Permit

Environmental Protection Act 1994

Environmental authority EPPR00504113

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPPR00504113

Environmental authority takes effect on 11 April 2019

Environmental authority holder(s)

Name(s)	Registered address
Sirromet Wines Pty Ltd	850 Mount Cotton Road MOUNT COTTON QLD 4165

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Prescribed ERA, ERA 63 - Sewage Treatment, 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of, (b-i) more than 100 but not more than 1500EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	Lot 2/RP152369

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the Environmental Protection Act 1994 (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or

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- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
c) otherwise-on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the Planning Act 2016 or an SDA Approval under the State Development and Public Works Organisation Act 1971), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Tristan Roberts
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 11 April 2019

Enquiries:
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Obligations under the Environmental Protection Act 1994

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

This environmental authority incorporates the following schedules and appendices:

Schedule A General

Schedule B Air

Schedule C Land

Schedule D Noise

Schedule E Waste

Schedule F Water

Schedule G Definitions

Appendix 1 Irrigation Areas

Terms in bold are defined in Schedule G – Definitions.

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Schedule A – General

A1 Activities conducted under this environmental authority must comply with the following restrictions:

a) Inflows to the anoxic tank of the on-site sewage treatment plant (STP) must not exceed the daily peak design capacity of 36,000 litre per **day**;

b) The maximum amount of treated wastewater that can be irrigated on any one day must not exceed 36,000 litre; and

c) Irrigation of treated wastewater must only occur inside the areas identified as irrigation areas as shown in ***Appendix 1 – Irrigation Areas.***

A2 The volume provided for the storage of treated wastewater to cover periods when irrigation becomes impracticable is to be not less than 300,000 litres via an enclosed wet weather storage tank or tanks.

A3 All reasonable and practicable **measures** must be taken to prevent or **minimise environmental harm** caused by the activities.

A4 Any breach of a condition of this authority must be reported to the administering authority as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.

A5 Other than as permitted by this environmental authority, the **release of a contaminant** into the environment must not occur.

A6 All information and records required by the conditions of this environmental authority must be kept for a minimum of five years with the exception of environmental monitoring results which must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the administering authority upon request and in the format requested.

A7 An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.

A8 All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses. The only exception to this condition is for in situ monitoring of pH and electrical conductivity.

A9 The holder of this environmental authority must record the following details for all environmental complaints received:

a) date and time complaint was received;

b) name and contact details of the complainant when provided and authorised by the complainant;

c) nature of the complaint;

d) investigations undertaken;

e) conclusions formed; and

f) actions taken.

A10 When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority to investigate a complaint of **environmental nuisance** arising from the activity. The monitoring results must be provided within 10 business days to the administering authority upon its request.

A11 The activities authorised under this environmental authority must be undertaken in accordance with written procedures that:

a) identify potential risks to the environment from the activity during routine operations, closure and an emergency;

b) establish and maintain control measures that minimise the potential for environmental harm;

c) ensure plant, equipment and measures are maintained in a proper and effective condition;

d) ensure plant, equipment and measures are operated in a proper and effective manner;

e) ensure that staff are trained in and aware of their obligations under the Environmental Protection Act 1994; and

f) ensure that reviews of environmental performance are undertaken at least annually.

Schedule B – Air

B1 When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority to investigate a complaint of **environmental nuisance** arising from the activity. The monitoring results must be provided within 10 business days to the administering authority upon its request.

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Schedule C – Land

C1 Treated wastewater must only be released to land in accordance with the designated irrigation areas identified in ***Appendix 1 – Irrigation Areas***.

C2 Treated wastewater released to land must be done in accordance with documentation as well as carried out in a manner which ensures:

a) drainage to groundwater is **minimised** and subsurface flows of contaminants to surface waters are prevented;

b) the irrigation water must be distributed evenly across designated irrigation areas identified in ***Appendix 1 – Irrigation Areas***;

c) surface pondage and run-off of treated wastewater within or beyond the boundary of any designated irrigation areas is prevented;

d) degradation of soil structure is minimised;

e) soil sodicity and the build-up of nutrients and heavy metals in the soil and subsoil are minimised;

f) spray drift or overspray does not carry beyond treated wastewater disposal areas;

g) treated wastewater disposal areas are maintained with an appropriate crop in a viable state for transpiration and nutrient uptake; and

h) sufficient buffer zones are maintained between irrigation sites and sensitive environmental receptors.

C3 The size of irrigated land areas is to be not less than 6.45 ha.

C4 Where treated wastewater is to be irrigated, the treated wastewater must meet **Class A recycled water** quality criteria, and the irrigated land areas must have signage prominently displayed and kept in a visible and legible condition, indicating that:

a) treated wastewater is being irrigated; and

b) the treated wastewater is not to be used or drunk by the public.

C5 Where treated wastewater is to be irrigated that does not meet Class A recycled water quality criteria, the irrigated land areas must be fenced with signage prominently displayed and kept in a visible and legible condition, indicating that:

a) treated wastewater is being irrigated; and

b) the treated wastewater is not to be used or drunk by the public.

C6 The holder of this environmental authority must ensure that only treated wastewater from either the:

a) enclosed wet weather storage tank or tanks (subject to condition (A2)), or from the

b) enclosed effluent tank within the on-site sewage treatment plant

is released to the designated irrigation areas specified in ***Appendix 1 – Irrigation Areas***.

C7 Notwithstanding condition (C6), potable water or alternative irrigation water may be released to the designated irrigation areas identified in ***Appendix 1 – Irrigation Areas***, provided it is treated in accordance with all other conditions of this environmental authority as if it were treated wastewater.

C8 The holder of this environmental authority must carry out:

a) an irrigation management monitoring program, and

b) a treated wastewater monitoring program

for the quality characteristics at the monitoring locations and at the frequencies specified in ***Schedule C, Table 1 – Irrigation Management Monitoring Program, Schedule C, Table 2 – Treated Wastewater Monitoring Program*** and ***Schedule C, Table 3 –***. ***Release Limits to Land****.*

C9 Sampling carried out as part of the monitoring programs in condition (C8) must be conducted in accordance with the administering authority's latest version of the Water Quality Sampling Manual, and all monitoring devices must be kept calibrated and maintained.

C10 Activities conducted under this environmental authority must not cause the limits for the quality characteristics specified in ***Schedule C, Table 3 – Release Limits to Land*** to be exceeded, or fallen short of (as applicable), when measured at the monitoring locations specified in ***Schedule C, Table 2 – Treated Wastewater Monitoring Program****.*

C11 When weather conditions or soil conditions preclude the release of treated wastewater to designated treated wastewater irrigation areas identified in ***Appendix 1 – Irrigation Areas***, treated wastewater must not be irrigated to land and instead be directed into wet weather storage tank or tanks.

C12 A **receiving environment monitoring program** must be designed and implemented by an appropriately qualified person to monitor the effects of the activity on soils within irrigation areas.

Schedule C, Table 1 – Irrigation Management Monitoring Program

	Indicator	Unit(s)	Monitoring Frequency	Monitoring Point	Monitoring Location (GDA 94)	
Irrigation Management	Rainfall	mm	Daily	On-site rain gauge	522600mE	6948018mN
	Wet Weather Storage Tank or Tanks Overflow(s)	m^3 mm date & time	Per overflow event	Wet Weather Storage Tank or Tanks	WWST 1: 522941mE WWST 2: 522950mE WWST 3: 522958mE	WWST 1: 6947767mN WWST 2: 6947773mN WWST 3: 6947778mN
	Irrigation Volume from 300,000L enclosed Wet Weather Storage Tank or Tanks	m^3 date & time intervals	Daily			
	Irrigation Volume from the WWTP Filtered Effluent Tank			WWTP Filtered Effluent Tank	523111mE	6947675mN

Schedule C, Table 2 – Treated Wastewater Monitoring Program

Monitoring Point	Quality Characteristic	Units	Frequency
Release point of 300,000L enclosed Wet Weather Storage Tank or Tanks	pH	pH scale	Weekly
	E. coli	**cfu**/100 mL	Weekly
	Total Nitrogen	mg/L as Nitrogen	Monthly
	Total Phosphorus	mg/L as Phosphorus	Monthly
WWTP Filtered Effluent Tank	Electrical Conductivity	µS/cm	Monthly
	Sodium Absorption Ratio	Ratio	Monthly

Schedule C, Table 3 – Release Limits to Land

Release Limit				
Quality Characteristics	**Minimum**	**50th Percentile**	**Median**	**Maximum**
Total Nitrogen	-	-	-	40 mg/L as Nitrogen
Total Phosphorus	-	-	-	15 mg/L as Phosphorus
pH	5.0	-	-	9.0
Electrical Conductivity (EC)	-	1,700 µS/cm	-	2,000 µS/cm
E. coli	-	-	10 cfu/100 mL	15 cfu/100 mL
Sodium Absorption Ratio	*	-	-	*

* There is no minimum or maximum release limit for the sodium absorption ratio, but these characteristics must be monitored and recorded.

C13 The receiving environment monitoring program required by condition (C12) must include, but not necessarily be limited to, the following:

a) soil and sub-soil analysis, including an assessment of the irrigation of treated wastewater on the soils from representative locations, including type, structure, pH, phosphorus adsorption level and capacity, nutrient status, salinity and sodicity, and cation exchange capacity of the designated treated wastewater irrigation areas identified in ***Appendix 1 – Irrigation Areas***;

b) determination of the quantity and quality of contaminants applied to the soils in the designated treated wastewater irrigation areas identified in ***Appendix 1 – Irrigation Areas***;

c) an annual (minimum) assessment of the impact of the releases on the designated treated wastewater irrigation areas identified in ***Appendix 1 – Irrigation Areas*** by an appropriately qualified person;

d) following each assessment undertaken as part of condtion (C12 (c)), an assessment by an appropriately qualified person as to whether the impact(s) of the releases on the designated treated wastewater irrigation areas warrant **MEDLI** re-modelling; and

e) if MEDLI re-modelling is recommended as per condition (C12 (d)), a re-assessment including modelling of the water, nutrient and salt balances and irrigation rate and return period to ensure sustainable use of the designated treated wastewater irrigation areas identified in ***Appendix 1 – Irrigation Areas***.

C14 The receiving environment monitoring program required by condition (C12) must be carried out for the quality characteristics and monitored at the frequencies specified in ***Schedule C, Table 4 – Soil Monitoring Program***, as well as monitoring the crop condition at the frequency specified in ***Schedule C, Table 5 – Vegetation Management***.

Schedule C, Table 4 – Soil Monitoring Program

Quality Characteristics	Units	Frequency
pH	pH scale	Annually
Total Nitrogen	mg/kg	
Phosphorus (Colwell)	mg/kg	
Chloride	mg/kg	
Electrical conductivity	dS/m	
Organic Carbon	%	
Exchangeable Calcium	meq/100g	
Exchangeable Magnesium	meq/100g	
Exchangeable Sodium	meq/100g	
Exchangeable Potassium	meq/100g	
Cation Exchange Capacity	meq/100g	
Exchangeable Sodium Percentage	%	
Phosphorus Adsorption Level	mg/kg	
Phosphorus Adsorption Capacity	mg/kg	

Schedule C, Table 5 – Vegetation Management

Crop Condition	Frequency
Cover (%), Visual observations	monthly

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C15 All chemical and fuel storages must:

a) be stored in, or serviced by, an effective containment system that is impervious to the materials stored therein;

b) be stored and handled in accordance with the relevant Australian Standard where such Standard is available; and

c) be managed to prevent the release of substances to waters or land.

C16 All reasonable and practicable measures must be taken to exclude vectors and pest species from the manufacture of soil conditioner involving the utilisation of biosolids to the extent necessary to prevent:

a) environmental nuisance to occupiers of neighbouring premises

b) any danger or risk to the health of any persons.

C17 An area which provides an impervious barrier associated with the manufacture of soil conditioner involving the utilisation of biosolids to subsoil and groundwater must be used for:

a) receiving, mixing and storing processing materials for the activity; and

b) collecting and storing leachate.

C18 Any biomass removed from plants growing on irrigated land must be transported and disposed of other than on the irrigated land.

C19 Any soil conditioner manufactured via composting involving biosolids on-site must not be disposed of/utilised in/on treated wastewater irrigation areas.

Schedule D – Noise

D1 Other than as permitted within this environmental authority, noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.

Schedule E – Waste

E1 Unless otherwise permitted by this environmental authority, all waste generated in carrying out the **activity** must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.

E2 All **regulated waste** removed from the **site** must be removed by a person who holds a current approval to transport such waste under the provisions of the Environmental Protection Act 1994.

Schedule F – Water

F1 Contaminants must not be released from the site to **waters**.

F2 Stormwater contaminated by the activity must be managed to minimise or prevent any adverse effect on the environmental values of the receiving environment.

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Schedule G – Definitions

Key terms and/or phrases used in this document are defined in this section. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Word or Phrase	Meaning
Activity	The environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.
Administering authority	The Department of Environment and Science, or its successors or predecessors.
Appropriately qualified person(s)	A person who has professional qualifications, training or skills or experience relevant to the nominated subject matters and can give authoritative assessment, advice and analysis about performance relevant to the subject matters using relevant protocols, standards, methods or literature.
Biochemical Oxygen Demand	The 5 day biochemical oxygen demand determined using standard tests (e.g. those used by NATA laboratories). This test is not inhibited for nitrification, otherwise would be referred to as “carbonaceous” biochemical oxygen demand.
Chemical	As defined in Schedule 12, Part 2 of the *Environmental Protection Regulation 2008*.
Commercial place	A place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.
cfu	Colony forming units

Word or Phrase	Meaning
Class A recycled water	Recycled water that meets the following water quality specifications:

	E. coli (median) cfu/100mL	E. coli (maximum) cfu/100mL	BOD5 mg/L median	Turbidity (Nephelometric Turbidity Unit (NTU)) 95% ile (max.)	Suspended Solids (SS), mg/L median	Total Dissolved Salts (TDS), mg/L or Electrical Conductivity (EC), µS/cm medians TDS / EC3	pH
Limit	10	15	20	5	5	1000 / 1600	6 – 8.5

Word or Phrase	Meaning
Contaminant(s)	As defined in Section 11 of the Environmental Protection Act 1994.
Day	Any 24 hour period.
Dwelling	Any of the following structures or vehicles that is principally used as a residence — • a house, unit, motel, nursing home or other building or part of a building; • a caravan, mobile home or other vehicle or structure on land; • a water craft in a marina.
Environmental harm	As defined in Section 14 of the *Environmental Protection Act 1994.*
Environmental nuisance	As defined under Chapter 1 of the *Environmental Protection Act 1994.*
Land	Land excluding waters and the atmosphere. Land includes land on the site.
Measures	Includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

Word or Phrase	Meaning
Median	The middle value, where half the data are smaller and half the data are larger. If the number of samples is even, the **median** is the arithmetic average of the two middle values.
MEDLI	The software modelling program "Model for Effluent Disposal Using Land Irrigation" utilised for designing and analysing effluent disposal systems using land irrigation.
Minimise	Minimise by taking all reasonable and practical measures to minimise the adverse effect having regard to the following matters: a) the nature of the harm or potential harm; b) the sensitivity of the receiving environment; c) the current state of technical knowledge for the activity; d) the likelihood of successful application of different measures that might be taken to minimise the adverse effects; e) the financial implications of the different measures as they would relate to the type of activity; and f) if the adverse effect is caused by the location of the activity being carrying out, whether it is feasible to carry out the activity at another location.
NATA	National Association of Testing Authorities
Receiving environment monitoring program	a monitoring program designed to monitor and assess the potential impacts of controlled and/or uncontrolled releases of contaminants to the environment from the activity.
Record(s)	include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.
Release of a contaminant into the environment	to: a) deposit, discharge, emit or disturb the contaminant; b) cause or allow the contaminant to be deposited, discharged, emitted or disturbed; c) fail to prevent the contaminant from being deposited, discharged emitted or disturbed; d) allow the contaminant to escape; or e) fail to prevent the contaminant from escaping.
Regulated waste	non-domestic waste mentioned in Schedule 7 of the *Environmental Protection Regulation 1998* (whether or not it has been treated or immobilised), and includes - • for an element - any chemical compound containing the element; and • anything that has contained the waste.

Word or Phrase	Meaning
Sensitive place	Includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place: a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; b) a motel, hotel or hostel; c) a kindergarten, school, university or other educational institution; d) a medical centre or hospital; e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; f) a public thoroughfare, park or gardens; or g) for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 20018.
Site	Land on or in which it is authorised to carry out the activities approved under this environmental authority.
Sodium Adsorption Ratio (SAR)	The relative proportion of Sodium ions (Na^+) to both Calcium ions (Ca^{2+}) and Magnesium ions (Mg^{2+}) as shown as follows: SAR = $[Na^+]$ / (($[Ca^{2+}]$ + $[Mg^{2+}]$)/2)1/2 Where: Na = sodium ion concentration (conc.) (meq/L) = (mg/L in wastewater)/22.99 Ca = calcium ion concentration (meq/L) = (mg/L in wastewater)/(40.08 x 0.5) Mg = magnesium ion concentration (meq/L) = (mg/L in wastewater)/(24.32 x 0.5)
Total Nitrogen (TN)	The sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen, expressed as mg/L as Nitrogen. This includes both the inorganic and organic fraction of nitrogen.
Total Phosphorus (TP)	The sum of the reactive phosphorus, acid-hydrolysable phosphorus and organic phosphorus, as mg/L of Phosphorus. This includes both the inorganic and organic fraction of phosphorus**.**
Watercourse	A river, creek or stream in which water flows permanently or intermittently- • in a natural channel, whether artificially improved or not; or • in an artificial channel that has changed the course of the watercourse.

Word or Phrase	Meaning
Waters	River, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part-thereof.
50^{th} percentile	A statistical measure indicating the value below which 50% of observations in a group of observations fall.

Appendix 1 – Irrigation Areas