Permit

Environmental Protection Act 1994

Environmental authority EPPR00533913

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

Environmental authority number: EPPR00533913

Environmental authority takes effect on 16 February 2018

Environmental authority holder(s)

Name(s)	Registered address
FITZROY ISLAND INVESTMENTS PTY LTD	5th Floor 21 Lindsey Street DARWIN NT 0800

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 169/NR5153

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
- 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.

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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.

Kylie Breaker
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 16 February 2018

Enquiries:
Extraction, Energy and Chemical Industries Assessment
Department of Environment and Heritage Protection
Phone: 1300 130 372
Email: palm@ehp.qld.gov.au

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)

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Legislative Requirements and Conditions of Environmental Authority

Condition

General

G1 All reasonable and practicable **measures** must be taken to prevent the likelihood of environmental harm being caused.

G2 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.

G3 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.

G4 The **activity** 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*
(f) ensure that reviews of environmental performance are undertaken at least annually.

G5 An annual monitoring report must be prepared and submitted to the **administering authority** by 30 November each year, for the preceding financial year.

G6 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.

G7 Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.

G8 **You** 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

c) nature of the complaint

d) investigations undertaken

e) conclusions formed

f) actions taken.

G9 When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a **complaint** not considered by the **administering authority** to be frivolous or vexatious, of **environmental nuisance** arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.

Condition

Air

A1 Odours or airborne contaminants must not cause **environmental nuisance** at a **sensitive place** or **commercial place**.

Condition

Water

WT1 Contaminants must not be released to any **waters**.

WT2 Suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering any area used for effluent irrigation or the storage or treatment of contaminants or wastes.

WT3 Retention basins to isolate and contain pump station overflows must be provided.

Condition

Acoustic

N1 Noise generated by the **activity** must not cause environmental nuisance to any **sensitive place** or **commercial place**.

Condition

Land

L1 The only contaminants permitted to be released to land are tertiary treated sewage effluent in compliance with the limits stated in Table 2 and the conditions of this approval.

L2

Conduct and keep records of any monitoring of contaminant releases to the irrigation area for the treated effluent at the point of discharge from the sewage treatment plant(s) at the frequency, and for the parameters specified in Table 2.

Table 2 — Contaminant release limits to land

Quality characteristics	Limit Type	Limit	Monitoring frequency
5 day BOD (mg/L)	**maximum**	20	Monthly
Suspended Solids (**mg/L**)	**maximum**	30	Monthly
pH (pH units)	range	6.5 — 8.5	weekly
Total Nitrogen (**mg/L**)	**maximum**	10	Monthly
	50th percentile	8	
Total Phosphorus (**mg/L**)	**maximum**	1	Monthly
Faecal Coliforms (organisms/100mL)	**maximum**	100	Monthly
Total Dissolved Solids (**mg/L**)	**maximum**	1000	weekly

Associated requirements

1. Monitoring must be in accordance with the administering authority's Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.

2. Indicators for TN and TP are recommended to be done as grab samples.

L3

A minimum area of 22,000 square metres of land, excluding any necessary buffer zones, must be utilised for the irrigation of treated effluent.

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L4 The mean (calculated over 14 consecutive days) daily quantity of treated effluent irrigated to land must not exceed 58 kilolitres.

L5 The daily volume of treated effluent transported offsite must be determined and records kept of such determinations.

L6 When weather conditions or soil conditions preclude the release of treated sewage effluent to land, effluent must not be irrigated to land.

L7

The irrigation of treated effluent must be carried out in a manner such that:

a) the irrigated wetted area is no closer than:

(i) 5 metres to the highest astronomical tide line or the bank of any watercourse; or

(ii) 1 metre from the northern and western property boundaries and 0.25m from the eastern and southern

property boundaries, and

(iii) 0.25 metre from pedestrian paths or walkways provided the effluent is applied by pressure compensated dripline, else 1 metre separation is to be provided.

b) vegetation is not damaged;

c) soil erosion and soil structure damage is avoided;

d) there is no surface ponding of treated effluent or reclaimed water;

e) percolation of effluent beyond the plant root zone is minimised;

f) the capacity of the land to assimilate nitrogen, phosphorus, salts, organic matter (as measured

by biochemical or chemical oxygen demand) and other contaminants -- is not exceeded; and

g) the quality of ground water is not adversely affected.

L8 You must take all reasonable and practicable steps to ensure that persons are not likely to be exposed to pathogens in treated effluent or reclaimed water, by such means as:

a) selection of irrigator equipment with low exposure risk; and/or

b) appropriate timing of irrigation; and/or

c) restriction of access to areas either being irrigated or that are freshly irrigated; and/or

d) prominent posting of notices on areas undergoing effluent irrigation, warning the public that the area is irrigated with treated effluent and not to use or drink the effluent; and/or

e) maintaining effective separation between effluent application areas and boundaries, sensitive areas and bores; and/or

f) fitting lockable valves or removable handles to all treated effluent release pipes situated in public access areas.

L9 Spray from any irrigation of treated effluent must not drift beyond the boundaries of the site.

L10 Excess effluent, either due to continued wet weather or high wastewater generation rates, must be transported offsite for disposal in accordance with condition W1.

L11 You must establish and implement an effluent irrigation area soil monitoring program, which must include at least:

a) selection and maintenance of at least three (3) soil sampling sites suitable as permanent reference points for long term soil monitoring; and

b) sampling of soil from the beds used for effluent irrigation immediately before commencement of effluent irrigation and thereafter at least once every year; and

c) analysis of soil samples for the soil physical and chemical properties as listed in condition L12.

L12 The soil condition of the effluent irrigation area must be monitored by measurement of the following soil physical and chemical properties at a minimum frequency of once every year, except for parameters (i) and w which are only required to be analysed in the initial samples.

a) pH in water 1:5 (method 4A1); and

b) electrical conductivity (dS/m, method 3A1); and

c) chloride (mg/kg, method 5A); and

d) exchangeable cations: potassium, calcium, sodium, magnesium (m.e./100g, method 15A1); and

e) exchangeable sodium percentage (ESP in % Na)); and

f) bicarbonate extractable phosphorus (mg/kg, Colwell P, method 9B1); and

g) total nitrogen (%, method 7A1 or A2); and

h) organic carbon (%, method 6A1);

i) phosphorus sorption isotherm (method 9J); and

j) available water holding capacity; and
the following field tests;

k) infiltration rate; and

l) subsoil hydraulic conductivity; and

m) soil description including texture, structure, colour and moisture.

NOTE: All laboratory methods specified in condition (L12) are those listed in the Australian Laboratory Handbook of Soil and Water Chemical Methods (G.E. Rayment and F.R. Higginson, 1992, Inkata Press, Melbourne)

L13 Sampling of soil for analysis should be carried out in accordance with the following requirements:

a) soil sampling sites should be chosen to enable them to be used as permanent reference points for long term soil monitoring; and

b) soil sampling must be from areas which are representative of any different soil types, irrigation practices, type of vegetation irrigated and cropping or pasture practices on the irrigated areas; and

c) soil samples may be composited for each soil profile depth to produce at least one composite sample for each representative sampling area; and

d) at each soil sampling location samples must be taken at soil profile depths of 100mm, 300mm and 600 mm with the samples being collected from within 50mm either side of the specified depths

Condition

Waste

W1 All waste generated in carrying out the activity must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.

Definition

DEF Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that 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.

"5 day BOD" means 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" BOD.

"50th percentile" means not more than three (3) of the measured values of the quality characteristic are to exceed the stated release limit for any six (6) consecutive samples for the quality characteristic.

"80th percentile" means not more than two (2) of the measured values of the quality characteristic is to exceed the stated release limit for any ten (10) consecutive samples for the quality characteristic.

"90th percentile" means not more than one (1) of the measured values of the quality characteristic is to exceed the stated release limit for any ten (10) consecutive samples for the quality characteristic.

"activity" means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

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"administering authority" means the Department of Environment and Heritage Protection or its successors or predecessors.

"appropriately qualified person(s)" means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

"approval" means environmental authority under the *Environmental Protection Act 1994*.

"commercial place" means a place used as an office or for business or commercial purposes.

"dwelling" means 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 nuisance" as defined under Chapter 1 of the *Environmental Protection Act 1994*.

"land" in the "land schedule" of this document means land excluding **waters** and the atmosphere.

"maximum" means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

"mean" means the average value not to exceed the stated limit when calculated for 14 successive daily values of the parameter.

"Measures" has the broadest interpretation and includes plant, equipment, physical objects, bunding, containment systems, monitoring, procedures, actions, directions and competency.

"mg/L" means milligrams per litre.

"NATA" means National Association of Testing Authorities.

"protected area" means -

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

"sensitive place" means -

- a dwelling, mobile home or caravan park, residential marina or other residential premises; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area; or
- a park or gardens.

and includes the curtilage of such place.

"site" means the place to which this environmental authority relates or the premises to which this **approval** relates.

"waters" includes 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.

"you" means the holder of this environmental authority.

END OF PERMIT

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