via irrigation to 0.3985 hectares	Compliance with irrigation requirements set out in Column 2, Table 1

- The Licence Holder must submit to the CEO by 28 February 2021, a Winter Irrigation Management Plan.
- The Winter Irrigation Management Plan required by Condition 4 shall include, but not be limited to:
 - details of proposed measures to manage winter irrigation that considers environmental factors such as topography, groundwater levels, soil moisture, precipitation, evaporation and transpiration data and crop factors;
 - options for irrigation infrastructure and controls to increase evaporation,

- provide even distribution and to avoid overwatering;
- (c) options for off-site disposal of treated wastewater or increased on-site storage; and
- (d) measuring, monitoring and reporting in respect to the Winter Irrigation Management Plan.

Treated Wastewater Limits and Monitoring

5. The Licence Holder must not cause or allow emissions to land greater than the limits specified in column 3 of Table 3.

Table 3: Annual loading limits and concentration limits for emissions to land

Column 1	Column 2	Column 3
Emission point reference on Map 3 in Schedule 1	Parameter	Limit (including units)
L1a, L1b and L2 (Irrigation areas)	Total nitrogen	180kg/ha/year
	Inorganic nitrogen	11mg/L
	Total phosphorus	20kg/ha/year
	Reactive phosphorus	1.2mg/L
	Biochemical Oxygen Demand (BOD ₅)	30kg/ha/day

6. The Licence Holder must ensure that parameters specified in column 3 of Table 4 are monitored at the monitoring point specified in column 2 of Table 4 and in accordance with requirements specified in columns 4, 5 and 6 of Table 4.

Table 4: Emissions to land monitoring requirements

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Emission point reference	Monitoring point reference	Parameter	Units	Averaging period	Frequency	Sampling Method
L1a, L1b and L2	FM1 – flow meter	Volume of wastewater discharged	L	Daily	Continuous when discharging	-
	M1 – off-take sampling point on irrigation pipe within two metres upstream of the flow meter	pH ¹	-	Spot sample	Monthly when discharging, sampled at least 15 days apart	AS/NZS 5667.1 & AS/NZS 5667.10
		TN	mg/L			
		Nitrite plus nitrate nitrogen				
		Ammonia - nitrogen				
		Reactive Phosphorus as P				
		TP				
		TDS ¹				
	BOD ₅					

Note 1: In-field non-NATA accredited analysis permitted.

Groundwater Monitoring

7. The Licence Holder must install and commission a groundwater monitoring bore that satisfies the requirements in Table 5 by **31 January 2021**.

Table 5: Groundwater monitoring bores installation requirements

Column 1	Column 2	Column 3	Column 4
Monitoring Bores	Location and Reference on Map 3 in Schedule 1	Description	Installation Requirements
New monitoring bore: MB3	Area 3	Down hydraulic gradient of irrigation area L1b	(a) Installed to meet the requirements of <i>Minimum Construction Requirements for Water Bores in Australia</i> (AIH 2012). (b) Surveyed to allow the ground level (to Australian Height Datum) to be accurately determined.

8. Pursuant to Condition 8, the Licence Holder must undertake groundwater monitoring at locations specified in column 1, for parameters specified in column 2 and in accordance with requirements specified in columns 3, 4, 5 and 6 of Table 6.

Table 6: Groundwater quality monitoring requirements

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Monitoring bores and reference on Map 3 in Schedule 1	Parameter	Units	Averaging period	Frequency	Sampling Method
MB1, MB2, MB3	Standing water level	m(AHD) mBGL	-	Collected quarterly, at least 45 days apart	-
	pH ¹	-	Spot sample		AS/NZS 5667.11, using low flow sampling
	Electrical conductivity ¹	µS/cm			
	Total nitrogen (TN)	mg/L			
	Nitrite plus nitrate nitrogen				
	Ammonia nitrogen				
	Total phosphorus (TP)				
	Reactive phosphorus as P				
	Total dissolved solids (TDS)				

Note 1: In-field non-NATA accredited analysis permitted.

Soil Monitoring

9. The Licence Holder must ensure that parameters specified in column 2 of Table 7 are monitored at the sampling point specified in column 1 of Table 7 and in accordance with requirements specified in columns 3, 4, and 5 of Table 7.

Table 7: Soil profile sampling and monitoring requirements

Column 1	Column 2	Column 3	Column 4	Column 5
Soil monitoring points as referenced in Map 3 in Schedule 1	Parameter	Units	Frequency	Sampling Method
SS1 ¹ from 0-10cm depth SS2 ¹ from 40-70cm depth SS3 ¹ from 100 – 150cm depth	pH	-	Annual	AS/NZS 4482.1
	Electrical conductivity @25°C	µS/cm		
	Moisture content	%		
	Cation Exchange Capacity	meq/100g		
	Total Nitrogen (TN)	mg/kg		
	Total Phosphorus (TP)			
	Phosphorus Retention Index (PRI) ²	mL/g		

Note 1: A composite sample, made up of a minimum of three sample points along the sampling traverse running north-south in irrigation areas L1a and L2 and a minimum of two sample points along the sampling traverse running north-south in irrigation area L1b.

Note 2: As per Methods for analysis of Phosphorus in Western Australian Soils, Perth, Chemistry Centre, Allen D. and R. Jeffery (1990).

Management

10. The Licence Holder must ensure that all analysis for monitoring required by conditions of the Licence is submitted to and tested by a laboratory with current NATA accreditation for the methods and analysis specified.

Information

11. The Licence Holder must maintain accurate and auditable records in relation to the calculation of fees payable in respect of this Licence.
12. The Licence Holder must record the number and details of any complaints received by the Licence Holder relating to the Premises, and any action taken by the Licence Holder in response to the complaint. 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

13. If the Licence Holder exceeds a limit specified in this licence, they must notify the CEO within 24 hours of becoming aware of the exceedance.
14. The Licence Holder must provide to the CEO within 30 days after the Anniversary Date, an Annual Audit Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the Annual Period.

15. The Licence Holder must provide to the CEO within 30 days after the Anniversary Date, an Annual Environmental Report satisfying the requirements of Table 8 for the Annual Period.

Table 8: Annual Reporting Requirements

Column 1	Column 2
Condition	Requirements
-	Total volume of beverage manufactured in kL per year and kL/month
6	<p>Emissions to land monitoring:</p> <p>(a) Data, including:</p> <ul style="list-style-type: none"> ○ the daily, monthly and cumulative volume of treated wastewater irrigated to land in cubic metres for that quarter; ○ the area to which the treated wastewater was irrigated in that quarter, including the total area in hectares; ○ the monthly calculations of nutrient loading rates for the parameters listed in column 2 of Table 3 and comparison against the nutrient loading limits specified in column 3 of Table 3; and <p>(b) Review, assessment, and interpretation of the data including comparison to historical trends.</p>
8	<p>Groundwater monitoring:</p> <p>(a) Data;</p> <p>(b) Review, assessment, and interpretation of the data including comparison to historical trends.</p>
9	<p>Soil monitoring:</p> <p>(a) Data;</p> <p>(b) Review, assessment, and interpretation of the data including comparison to historical trends.</p>
12	Complaints – summary of records and actions

Definitions

In this Licence, the terms in Table 11 have the meanings defined.

Table 11: Terms and definitions

Term	Definition
Anniversary Date	30 June of each year.
Annual Period	a 12 month period commencing from 1 July until 30 June in the immediately following year.
Annual Audit Compliance Report	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
Approved Policy	has the same meaning given to that term under the EP Act.
AS/NZS 4482.1	Australian Standard AS/NZS 4882.1 2005 Guide to the investigation and sampling of sites with potentially contaminated soil – Non-volatile and semi-volatile compounds.
AS/NZS 5667.1	Australian Standard AS/NZS 5667.1 Water quality - Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
AS/NZS 5667.10	Australian Standard AS/NZS 5667.10 Water quality -Sampling – Guidance on sampling of waste waters.
AS/NZS 5667.11	Australian Standard AS/NZS 5667.11 Water quality -Sampling – Guidance on sampling of groundwaters.
Averaging period	means the time over which a limit is measured or a monitoring result is obtained.
CEO	means Chief Executive Officer of the Department. “submit to / notify the CEO” (or similar), means either: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
CEO Request	means a request made by the CEO to the Licence Holder in writing, sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: a) information, records or reports in relation to specific matters in connection with this Licence including in relation to compliance with any Conditions and the calculation of fees (whether or not a breach of condition or the EP Act is suspected); or b) reporting, records or administrative matters: i. which apply to all Licences granted under the EP Act; or ii. which apply to specified categories of Licences within which this Licence falls.

Condition	means a condition to which this Licence is subject under s 62 of the EP Act.
Department	means the department established under section 35 of the Public Sector Management Act 1994 (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
Discharge	has the same meaning given to that term under the EP Act.
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	<i>Environmental Protection Act 1986 (WA)</i> .
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i> .
General Description	means the description of activities and operations carried out on the Premises as set out in Schedule 2 of this Licence.
General Emission	has the meaning set out in Condition 17 of this Licence.
Hardstand	means a surface with a permeability of 1x10 ⁻⁹ metres/second or less.
HDPE	high-density polyethylene.
Licence	refers to this document, which evidences the grant of 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.
mAHD	metres Australian Height Datum.
mBGL	metres below ground level.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
NATA	means National Association of Testing Authorities, Australia.
NATA accredited	means, in relation to the analysis of a sample, that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
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.
Quarter	means a three month period ending on 31 January, 30 April, 31 July and 31 October in each year.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Specified Emission	has the meaning set out in Condition 17 of this Licence.
Spot sample	means a discrete sample representative at the time and place at which the sample is taken.
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.
WWTP	means the Moving Bed Bioreactor wastewater treatment plant installed at the Premises.

Schedule 1: Maps

Map 1: Premises Map

The Premises is shown in the map below. The yellow line depicts the boundary to the Premises.



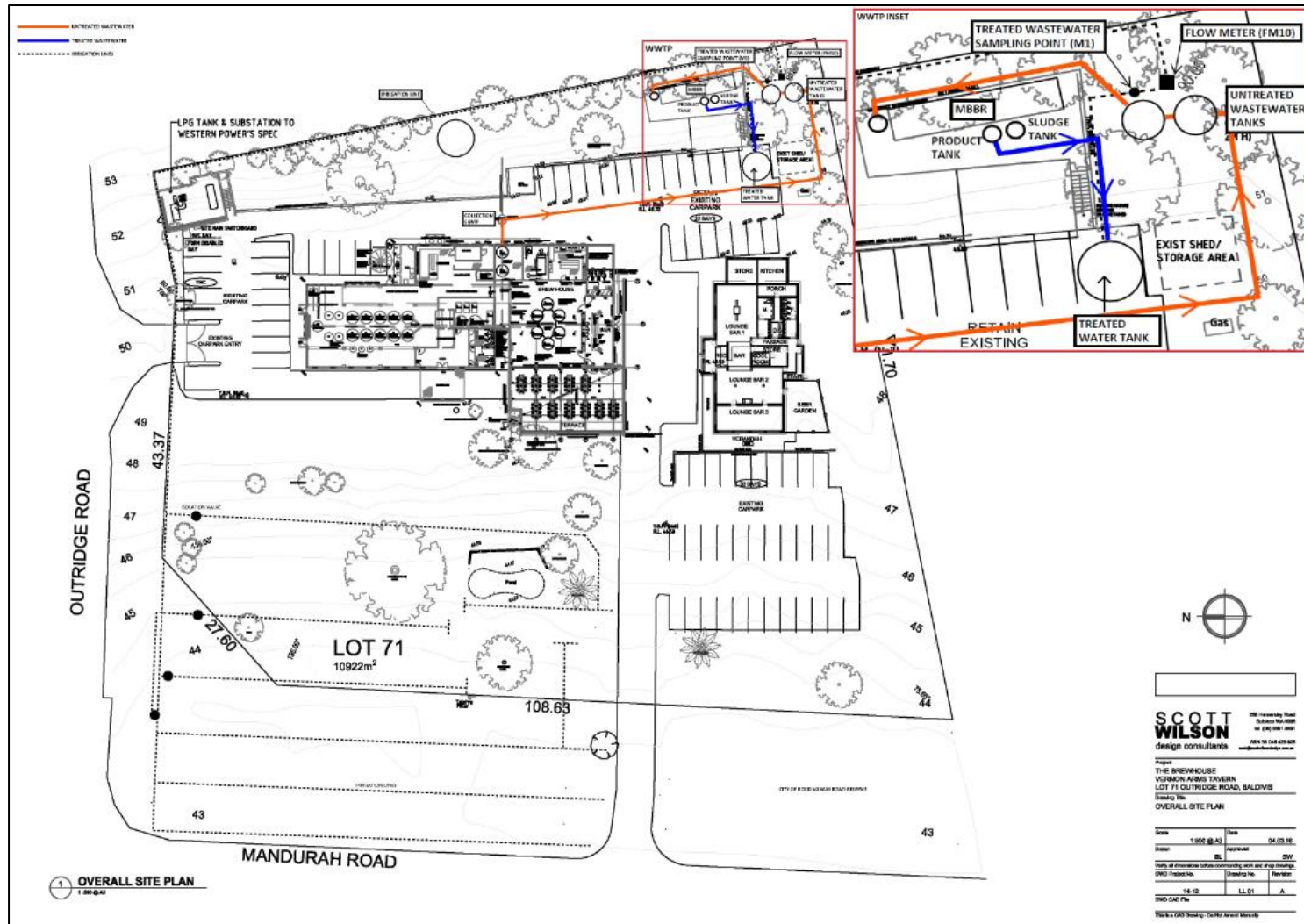
Note: The Premises boundary is defined by the full Lot 71 on Diagram 90934 boundary, plus an additional section of City of Rockingham controlled road reserve along the full length of the western (Mandurah Road) boundary, defined by the following GPS points:

GPS coordinates:

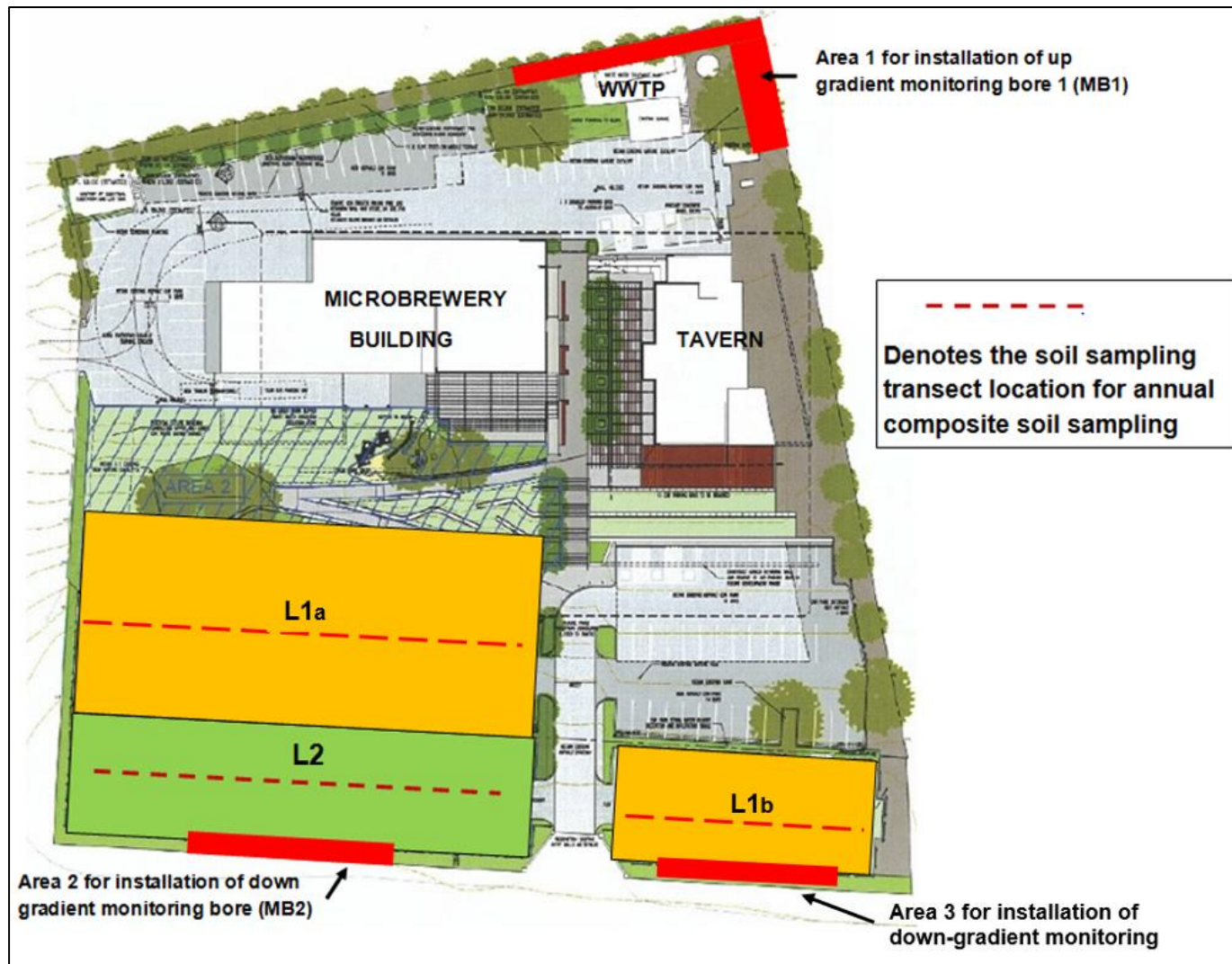
6,419,463 mN 385,738 mE
6,419,589 mN 385,769 mE
6,419,580 mN 385,806 mE
6,419,565 mN 385,783 mE
6,419,460 mN 385,757 mE

The width of the road reserve strip within the fenced boundary of the premises is approximately 16 metres.

Map 2: Site Plan showing infrastructure layout



Map 3: Treated wastewater discharge points and groundwater and soil monitoring locations map



Map 4: Plan View of Brewery Infrastructure Layout

